BRUNSWICK COUNTY SCHOOLS
CONTRACT FOR PHONE SYSTEM WITH INSTALLATION AND SUPPORT

This contract for phone system with installation and support services (the "Contract") is made and entered into this 21st day of June, 2021, between the County of Brunswick by and through its agent, Brunswick County Board of Education, (the "Owner"), 35 Referendum Drive, Bolivia, NC 28422, and DISYS Solutions, Inc. (DSI) (the "Provider"), 44670 Cape Court, Suite 100, Ashburn, VA 20147.

For and in consideration of the mutual promises set forth in the Contract the parties do mutually agree as follows:

1. Obligations of Provider. Provider hereby agrees to provide services to Owner as follows:

    1.1. Provider shall provide the services described in the attached Proposal, Exhibit A, at designated times and sites as specifically requested and authorized by Owner. Work will be completed in a timely manner acceptable to Owner in full compliance with the terms and conditions of this Contract, including any documents incorporated by reference.

2. Obligations of Owner.

    2.1. Owner hereby agrees to compensate Provider in the total amount of Eight Hundred Seventy-Six Thousand Eighty-Six Dollars and Ninety-Six Cents ($876,086.96) over the three-year period. Year one total compensation is Five Hundred Eighty Thousand Three Hundred Fifty-Five Dollars and Thirty Cents ($580,355.30); year two total is One Hundred Forty-Seven Thousand Eight Hundred Sixty-Five Dollars and Eighty- Three Cents ($147,865.83); year three total is One Hundred Forty-Seven Thousand Eight Hundred Sixty-Five Dollars and Eighty-Three Cents ($147,865.83) once all services have been rendered in accordance with the terms of this Contract.

3. Compensation. Provider shall provide Owner with invoice(s) itemized by service provided, the number of hours worked and by whom, the date(s) that services were provided, and the amount owed, along with any supporting documentation that may be requested in advance by Owner. Owner shall process payments to Provider within forty-five (45) days of submission of such invoice(s). In the event of inclement weather, fire, power failure, or other similar occurrence, which may necessitate the cancellation of the delivery of the service(s), and an alternate date cannot be agreed upon, Owner will be under no obligation to compensate Provider for services not rendered.

4. Term. The services described in the Contract will be provided from July 1, 2021 through June 30, 2024, unless sooner terminated as herein provided.

5. Termination for Convenience. Owner may terminate this Contract at any time at its complete discretion upon twenty (20) calendar days' notice in writing from the Owner to Provider prior to the date of termination. In addition, all finished or unfinished documents and other materials produced by Provider pursuant to this Contract shall, at the request of Owner be turned over to it and become its property. If the Contract is terminated by Owner in accordance with this section, Owner will provide a prorated payment for all services performed as of the date of termination.

6. Termination for Default. At any time, Owner may terminate this Contract immediately and without prior notice if (i) Provider is unable to meet goals and timetables or if the Owner is dissatisfied with the quality of services provided; (ii) Provider becomes insolvent, makes or has made an assignment for the benefit of creditors; (iii) Provider is the subject of proceedings in voluntary or involuntary bankruptcy instituted on behalf of or against Provider; (iv) Provider

has a receiver or trustee appointed for substantially all of its property; or (v) Provider allows any final judgment to stand against it unsatisfied for a period of forty-eight (48) hours.

7. Contract Funding. It is understood and agreed between Provider and the Owner that the Owner's payment obligation under this Contract is contingent upon the availability of appropriated funds from which payment for Contract purposes can be made. If the governing board of Owner does not appropriate the funding needed by Owner to make payments under this Contract for a given fiscal year, Owner will not be obligated to pay amounts due beyond the end of the last fiscal year for which funds were appropriated. In such event, Owner will promptly notify Provider of the non-appropriation, and this Contract will be terminated at the end of the last fiscal year for which funds were appropriated. No act or omission by the Owner which is attributable to non-appropriation of funds shall constitute a breach of or default under this Contract.

8. Insurance. Provider agrees to maintain Commercial General Liability in amount of $1,000,000 each occurrence with $2,000,000 General Aggregate. Provider shall maintain $1,000,000 in automobile liability, and other appropriate insurance, as well as Workers Compensation in the required statutory amount for all employees participating in the provision of services under this Contract. Provider also agrees to maintain $1,000,000 in professional liability insurance if the Provider is engaged in a professional service pursuant to this Contract. The Owner, Brunswick County Board of Education, shall be named by endorsement as an additional insured on the General Liability policy. Certificates of such insurance shall be furnished by Provider to the Owner and shall contain an endorsement to provide the Owner at least 30 days' written notice of any intent to cancel or terminate by either Provider or the insuring company. Failure to furnish insurance certificates or maintain such insurance shall be a default under this Contract and shall be grounds for immediate termination of this Contract.

9. Taxes. Provider shall pay all federal, state, and FICA taxes for all employees participating in the provision of services under this Contract.

10. Monitoring and Auditing. Provider shall cooperate with the Owner, or with any other person or agency as directed by the Owner, in monitoring, auditing, or investigating activities related to this Contract. Provider shall permit the Owner to evaluate all activities conducted under this Contract as dictated by the Owner. Provider shall provide auditors retained by the Owner with access to any records and files related to the provision of services under this Contract. The Owner agrees that its auditors will maintain the confidentiality of any identified and actual trade secrets of Provider accessed during an audit conducted under this Contract.

11. Records and Confidentiality of Student Information. Provider agrees that all student records or personally identifiable information contained in student records that may be obtained in the course of providing services to the Owner under this Contract shall be subject to the confidentiality and disclosure provisions of applicable federal and state statutes and regulations as well as the Owner's policies. All student records shall be kept in a secure location preventing access by unauthorized individuals. Provider will maintain an access log delineating date, time, agency, and identity of individual accessing student records who is not in the direct employ of Provider. Provider shall not forward to any person other than parent or the Owner any student record or personally identifiable information obtained from a student record (including, but not limited to, the student's identity) without the written consent of the Owner. Upon termination of this Contract, Provider shall turn over to the Owner all student records or personally identifiable information about students obtained by Provider while providing services under this Contract. Nothing in this Contract gives Provider any right to access any student records or personally identifiable information.

12. Lunsford Act/Criminal Background Checks. Provider also acknowledges that G.S. § 14-208.18 prohibits anyone required to register as a sex offender under Article 27A of Chapter 14 of the General Statutes from knowingly being on the premises of any school. Provider shall conduct or arrange to have conducted, at its own expense, sexual offender registry checks on each of its

owners, employees, agents and subcontractors ("contractual personnel") who will engage in any service on or delivery of goods to Owner's property or at an Owner sponsored event, except checks shall not be required for individuals who are solely delivering or picking up equipment, materials, or supplies at:(1) the administrative office or loading dock, provided same is not located on a school property; (2) non-school sites; (3) schools closed for renovation; or (4) school construction sites. The checks shall include at a minimum checks of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry ("the Registries"). For Provider's convenience only, all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at *http://www.nsoprv.f!ov/*. Provider shall provide certification on the Sexual Offender Registry Check Certification Form (Exhibit B) that the registry checks were conducted on each of its contractual personnel providing services or delivering goods under this Contract prior to the commencement of such services or the delivery of such goods. Provider shall conduct a current initial check of the registries. The sex offender registry checks shall be conducted within thirty (30) days of Provider's execution of the Contract and prior to performing any services on Owner's property. In addition, Provider agrees to conduct the registry checks and provide a supplemental certification form before any additional contractual personnel are used to deliver goods or provide services pursuant to this Contract. Provider further agrees to conduct annual registry checks of all contractual personnel and provide annual certifications at each anniversary date of this Contract. Provider shall not assign any individual to deliver goods or provide services pursuant to this Contract if said individual appears on any of the listed registries. Provider agrees that it will maintain all records and documents necessary to demonstrate that it has conducted a thorough check of the registries as to each contractual personnel, and agrees to provide such records and documents to Owner upon request. Provider specifically acknowledges that Owner retains the right to audit these records to ensure compliance with this section at any time in Owner's sole discretion. Failure to comply with the terms of this provision shall be deemed a material breach of the Contract. If requested by Owner, the Provider shall provide sufficient background information regarding any or all contractual personnel who may deliver goods or perform services under this Contract in order to allow Owner to perform a criminal background check on each individual at Owner's expense. Provider further agrees that it has an ongoing obligation to provide Owner with the name of any new contractual personnel who may deliver goods or provide services under the Contract. Owner reserves the right to prohibit any contractual personnel of Provider from delivering goods or providing services under this Contract if Owner determines, in its sole discretion, that such contractual personnel may pose a threat to the safety or well-being of students, school personnel or others, or if such contractual personnel may otherwise pose a risk to the Owner's operations. Failure to comply with the terms of this provision shall be deemed a material breach of the Contract.

13. <u>Indemnification</u>. Provider shall indemnify and hold harmless the Owner and its agents and employees from and against all claims, actions, demands, costs, damages, losses, and/or expenses of any kind whatsoever proximately resulting from the omission or commission of any act, lawful or unlawful, by Provider or its agents and/or employees, including but not limited to court costs and attorney's fees, incurred in connection with the defense of said matters. The parties agree that this indemnification clause is an "evidence of indebtedness" for purpose of N. C. Gen. Stat. § 6-21.2.

14. <u>Relationship of Parties</u>. Provider shall be an Independent Contractor of the Owner, and nothing herein shall be construed as creating a partnership or joint venture; nor shall any employee of Provider be construed as an employee, agent, or principal of the Owner.

15. <u>Compliance with Applicable Laws</u>. Provider shall comply with all applicable laws and regulations in providing services under this Contract. In particular, Provider shall not employ any individuals to provide services to the Owner who are not authorized by federal law to work

in the United States. Provider represents and warrants that it is aware of and in compliance with the Immigration Reform and Control Act and North Carolina law (Article 2 of Chapter 64 of the North Carolina General Statutes) requiring use of the E-Verify system for employers who employ twenty-five (25) or more employees and that it is and will remain in compliance with these laws at all times while providing services pursuant to this Contract. Upon request, Provider agrees to provide Owner with an affidavit of compliance or exemption. Provider shall also ensure that any of its subcontractors (of any tier) will remain in compliance with these laws at all times while providing subcontracted services in connection with this Contract. Provider is responsible for providing affordable health care coverage to all of its full-time employees providing services to Owner. The definitions of "affordable coverage" and "full-time employee" are governed by the Affordable Care Act and accompanying IRS and Treasury Department regulations.

16. <u>Debarment</u>. Provider hereby certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this Contract by any governmental department or agency. Provider must notify Owner within thirty (30) days if debarred by any governmental entity during this Contract.

17. <u>Restricted Companies List</u>. Provider represents that as of the date of this Contract, Provider is not included on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C. Gen. Stat. § 147-86.58.   Provider also represents that as of the date of this Contract, Provider is not included on the list of restricted companies determined to be engaged in a boycott of Israel created by the North Carolina State Treasurer pursuant to
N.C. Gen. Stat. § 147-86.81.

18. <u>Anti-Nepotism</u>. Provider warrants that, to the best of its knowledge and in the exercise of due diligence, none of its corporate officers, directors, or trustees and none of its employees who will directly provide services under this Contract are immediate family members of any member of the Brunswick County Board of Education or of any principal or central office staff administrator employed by Owner. For purposes of this provision, "immediate family" means spouse, parent, child, brother, sister, grandparent, or grandchild, and includes step, half, and in-law relationships. Should Provider become aware of any family relationship covered by this provision or should such a family relationship arise at any time during the term of this Contract, Provider shall immediately disclose the family relationship in writing to the Superintendent of Schools. Unless formally waived by Owner, the existence of a family relationship covered by this Contract is grounds for immediate termination by Owner without further financial liability to Provider.

19. <u>Applicable Brunswick County Board of Education Policies</u>. Provider acknowledges that the Brunswick County Board of Education has adopted policies governing conduct on all property owned by the Board of Education and agrees to abide by any and all relevant board policies while on its property. Provider acknowledges that these policies are available online on Owner's website. In particular, Provider acknowledges that it has received copies of or has access to (via the Brunswick County Schools' website) and will abide by all applicable Brunswick County Board of Education policies, including but not limited to policies related to conduct on school property, weapons, drugs and alcohol, tobacco, and interactions with staff and students.

20. <u>Damage to Equipment, Facilities, Property or Data</u>. Provider shall be solely responsible for any damage to or loss of Owner's equipment, facilities, property and/or data arising out of the negligent or willful act or omission of Provider or its subcontractors. In the event that Provider causes damage to Owner's equipment or facilities, Provider shall, at its own expense, promptly repair or replace such damaged items to restore them to the same level of functionality that they possessed prior to such damage.

21. <u>Health and Safety</u>. Provider shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with performing the services hereunder.

Provider shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees in connection with performing the services and other persons who may be affected thereby.

22. <u>Non-Discrimination in Employment</u>. Provider shall not discriminate against any employee or applicant for employment because of race, ethnicity, gender, gender identity, sexual orientation, age, religion, national origin, disability, color, ancestry, citizenship, genetic information, political affiliation or military/veteran status, or any other status protected by federal, state or local law or other unlawful form of discrimination. Provider shall take affirmative action to ensure that applicants are employed and that employees are treated fairly during employment. In the event Provider is determined by the final order of an appropriate agency or court of competent jurisdiction to be in violation of any non-discrimination provision of federal, state or local law or this provision, this Contract may be cancelled, terminated or suspended in whole or in part by Owner, and Provider may be declared ineligible for further agreements with Owner.

23. <u>Assignment</u>. Provider shall not assign, subcontract, or otherwise transfer any interest in this Contract without the prior written approval of the Owner.

24. <u>Contract Modifications</u>. This Contract may be amended only by written amendments duly executed by and between the Owner and Provider.

25. <u>North Carolina Law; Venue</u>. This Contract shall be governed by applicable federal law and by the laws of the State of North Carolina without regard for its choice of law provisions. All actions relating in any way to this Contract shall be brought in the General Court of Justice of the State of North Carolina in Brunswick County or in the Federal District Court for the Eastern District of North Carolina, Wilmington division.

26. <u>Dispute Resolution</u>. Should a dispute arise as to the terms of this Contract, both parties agree that neither may initiate binding arbitration. The parties may agree to non-binding mediation of any dispute prior to the bringing of any suit or action.

27. <u>Governmental Immunity</u>. Owner, to the extent applicable, does not waive its governmental immunity by entering into this Contract and fully retains all immunities and defenses provided by law with regard to any action based on this Contract.

28. <u>Order of Precedence</u>. The Parties do hereby agree that in the event of conflict between the terms and conditions of this Contract and the terms and conditions in an agreement entered into between the parties at the same time as or prior to this Contract, the terms and conditions of this Contract shall prevail.

29. <u>Entire Agreement</u>. This Contract, including the purchase order, if any, used in connection herewith and any other document(s) expressly incorporated by reference as a part of this Contract, constitutes and expresses the entire agreement and understanding between the parties concerning its subject matter. This Contract supersedes all prior and contemporaneous discussions, promises, representations, agreements and understandings relative to the subject matter of this Contract. To the extent there may be any conflict between the four corners of this Contract and other documents incorporated by reference herein, the terms of this Contract will control.

30. <u>Attached Exhibits</u>: The following documents, if any, are attached as Exhibits to this Contract and incorporated by reference herein:

Exhibit A: Proposal

Exhibit B: Proposal Modification

Exhibit C: Sexual Registry Form

31.   <u>Severability</u>. If any provision of this Contract shall be declared invalid or unenforceable, the remainder of the Contract shall continue in full force and effect.

32.   <u>Counterparts and Execution</u>. This Contract may be executed in any number of counterparts, each of which will be deemed an original but all of which together will constitute one and the same instrument. This Contract may also be executed electronically. By signing electronically, the parties indicate their intent to comply with the Electronic Commerce in Government Act (N.C.G.S § 66-358.1 et seq.) and the Uniform Electronic Transactions Act (N.C.G.S § 66-311 et seq.). The Parties agree that computer scanned and/or faxed signatures or copies of this Contract will have the same validity and force as an "original."

33.   <u>Authority to Enter Contract</u>. The person(s) executing this Contract on behalf of Provider have authority to do so as an official, binding act of Provider.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first indicated above.

[SIGNATURES APPEAR ON FOLLOWING PAGE]

COUNTY OF BRUNSWICK, NORTH CAROLINA

_____
Chairman, Board of Commissioners

ATTEST:

_____
Clerk to the Board of Commissioners

This Contract was approved by the Brunswick County Board of Commissioners on the 21st day of June, 2021.

DISYS Solutions, Inc.

By: _____ATUL BHATIA_____
        Atul Bhatia, Chief Executive Officer

ATTEST: ___VMU LUTHRA_____
            Corporate Secretary

This instrument has been pre-audited in the manner required by the School Budget and Fiscal Control Act.	This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.
Freyja Cahill	*Julie A. Miller*
Freyja Cahill, Chief Financial Officer Brunswick County Board of Education	Julie A. Miller, Director of Fiscal Operations County of Brunswick, North Carolina

APPROVED AS TO FORM

4.6510.696.319.000.766.00

Bryan W. Batton
_____
Robert V. Shaver, Jr., County Attorney /
Bryan W. Batton, Asst. County Attorney
Brunswick County, NC

EXHIBIT A

REQUEST FOR PROPOSAL (RFP) NUMBER: 153.VAR.21.TECH.163
TURNKEY PHONE SYSTEM

SUBMITTED TO:

BRUNSWICK COUNTY SCHOOLS
BOLIVIA, NC

MAY 10, 2021

Submitted By:

DSI
DISYS Solutions inc.
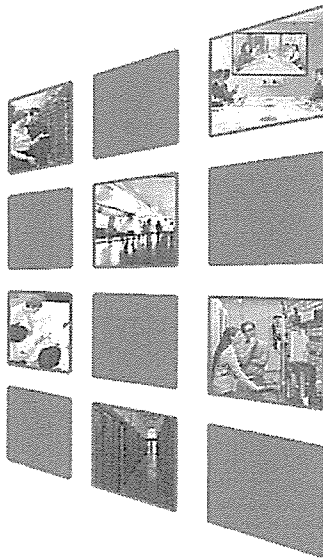
DISYS Solutions, Inc. (DSI)
44670 Cape Court, Suite 100
Ashburn, VA 20147
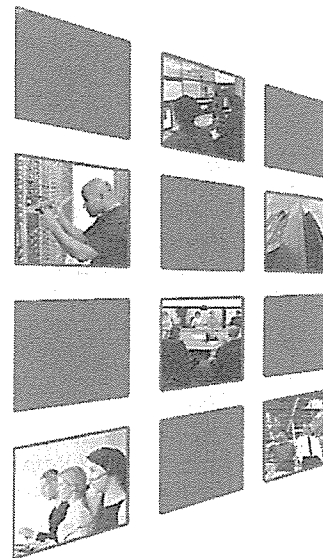888-286-3896 (Phone)
800-601-2944 (Fax)
www.dsitech.com

EXHIBIT A

Bruswick County Schools
RFP Number: 153.VAR.18.TECH.01 – Technology Wireless and Security Project

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DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.18.TECH.01 – TECHNOLOGY WIRELESS AND SECURITY PROJECT

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

DSI
DISYS Solutions Inc
Complete IT Solutions & Services

SUBMITTAL LETTER

May 10, 2021

Brunswick County Schools (BCS)
Operations Division
Attn: Ms. Megan Grissett
35 Referendum Drive
Bolivia, NC 28422

Re: Request for Proposal (RFP) Number: 153.VAR.21.TECH.163
        Turnkey Phone System

Dear Ms. Grissett,

DISYS Solutions, Inc. (DSI) is pleased to submit our quotation for a Turnkey Phone System to support Brunswick County Schools. DSI has reviewed all the Terms and Conditions and takes no exception to a resulting contract. Our submission is in compliance with all the terms and conditions listed throughout the above referenced quote. Please consider this transmittal letter, the information listed below and the attached completed bid document as our complete response.

DSI is a Cisco Authorized Gold Value-Added-Reseller, and IT integrator. We will partner with Brunswick County Schools offering technical assistance, engineering insight, and product roadmaps to ensure that the Brunswick County Schools receive optimal technical information and return on its investment.

1.   Company Name: DISYS Solutions, Inc.
      Address: 44670 Cape Court, Suite 100, Ashburn, VA 20147
      Telephone Number: (571) 707-3636
      E-Mail Address: bidsdistribution@dsitech.com
      Fax Number: (800) 601-2944

2.   Contractor DUNS Number: 96-275-1918
      TIN #:   27-2586114

If you have any questions related to this proposal response, or require additional information, please contact Glenn Hume at 571-707-3622 or by email at bidsdistribution@dsitech.com. We look forward to serving the needs of the Brunswick County Schools.

Sincerely,

Vinu Luthra
Chief Operating Officer

EXHIBIT A

A. Respondent's Profile and Submittal Letter
1. Business History

DISYS Solutions Inc. (DSI) was founded in 1991 by the current owners, Atul Bhatia (CEO) and Vinu Luthra (COO). Originally founded as AV Networks in 1991, AV Networks merged with Digital Intelligence Solutions in 2000 and later formed under its current name as an independent company in 2010. Today, DSI is a privately held corporation, that has grown into a national IT Value-Add Reseller and Service Provider of top industry vendor products and solutions with

The principals (Executive Management Team), Atul Bhatia and Vinu Luthra are actively involved, 100%, in the day-to-day operations of the company. Atul Bhatia, CEO, oversees the financial related business operations such as accounting, purchasing and human resources. He ensures our internal business practices achieve a solid company profit while maintaining cost savings to customers and ethical accounting practices. Vinu Luthra, COO, oversees the success of DSI customer service by ensuring all DSI technology product and services contracts include a staff of sales and engineering personnel that possess exemplar customer service skills and knowledge of current and emerging technologies.

Presently, DSI provides complete end-to-end IT solutions covering the entire technology infrastructure of:
- Wireless Engineering
- Engineering assessment (site surveys), architecture design, implementation, and support
- Cloud Computing
- Collaboration & Telecom
- Data Center
- Internet of Things
- Mobility
- Networks
- Optical Networks
- Security
- Telecommunications
- Managed Services

DSI is recognized by the Commonwealth of Virginia as both a certified Minority-Owned and Small Business. DSI has the following employee and industry certifications:

- Adobe Certified Expert (ACE)

- Governance of Enterprise IT (CGEIT) - Information System Audit and Control Associate (ISACA)

- Information Technology Infrastructure Library (ITIL V3)

- ISO-9001:2015 & ISO/IEC 20243:2018

- Project Management Institute (PMI) certified Project Management Professionals (PMP)

EXHIBIT A

Bruswick County Schools
RFP Number: 153.VAR.21.TECH.163 – Turnkey Phone System

2. ORGANIZATIONAL CHART

Organization Chart

Legend
- Direct Reporting
- Communication Lines
- Key Personnel

DSI
DISYS Solutions Inc.

ATUL BHATIA
CEO

VINU LUTHRA
COO

ADMINISTRATION
ACCOUNTING
HUMAN RESOURCES
PURCHASING

ALAN BECHARA
Executive Vice President

KASHIF SATTI
Vice President of
Technical Services

NORTH CAROLINA SALES TEAM

PANKAJ SHARMA
Regional Manager

CONTRACTS
& PROPOSALS
MARKETING

MARYAM AURAKZAI
Account Representative

ROY EVERETT
Sales Executive

INFORMATION TECHNOLOGY

KASHIF ZAFAR
Sr. Manager of PMO
PMP, ITIL

EXPERT CERTIFICATIONS
(CCIE) - 24

PROFESSIONAL CERTIFICATIONS (CCDA, CCDP, CCENT, CCNA, CCNP, HPE) - 68

VAIJANATH SONVANE
Sr. Network Engineer
CCIE

CISCO
VIPs - 3

BUSINESS VALUE
PRACTITIONERS - 2

NOC NETWORK
TECHNICIANS - 7

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

3. SALES AND TECHNICAL SUPPORT RESOURCES

DSI will partner with BCS providing a Program Support Team streamlined under the supervision of one primary point of contact (POC) to address the execution of the project. DSI's experienced Program Support Team includes sales, program management, and engineering members that bring a Value-Add proposition directly to BCS. Our staff is ready to assist: providing quick responses to any issue, Purchase Order requests, technical questions, working configuration issues and partnering with the BCS to provide solution support and measurable return on the BCS' investment.

| DSI Team Members	Responsibilities	Management Team - Key Personnel	Project Manager	VoIP Specialist
Management Team				
Pankaj Sharma	NC Territory Team Lead – Primary Main point of contact for all sales, customer support and invoicing related issues.	✓		
Roy Everett	NC Outside Sales Executive – Primary Customer Liaison	✓		
Maryam Aurakzai	NC Inside Sales - Support			
Vaijanath Sonvane	Sr. Voice Engineer – CCIE, CCVP, CCNA Shall provide expert technical oversight and advise on configurations and management of the system during project implementation.	✓		✓
Kashif Zafar	Project Manager (PMP) – Primary Shall provide overall project management and resolution of issues during implementation.	✓	✓	
Kashif Satti	Escalation –Technical Operations-Primary Will direct project management and engineering resources with all activities related to the project	✓	✓	
Technical Pool resources assigned by PM – CCIEs are Subject Matter Experts (SMEs)				

Resumes for the Key Staff are included in Section D – Experience of Key Personnel.

EXHIBIT A

4. AUTHORIZATION DOCUMENTATION

Commonwealth of Virginia
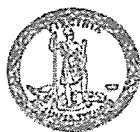
State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That DISYS SOLUTIONS, INC. is duly incorporated under the law of the Commonwealth of Virginia;

That the corporation was incorporated on May 20, 2010;

That the corporation's period of duration is perpetual; and

That the corporation is in existence and in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.
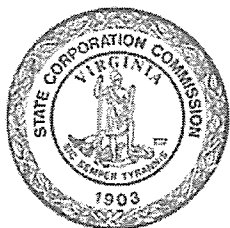
Signed and Sealed at Richmond on this Date:

February 16, 2021

Bernard J. Logan, Clerk of the Commission

CERTIFICATE NUMBER : 2021021615499580

<u>EXHIBIT A</u>

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

NORTH CAROLINA
Department of The Secretary of State

To all whom these presents shall come, Greetings:

I, Elaine F. Marshall, Secretary of State of the State of North Carolina, do hereby certify the following and hereto attached to be a true copy of

APPLICATION FOR CERTIFICATE OF AUTHORITY

OF

DISYS SOLUTIONS, INC

the original of which was filed in this office on the 28th day of June, 2010.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 28th day of June, 2010.

Elaine F. Marshall

Secretary of State

Certification# C201017600233-1 Reference# C201017600233-1 Page: 1 of 4
Verify this certificate online at www.secretary.state.nc.us/verification

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

6

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

<table>
<tr><td>State of North Carolina
Department of the Secretary of State</td><td>SOSID: 1156641
Date Filed: 6/28/2010 3:39:00 PM
Elaine F. Marshall
North Carolina Secretary of State
C201017600233</td></tr>
</table>

APPLICATION FOR CERTIFICATE OF AUTHORITY

Pursuant to §55-15-03 of the General Statutes of North Carolina, the undersigned corporation hereby applies for a Certificate of Authority to transact business in the State of North Carolina, and for that purpose submits the following:

1. The name of the corporation is _DISYS Solutions, Inc_____ ; and if the corporate name is unavailable for use in the State of North Carolina, the name the corporation wishes to use is:
_DISYS Solutions, Inc_____.

2. The state or country under whose laws the corporation was organized is: _Virginia_____.

3. The date of incorporation was _06/01/2010_____ ; its period of duration is: ____*perpetual*_____.

4. Principal office information: *(Select either a or b.)*

   a. ☑ The corporation has a principal office.

   The street address and county of the principal office of the corporation is:

   Number and Street_4151 Lafayette Center Drive Suite 600_____

   City, State, Zip Code_Chantilly, VA 20151_____ County_Fairfax_____

   The mailing address, *if different from the street address*, of the principal office of the corporation is:
   _____

   b. ☐ The corporation does not have a principal office.

5. The street address and county of the registered office in the State of North Carolina is:

   Number and Street _120 Penmarc Drive Suite 118_____

   City, State, Zip Code _Raleigh, NC 27603_____ County _Wake_____

6. The mailing address, *if different from the street address*, of the registered office in the State of North Carolina is:
   _____

7. The name of the registered agent in the State of North Carolina is: _National Registered Agents, inc_____

8. The names, titles, and usual business addresses of the current officers of the corporation are (attach if necessary):

Name	Title	Business Address
Atul Bhatia	CEO	4151 Lafayette Center Drive Suite 600 Chantilly, VA 20151
Virinder Luthra	Secretary	4151 Lafayette Center Drive Suite 600 Chantilly, VA 20151
Maruf Ahmed	~~CFO~~ *Treasurer*	4151 Lafayette Center Drive Suite 600 Chantilly, VA 20151

9. Attached is a Certificate of Existence (or document of similar import) duly authenticated by the Secretary of State or other official having custody of corporate records in the state or country of incorporation. *The Certificate of Existence must be an original and less than six months old.*

CORPORATIONS DIVISION   P. O. BOX 29622   RALEIGH, NC 27626-0622
(Revised January, 2002)   *(Form B-09)*

Certification# C201017600233-1 Reference# C201017600233- Page: 2 of 4

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

APPLICATION FOR CERTIFICATE OF AUTHORITY
Page 2

10. If the corporation is required to use a fictitious name in order to transact business in this State, a copy of the resolution of its board of directors, certified by its secretary, adopting the fictitious name is attached.

11. This application will be effective upon filing, unless a delayed date and/or time is specified:_____

This is the 18 day of June _____ , 20 10

DISYS Solutions, Inc
_____
Name of Corporation

_____
Signature

Virinder Luthra, sec
_____
Type or Print Name and Title

NOTES:
1. Filing fee is $250. This document must be filed with the Secretary of State.

CORPORATIONS DIVISION
(Revised January, 2002)
                                P. O. BOX 29622
                                                                RALEIGH, NC 27626-0622
                                                                (Form B-09)

Certification# C201017600233-1 Reference# C201017600233- Page: 3 of 4

DSI
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<u>EXHIBIT A</u>

Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

DISYS SOLUTIONS, INC. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is May 20, 2010.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 18, 2010

Joel H. Peck, Clerk of the Commission

CIS0353

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EXHIBIT A

5. FEDERAL IDENTIFICATION NUMBER OF FIRM

DISYS Solutions, Inc.'s Federal Taxpayer ID Number is 27-2586114.

6. OWNERSHIP INTERESTS

DISYS Solutions, Inc. (DSI) is a privately-own Corporation, based in Virginia, equally-owned by Atul Bhatia and Vinu Luthra. Both individuals are Authorized Signatories with the authority to bind the Corporation and they hold the following titles:

Atul Bhatia – Chairman of the Board, President and Chief Executive Officer

Vinu Luthra – Secretary, Treasurer and Chief Operating Officer

7. CURRENT CLIENT LIST

While DSI's client list is confidential, we encourage Brunswick County Schools to check our references provided in Section E.

8. ACTIVE BUSINESS VENUES

DSI has active business activities in the states of Virginia, Maryland, North Carolina, South Carolina, Georgia, Florida, Texas and the District of Columbia. At the Federal level, DSI is a GSA prime contract holder and a prime contract holder on two NASA SEWP V (Solutions for Enterprise-Wide Procurement) GWAC vehicles.

Within the State of North Carolina, DSI is active statewide. We are currently on the following contracts:

- City of Charlotte: Cisco Products and Services
- State of North Carolina Department of IT: Cisco IT Enterprise Hardware
- NC Dept. of Public Instruction – E-Rate Category 2

Within the states listed above, DSI is on more than 30 regional/statewide contracts providing us with the capabilities to provide several thousand IT-related products.

EXHIBIT A

9. PRESENT STATUS AND PROJECTED DIRECTION OF BUSINESS

DSI is incorporated in the Commonwealth of Virginia and is certified as both a Small Business and a Minority-owned Business by the Virginia Department of Small Business and Supplier Diversity.

Our company philosophy and work-culture always places the customer's interests first and understands the importance of providing a valuable experience from start to finish. Our knowledge of current and emerging technologies is the foundation for providing solutions and services that increase productivity and create positive workflow for our customers. DSI's Philosophy is fundamental to our business. Each Team member takes personal responsibility for developing a positive relationship and providing a good experience for each client partner by giving efficient, accurate and prompt service, by listening to and understanding the customer's needs, by meeting or exceeding these needs and by meeting our commitments, keeping our promises and taking ownership of our mistakes.

Following is a summary of DSI's future, long-term vision, and strategic plans as they relate to the direction of the proposed solution. It provides a clear vision of how our firm plans to support emerging technologies and industry standards.

Mission Statement:

"Deliver complete life-cycle transformational IT solutions to enable Public Sector customers to realize their vision of productivity, innovation, cost-efficiency, energy-efficiency, security, and user-centricity."

Strategic Initiatives:

- Maintain Cisco certifications and exceptional CSAT scores.
- Expand Channel Program to include additional partner organizations.

Emerging Technologies and Industry Standards:

As a vendor-neutral integration partner, DSI has evaluated, and continues to evaluate, a large variety of technologies, technology providers, and solutions. Based on these evaluations, we have found Cisco Networking solutions to be best-in-class. Consequently, DSI has been a Cisco Direct Value Added Reseller (DVAR) since 2002.

As Cisco is, and remains to be, on the forefront of technology development, DSI feels confident that our association with Cisco will allow us to serve our customers with state-of-the-art emerging technologies as they become available. Furthermore, we feel that Cisco, given its stature in this industry, is regarded as a standard establishing entity. Consequently, we are confident that as a Cisco Gold Partner we maintain and exceed accepted industry standards.

At the same time, our practice of continuous evaluation of technologies, technology providers, and solutions, allows us not only to be aware of emerging technologies, but also how these emerging technologies can integrate with and enhance the quality of existing technologies our customers have already made an investment in.

To support our practice of continuous evaluation of technologies, technology providers, and solutions, we have established formal relationships with organizations including HP, Dell, Brocade, and Microsoft.

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10. FINANCIAL STABILITY

DSI is a financially stable company and currently has 95 employees with sales/engineering personnel in Florida, Georgia, Maryland, North Carolina, South Carolina and Texas in addition to our Ashburn, VA, headquarters. As evidenced by the yearly revenue chart below, DSI continues to grow and in 2020 achieved its highest revenue total to date.

Year	Annual Revenue Volume
2010	$ 31,937,080.83
2011	$ 47,463,584.46
2012	$ 62,474,102.69
2013	$ 68,215,190.29
2014	$ 70,064,089.00
2015	$67,115,942.46
2016	$106,577,059.00
2017	$108,241,446.00
2018	$129,045,804.00
2019	$133,976,111.00
2020	$165,000,487.00

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11. RESELLER AND PARTNER OF PROPOSED SYSTEM

As DSI has grown and evolved over the last 25 years, we have evaluated, sold and supported multiple technologies and thousands of products, and our technical expertise and collective experiences have expanded our core capabilities, and found Cisco to be one of the best value products with unparalleled support. DSI a qualified top tier Gold Authorized Value Added Reseller (VAR) Partner maintaining the certifications, technical specializations, training, and customer experiences required by Cisco Systems, Inc., DSI has consistently received accolades for achieving Customer Satisfaction Excellence – the highest distinction a partner can achieve within the Cisco Partner Program.

CISCO RECOGNITION

DSI was recognized with two awards at the 2020 Cisco Partner Summit: "Customer Experience Partner of the Year" and "SLED East Territory Partner of the Year".

Our staff is not only certified but experienced in advising customers in the best methods of successfully deploying Cisco products and technologies as demonstrated by our Cisco Customer Service Award. DSI has an in-house lab (approximately 1,000 sf.) with various networking equipment for the sole purpose of evaluation and testing our solution before cut-over, and approximately 2,000 ft. of warehouse space for staging and sparing as needed. Using internal configuration resources as well as tools provided by Cisco, DSI's staff can quickly and easily configure products that fit seamlessly into the Customer's existing environments to maximize productivity and reliability, and minimize downtime at cutover.

DSI has the following Cisco certifications held by our team members experienced in performing services to state and local governments, colleges and universities and school districts.

- Total Cisco Certifications – 142
    - Cisco Sales Experts - 53
    - Professionals (CCNP, CCDP, CCIP, CCSP) – 15
    - Experts (CCIE) – 21
    - CCNA, CCENT – 49
    - Cisco Business Value Practitioner – 4

EXHIBIT A

Bruswick County Schools
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CISCO

LETTER FOR CHANNEL PURCHASING

Date:	May 3, 2021
To:	Brunswick County Schools
Bid Number or Project Name:	153.VAR.21.TECH.163

Cisco Systems, Inc. ("Cisco") hereby confirms that, as of the date of this letter, DISYS Solutions, Inc., is a Gold certified Cisco channel partner and that Cisco and DISYS Solutions, Inc., have entered into an agreement for the purchase and resale of Cisco Products and/or Services (the "Agreement").

This means that DISYS Solutions, Inc., (DSI) has complied with the Cisco certification procedure and is duly authorized to purchase and resell Cisco products in the USA as well as negotiate the terms and conditions of support and maintenance services on Cisco products, including warranties, in accordance with the terms and conditions of such Agreement.

Furthermore, DISYS Solutions, Inc., is specialized in the following Cisco technologies:

- Gold Certified Partner;
- Master Networking Specialization;
- Master Security Specialization;
- Advanced SP Architecture Specialization;
- Master Collaboration Specialization;
- Advanced Security Architecture Specialization;
- Advanced Collaboration Architecture Specialization;
- Advanced Data Center Architecture Specialization;
- Cisco Hyperflex Specialization;
- Cisco Umbrella for MSSPs Specialization;
- Cisco WebEx Calling with Calling Plan;
- Cisco WebEx Calling Partner;
- Advanced Enterprise Networks Architecture Specialization;
- EA MSP Cisco DNA - Switching Wireless Routing;
- EA Data Center ACI and HyperFlex;
- EA Cisco DNA - Switching Wireless Routing;
- EA Meraki;
- EA Collab - UC TP PC;
- EA Collab - Flex Plan;
- EA Security Choice;
- EA SPNA Service Provider Network Agreement;
- Collaboration SaaS Specialization;
- Gold Provider;
- Buying Models Commerce Certification;
- EA Data Center Cloud;
- Managed Security;
- Managed Business Communications;
- Security Enterprise Licensing Agreement 1.0;
- Cisco IoT Specialization;
- Data Center Specialization;
- Customer Experience Specialization;
- Secure Remote Work EA Authorization; and
- US Federal Authorization.

Please note that the present confirmation is not permanent, and that the status of Cisco's authorized channel is reviewed on a regular basis. This information is accurate as of the date appearing at the top of this certificate.

If you need any additional information, please do not hesitate to contact Bess Beaty at 919-392-4138.

Phil Lozano, Director, Finance
Cisco Systems, Inc.

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EXHIBIT A

B: FUNCTIONAL GENERAL AND MINIMUM REQUIREMENTS

Describe the Firm's understanding of the District's needs and the objectives to be accomplished. Refer to the Scope of Services of this Request for Proposal. Detail how the proposed system meets the functional requirements outlined in the Scope of Services.

1. SOLUTION OVERVIEW

DISYS Solutions Inc. (DSI) understand that Brunswick County Schools (BCS) is seeking an enterprise grade cloud hosted and fully managed VOIP solution to support the needs of their staff and students.

Based on the requirements, DSI is proposing Cisco Unified Communication Manager Cloud (Cisco UCM Cloud) solution. Cisco UCM Cloud is part of Cisco's Cloud Calling portfolio powered by Cisco's collaboration technology – Cisco Unified Communications Manager (Cisco UCM). The service offers voice, video, messaging, meeting, and mobility solutions with the features and benefits of Cisco IP phones, mobile devices, and desktop clients.

Cisco UCM Cloud is hosted and operated by Cisco in North America, Europe, Asia Pacific, and Japan. UCM Cloud can be deployed as a cloud-only solution, or in a mixed network of both cloud and on-premises Cisco Unified Communications Manager.

The following high-level services are provided by Cisco UCM Cloud:

- Dedicated private instance per enterprise customer in the Cisco cloud
- Highly customizable
- Familiar UCM feature set and user experience
- Enterprise calling features with on-net media optimization
- Enhanced emergency call handling features
- Survivable telephony through redundant, localized call processing
- Integration with third-party applications like Microsoft Office 365, Singlewire, etc. via APIs
- PSTN integration via central breakout and/or Local Breakout (LBO) with Survivable Remote Site Telephony (SRST)
- Calling subscriptions for telephony users and common areas

The following benefits are provided by Cisco UCM Cloud:

- **No capital expenditures (CapEx).** No hardware, software, or data center is required—it is all handled by Cisco. Because you buy less equipment, you can use less power and enjoy the benefits of energy-efficient, green computing.
- **No lengthy deployment time.** There is no telephony equipment to install, so your collaboration service can be operational in a matter of weeks instead of months.
- **No additional staff requirement.** Limited expertise is required, resulting in lower support costs.
- **Predictable costs.** Cisco UCM Cloud is purchased as a Per-User Per-Month (PUPM) subscription.
- **No upgrades necessary.** Cisco handles any new features and upgrades without disrupting your business.
- **Less worries.** Cloud computing can transform the way you provide services, facilitating high agility, scalability, and profitability. You can rapidly respond to changes in the market without having to manage significant infrastructure.

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The following UC applications are included with the standard UCM Cloud offer:

- Cisco Unified Communications Manager
- Cisco Unified Communications Manager IM and Presence
- Cisco Unity Connection
- Cisco Emergency Responder
- Cisco Expressway (C and E)

Solution Components	Brief Description
Cisco Collaboration Flex Plan	Cisco Collaboration Flex Plan for Education is a licensing subscription that gives you access to Cisco's collaboration services and software.
Cisco Unified Communication Manager (Cisco Unified CM or UCM or CUCM)	At the heart of the Cisco UC Solution is the Cisco Unified CM. It provides endpoint registration, call processing, and media resource management.
Cisco Unified IM and Presence (Cisco Unified IMPS)	Cisco Unified IMPS provides native standards-based, enterprise Instant Messaging, and network-based presence. Cisco Unified IM & Presence is included as a part of the Cisco Collaboration Flex Plan.
Cisco Unity Connection (Cisco UCXN or CUC)	Cisco Unity Connection provides Unified Messaging and Voicemail Services.
Cisco Emergency Responder (Cisco ER or CER)	Cisco ER is an emergency communication system that helps you respond to a crisis quickly and efficiently. Cisco ER solution sends emergency calls to the appropriate public safety answering point (PSAP) for the caller's location, allowing the PSAP to identify the caller's location and return the call if necessary.
Cisco Expressway (EXPWY)	Cisco Expressway is an advanced collaboration gateway that helps make collaboration as simple, secure, and effective outside the organization as it is inside. This allows you to equip your teleworkers and mobile Cisco Jabber users with access to their full collaboration workloads without requiring a VPN. Cisco Expressway is included as a part of the Cisco Collaboration Flex Plan.
Cisco Jabber Client	Cisco Jabber platform allows all users to access presence, IM, voice, video, voice messaging, desktop sharing, and video conferencing from any device. Cisco Jabber is included as a part of the Cisco Collaboration Flex Plan.

Customer can deploy supported third party applications on Cisco UCM cloud as an add-on Integration as a Service (IaaS). Applications that integrate with UC applications may require configuration to match the Cisco UCM Cloud configuration. The configuration requirements and procedures must be identified for deployments with multiple organizations are involved.

EXHIBIT A

2. CISCO UCM CLOUD FEATURES

2.1. MANAGEMENT INTERFACES

The table below provides a partial list of Administration features supported by the service:

Feature	Description
Administration Portal	This secure web portal enables partners and customers to administer and configure system and end-user features.
Self-Care Portal	This secure web portal enables end-users to administer their assigned services.
HTTPS for Secure Web Access	Partner- and customer-accessible administrative and self-care portals provide secure HTTPS access using TLS.
Lightweight Directory Access Protocol (LDAP)	Support for LDAP to synchronize with the customer's LDAP directory. With this feature, end users are defined in the customer's directory and synchronized into the unified communications application.
Single Sign-On	SAML-based Single Sign-On (SSO) for access to partner- and customer-accessible administrative and self-care portals. Single sign-on allows users to only authenticate once and be able to access multiple Cisco UCM Cloud portals without re-authentication.
Webex Control Hub	Cisco Webex Control Hub is a cloud-based, intuitive, single-pane-of-glass management portal that provides reporting, analytics, and administrative capabilities for Cisco Webex services, including UCM Cloud.

2.2. CALLING FEATURES

Cisco UCM Cloud supports UCM-compatible call processing in order to originate, route, and terminate audio and video calls using SIP-based signaling for call setup and teardown. Media exchange occurs directly between the endpoints across the IP network, using the Real-Time Transport Protocol (RTP) or Secure Real-Time Transport Protocol (SRTP).

Cisco UCM Cloud enables voice and video communications through supported voice and video endpoints and desktop soft clients like Webex and Jabber.

The table below provides a partial list of Calling features supported by the service:

Feature	Description
Audio Calling	Make and receive audio calls to and from registered endpoints in the network (SIP-only). Supported audio codecs: G.711a/μ, G.729a, etc.
Video Calling	Make and receive video calls to and from video-enabled registered endpoints within the same customer network. Supported video codecs: G.711 G.722 G.722.1 G.729 AAC-LD Opus.
Direct Outward Dial (DOD)	Supports the ability for a registered endpoint to directly dial an outside number routed to the PSTN.
Direct Inward Dial (DID)	This feature that enables callers from PSTN to dial directly into a registered endpoint using an E.164 number.

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Feature	Description
International Dialing	Make and receive international calls to and from any registered endpoint through the telephone network.
Call Preservation for Active Calls	Full call preservation for calls between registered endpoints on the customer's network in the event CISCO UCM CLOUD becomes unreachable. No mid-call features will be available when the call is in "call preservation" mode. Any call involving media from Cisco UCM Cloud (like music on hold, announcements, etc.) will not be preserved if Cisco UCM Cloud is unreachable.
Barge	Barge allows a user to be added to a remotely active call that is on a shared line. The feature has a dependency on endpoint support for a built-in-bridge.
Call Forward	Allows a user to configure an endpoint to forward calls to another phone. Following is a sample of a few of the call-forwarding types that are supported: • Call Forward All (CFA): Forwards all calls to a number • Call Forward Busy (CFB): Forwards calls when the line is in use • Call Forward No Answer (CFNA): Forwards calls when the phone is not answered after a configured duration is exceeded
Call Hold/Resume	Allows a user to place a call on hold by pressing the "hold" button on the endpoint. If Music On Hold (MOH) is configured, recorded media will be played while the remote user is on hold. Unicast MOH is only supported (no multicast support).
Call Park	Allows a user to place a call on hold so that it can be retrieved by a different endpoint. An authorized configured endpoint can then dial the call park extension to retrieve the call.
Call Pickup	Allows users to pick up (resume) a call that has been parked.
Group Call Pickup	Allows you to configure a set of users who have privileges to pick up "parked" calls.
Call Transfer	Redirect a connected call from your phone to another number.
Client Matter Codes (CMC)	Manage call access using authorization account codes.
Forced Authentication Codes (FAC)	Manage call access using a combination of authorization codes and authorization levels. The dialed FAC code must be equal to or greater than the authorization level that is specified for the route pattern for the call.
Do Not Disturb	Set the endpoint to not ring when called.
On-Hook Dialing	Dial a number while your endpoint is on-hook (without hearing dial tone). Then go off-hook by lifting the endpoint handset or pressing the speakerphone button.
Off-Hook Dialing	You must first go off-hook, and then dial a number to place a call.
Join Across Lines	Merge established calls on multiple lines to create a conference.

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Feature	Description
Fax/Modem over IP (pass-through)	With fax pass-through support, modulated fax information is passed in-band over a voice speech path in an IP network. Customer premises gateways that support these protocols must be used.
Speed Dial	Speed dial entries can be configured and assigned to the speed dial buttons on the endpoint to quickly place calls.
Abbreviated Dial	Abbreviated dial settings are speed dial entries that are grouped together and associated with the abbreviated dialing button on the endpoint. When the abbreviated dial button is pressed, the endpoint displays the option to select an abbreviated entry to dial.
Auto Answer	Will cause the endpoint to automatically answer an incoming call without ringing or any user interaction.
Calling Line ID	Displays the calling number for an incoming call during the alerting stage.
Calling Name ID	Displays the calling name associated with the calling number for an incoming call during the alerting stage.
Unassigned Directory Numbers	Allows a partner or customer to manage unassigned numbers. These are numbers that are no longer associated to an endpoint.
Directories	The directory feature allows a user to look up Cisco UCM Cloud-configured numbers on their endpoint.
Privacy	Enable or disable the capability of users with phones that share the same number to view call status and to barge into the call.
Extension Mobility	Enables users to temporarily access their endpoint settings, such as line appearances, services, and speed dials, from other endpoints within your system.
Toll Restriction	Restrict endpoints from making long-distance or toll calls on a per-device basis.
Multiple Line Appearances	Allows an endpoint to be configured with multiple lines.
Calls per Line	Terminate multiple calls on the same number.
Hunt Groups	Configure a collection of telephone numbers to ring in a specific order based upon a ringing algorithm. Users can monitor their login status via a line key.
Shared/Bridged Line Appearances	Configure a single number across multiple endpoints. Calls to this number will ring all the endpoints that are configured with the shared number.
Ad Hoc Conferencing	Create an audio conference call with up to two other parties without prior scheduling.
Single Number Reach (SNR)	Users can answer incoming calls on either their endpoint or mobile client.
Bandwidth Accounting	Call admission control.

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Feature	Description
Dialed Number Analyzer	This tool allows you to test a Cisco Unified Communications Manager dial plan configuration before deploying it. You can also use the tool to analyze dial plans after the dial plan is deployed.
Call Detail Records (CDR)	CDRs for all call usage-based data. Usage data can be accessed ad-hoc or on a scheduled basis: daily, weekly, or monthly.
Partner Troubleshooting Tool	This client-side application be used to troubleshoot and diagnose: • Device status • Device discovery • Computer Telephony Integration (CTI) applications • Call routing • Dial Plan
IP Phone Support	Cisco IP 39xx, 68xx, 69xx, 78xx, 79xx, 88xx, 99xx, series endpoints. Third-party standard SIP endpoints.
Soft Phone Support	Cisco Jabber and Cisco Webex client.
Video Endpoint Support	Cisco IX, TX, CTS, T, EX, DX, MX series endpoints.

2.3. VOICE MESSAGING FEATURES

Cisco Unity Connection provides users with flexible access to their voice messages. Voice messaging is the recording and storing of phone messages, which users can manage at their convenience. Users can even forward messages to third parties.

Mailbox stores are allocated at 14MB per user and cannot be increased. The user will be warned when 12MB are used, and again at 13MB of usage. Once the mailbox is full, the user will be prevented from sending or receiving additional voicemail until usage is reduced.

The table below provides a partial list of Voice Messaging features supported by the service:

Feature	Description
Voice Messaging	Users can receive voice messages in their personal mailbox.
Voice Messages Access	Users can access new and saved voice messages using a touchtone or voice recognition conversation over a phone.
Multiple Personal Greetings	Record up to six personal greetings that can be configured to be played when a call is not answered.
After-Greeting Action	Call handlers can be configured to perform an action after the greeting: take messages, play a recorded announcement, or transfer the call to users.
Notifications	Users can be notified of incoming voice messages as soon as the message arrives in the user's mailbox. A notification message will be delivered to the configured phone number.
Distribution List	Voice messages can be sent to a group of voice message recipients.

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Feature	Description
Password and PIN Policy Options	Authentication rules govern user passwords, PINs, and account lockouts for all user accounts.
Call Restriction Tables	Call restriction tables can be used to help guard against toll fraud. Restriction tables can be used to control the phone numbers that can be used for transferring calls or message notifications.
Voice Message Aging Policies	Message aging policies ensure that the mailbox storing the customer's voice messages do not fill up.
Message Locator	Search for messages by another user, outside callers, or a specific number.
Message Sensitivity	Mark messages as regular or urgent. Configure if message notifications are sent when all new voice messages arrive, or limit notifications to only those marked as urgent.
SpeechView	Enables the transcription of voice messages so that users can receive the voicemails in the form of text.
Secure Messages	By setting message sensitivity as secure, users can control who can access a voice message and whether it can be redistributed to others.
Future Delivery	Deliver the message at a future date or time that you specify.
Return Receipt	Request a return receipt so that you are notified when a recipient opens the voice message you left them.
Live Recording	Record conversations while on a phone call. Recordings will be persisted in the user's mailbox store.
Live Reply	Users who are listening to messages by phone can reply to a message by calling the sender.
System Broadcast Messages	Recorded announcements can be sent to everyone in an organization.
IMAP Client Support	View voicemail messages from secure IMAP clients.
Message List on IP Phone	View a voice message list on a supported Cisco IP phone display.

2.4. INSTANT MESSAGING AND PRESENCE FEATURES

Cisco Instant Messaging and Presence Service (IM and Presence) is a standards-based enterprise platform that facilitates the highly secure exchange of presence and IM information. Instant messaging is an important communication option that lets you efficiently interact in today's multitasking business environment. IM and Presence provides personal and group chat capabilities so you can quickly connect with individuals and groups and conduct ongoing conversations.

IM and Presence is tightly integrated with Cisco Jabber IM clients. It enables these clients to perform numerous functions such as instant messaging, presence, click-to-call, voice, video, and visual voicemail.

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The table below provides a partial list of IM and Presence features supported by the service:

Feature	Description
Enterprise-Grade Instant Messaging	Enjoy secure, rich-text, one-on-one chat and group chat capabilities.
Group Chat Escalation	Add additional participants to a one-on-one chat session and convert to a group chat.
Standard and Custom Presence Status	Select a standard presence status or create a customized status for specific situations.
Do Not Disturb	Silence notifications to not be disturbed.
Privacy Policy	Privacy policies allow you to determine which users can see your availability status, and send you instant messages.
File Transfer	Directly perform a local file transfer within the context of a one-on-one chat session.
Predictive Search	Look up contacts quickly. Predictive search offers you suggestions as you type in a search query and can index your Cisco Jabber contact list.
Desktop Share	Share the desktop during a one-on-one chat.
Integrated Voice and Video	Make and receive audio and video calls using the Jabber client. Mobile Remote Access phone control is not supported.
Visual Voice Message Access	View, play back, and delete voice messages from Jabber.
Message Archiving	Store IM records for future recovery and analysis to a customer's on-premises database. The database is not provided, managed, or operated by Cisco.
Directory Integration	Source contacts from a customer's Lightweight Directory Access Protocol (LDAP) server.
Webex Integration	Cisco Webex calendar integration enables users to host or join Webex meetings from Jabber.
Multi-platform IM Client	Cisco Jabber is supported on Microsoft Windows, Mac OS X, Apple IOS, and Android platforms.

2.5. MOBILE AND REMOTE ACCESS FEATURES

Cisco UCM Cloud supports Mobile and Remote Access (MRA) for user endpoints to securely connect to the service from an outside customer network without having to establish a secure direct connection (e.g., VPN, etc.).

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The table below provides a partial list of MRA features supported by the service:

Feature	Description
Mobile Voice Access	Voice calling is available when the user endpoint is not within the enterprise network.
Mobile Voice Message Access	Voice messaging capabilities are available when the user endpoint is not within the enterprise network.
Instant Messaging and Presence	Instant messaging chat capabilities and presence status are available when the user endpoint is not within the enterprise network.
Single Number Reach (SNR)	Users can answer incoming calls on their endpoint not within the enterprise network.
Voice over Wi-Fi	Voice calling capabilities (make and receive) are available using supported endpoints over a Wi-Fi connection.
Call Preservation	SNR calls are anchored so that the call is preserved for a certain amount of time to allow it to be resumed from an IP desk endpoint in the event the Jabber client hangs up or exits.

2.6. EMERGENCY CALL HANDLING FEATURES

The emergency call routing service feature allows an administrator to define Emergency Location Identification Numbers (ELINs) at the device pool level, or device level, so that a device's location can be determined and identified at the Public Safety Answering Point (PSAP). Due to the portable nature of the Jabber client, location information may not be accurate if Jabber is used to place emergency calls.

A table below provides a partial list of emergency call handling features supported by the service:

Feature	Description
Identification of Caller Location to PSAPs	Associate an ELIN to an endpoint. ELIN to location mapping is used to update the Automatic Location Information (ALI) database. When an endpoint makes an emergency call, the PSAP can determine the location based on the ELIN set in the call signaling. The partner must update the ALI database.
Emergency Call-Back to ELINs	The ELIN-to-endpoint association is maintained for a specific duration, during which PSAP can call back the endpoint that made the emergency call.
Emergency Call Alerting	Emergency Call Alerting helps onsite security identify and assist emergency callers immediately, and direct fire, police, or ambulance services.

3. ARCHITECTURAL OVERVIEW

Cisco UCM Cloud is a cloud-based enterprise calling solution hosted in Cisco Webex data centers in multiple geographically distributed locations.

As shown in Figure 1, customer uses an instance of UC applications deployed in the UCM Cloud data centers. Calls made from IP phones connected to the UCM Cloud use SIP for signaling and RTP for media. Phones obtain TFTP information from UCM and register with the UCM Cloud deployed in the region. UCM Cloud continues to use the same connection to send traffic back to the phone, providing firewall traversal.

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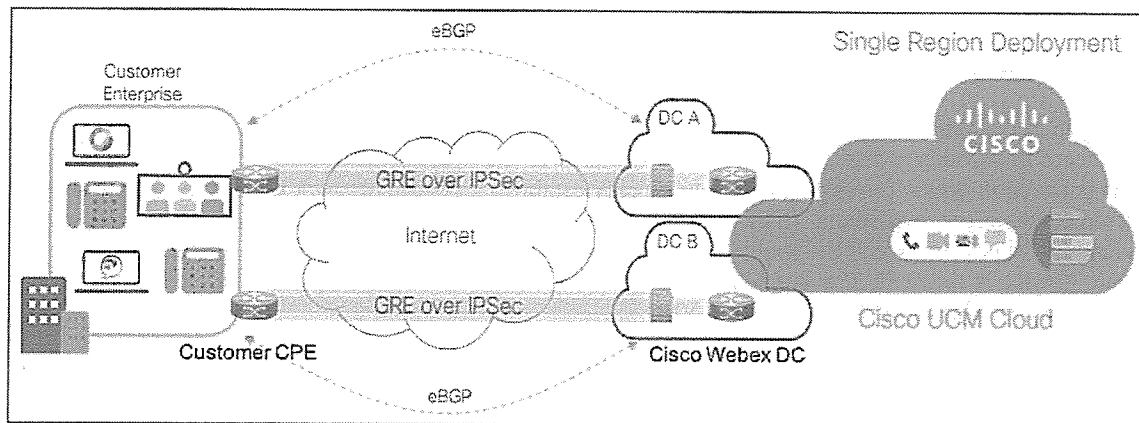
Figure 1: Cisco UCM Cloud High-Level Solution Architecture

3.1. CONNECTING TO CISCO UCM CLOUD

Cisco UCM Cloud is a private cloud where service is primarily delivered over a private connection to the customer premises. Over the Top (OTT) access is included to service mobile and remote workers. A private connection to UCM Cloud provides security and reliability, consistent network performance with faster speeds and lower latencies, delivering a more consistent and enhanced collaboration experience.

Cisco UCM Cloud Direct Connect is a set of services that allow customers to connect directly to Cisco UCM Cloud. The following deployment options are available for Direct Connect peering (mixing different Direct Connect types across regions is supported):

- Webex Edge Connect
  Cisco Webex Edge Connect for Cisco UCM Cloud enables customers to connect dedicated, managed, redundant IP links from their premises to the Cisco UCM Cloud (calling workload only). Customers connect directly to the Cisco Webex backbone via the Equinix cloud exchange.

- Virtual Connect Via VPN or SD-WAN
  Virtual Peering enables customers to securely extend their private network virtually over the Internet to the Cisco UCM Cloud without the need to own and support the remote infrastructure and dedicated circuits. Cisco SD-WAN (formerly Viptela and Meraki) or VPN are supported for Virtual Connect. In both cases, Cisco hosts, manages, and assures redundant customer dedicated routers (VPN router or SD-WAN Edge device) with Internet access, in the Cisco UCM Cloud data center region(s) where service is required. The customer is responsible for the corresponding premises equipment and SD-WAN licenses.

- Fiber Connect
  Fiber Connect enables customers to securely connect their private network via their point-to-point fiber circuit directly to the Cisco UCM Cloud. Cisco provides the customer the ability to securely terminate redundant fiber connections in the Cisco UCM Cloud data center region(s) where service is required. The customer is responsible for the fiber circuit and the corresponding premises equipment.

- MPLS
  MPLS Connect enables customers to securely connect their private network via their MPLS connection directly to the Cisco UCM Cloud. Cisco provides the customer the ability to securely terminate redundant MPLS connections in the Cisco UCM Cloud data center region(s) where

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service is required. The customer is responsible for the MPLS circuit and the corresponding premises equipment.

The proposed solution is based on Virtual Connect via VPN. Virtual Connect (VPN) enables UCM Cloud customers to securely extend their private networks over the Internet using point-to-point VPN tunnels. This connection option provides a means to quickly establish a private network connection using existing customer premises equipment (CPE) and Internet connectivity. Cisco hosts, manages, and assures redundant VPN routers and the required Internet access, in the Cisco UCM Cloud data center region(s) where service is required. The customer is responsible for the corresponding premises equipment (CPE) and Internet services used to establish the VPN.

Customer will need to take into consideration about the following requirements for direct connect option:

- Management Network (to access UC applications) is through the customer network (This may change once Cisco support access for the UC applications in Webex Control Hub).
- Third party integration is through the customer network. Cisco does not provide the Internet for third party integration.
- Cisco provides Internet for services such as MRA, APNS, GDS phone activation.

As shown in Figure 1, each order for Virtual Connect (VPN) includes two Generic Routing Encapsulation (GRE) tunnels protected by IPsec encryption (i.e., GRE over IPsec), one to each of the redundant UCM Cloud data centers in the respective region where the order was placed. Traffic is encrypted and travels between two networks via public Internet. The customer must ensure that the round-trip time (RTT) from their WAN to UCM Cloud does not exceed 300ms. The customer is responsible for Certificates and encryption keys for secure connections.

Note: While not a requirement, Cisco recommends two CPE devices for redundancy, one to terminate each of the two point-to-point VPN tunnels. Additional redundancy can be achieved by terminating each tunnel to a separate physical location within the customer infrastructure.

3.2. CISCO UCM CLOUD HIGH AVAILABILITY/REDUNDANCY
Cisco UCM Cloud provides high availability within the data centers and across regions. Box-to-Box redundancy is available with Cisco UCM Cloud. Cluster-over-Wan is implemented in the Cisco UCM Cloud environment, and it can be leveraged for failover and fallback in case of WAN link failures as shown in Figure 2.

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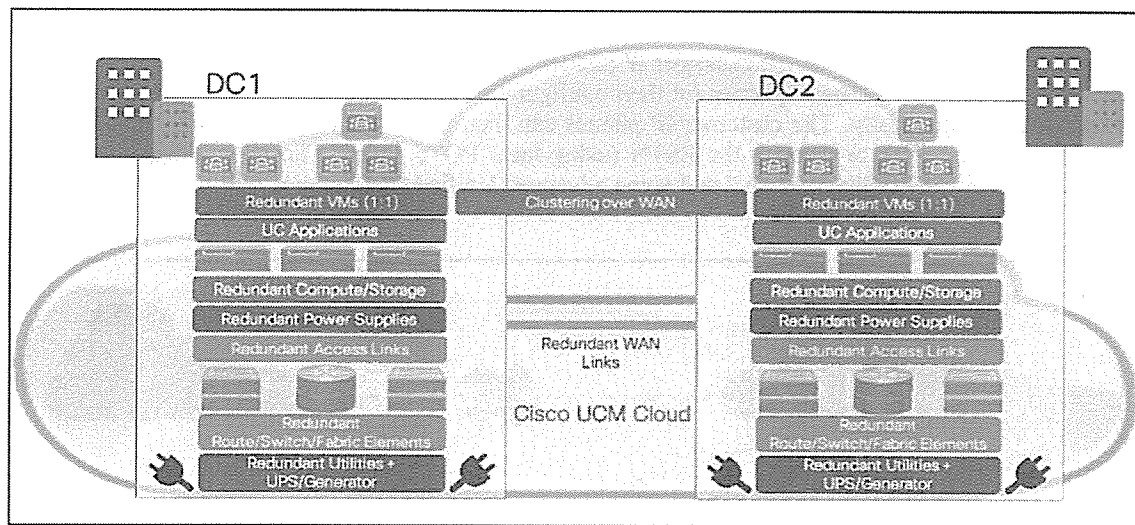
Figure 2: Cisco UCM Cloud Redundancy

Cisco UCM Cloud also supports SRST (Survivable Remote Site Telephony). SRST adds automatic telephony survivability for the customer during WAN link failures to the cloud. The proposed solution includes Cisco 4000 Series ISR Routers to provide SRST functionality. SRST gateways will be deployed at customer premises (by DSI) to ensure service availability and address call failure scenarios. SRST gateways are provisioned with analog ports to provide PSTN connectivity using POTS lines .

Note: Customer must provide POTS lines from local Service Provider for local failover functionality. It is not included as a part of this proposal.

Under normal operations shown in Figure 3, the customer sites will connect to the UCM Cloud via customer WAN, which carries voice traffic and call signaling. The IP phones at customer sites exchange call signaling information with the UCM Cloud and place their calls across the customer WAN.
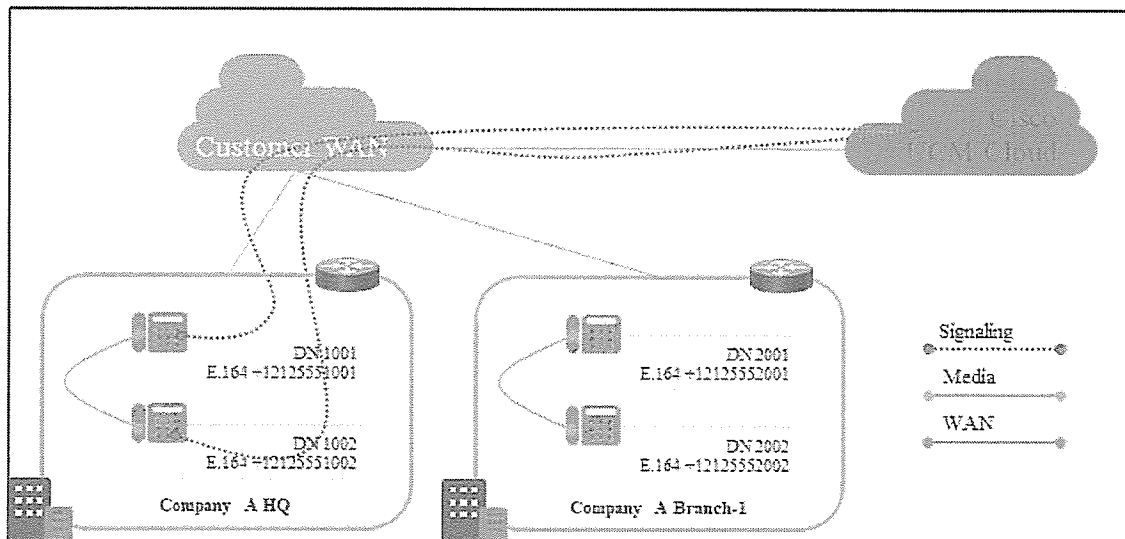
Figure 3: Cisco UCM Cloud Normal Operation

EXHIBIT A

If WAN link to the UCM Cloud fails, as shown in Figure 4 , or if some other event causes loss of connectivity to the UCM Cloud, the customer IP phones will re-register with the local SRST Router. The local SRST Router queries the IP phones for their configuration and uses this information to build its own configuration automatically. The customer IP phones can then make and receive calls either within the customer office network or through the PSTN (using local POTS lines). The phones will display the message "Unified CM fallback mode," and some advanced Unified CM features will be unavailable and are grayed out.
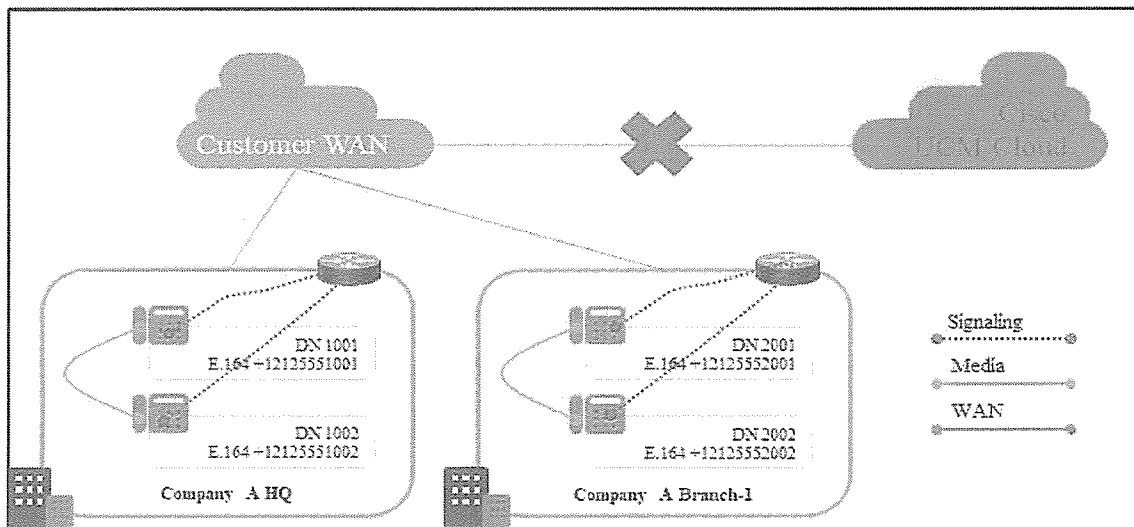
Figure 4: Cisco UCM Cloud SRST Failover

When WAN connectivity to the UCM Cloud is reestablished, the customer IP phones will automatically re-register with the UCM Cloud and resume normal operation. The SRST Router deletes its information about the IP phones and reverts to its standard routing or gateway configuration.

3.3. CISCO UCM CLOUD DATA CENTERS
Cisco UCM Cloud data centers are in the North America, Europe, and Asia Pacific regions, interconnected by a multi-gigabit and fully redundant backbone (for the UC applications).

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Figure 5: Cisco UCM Cloud Data Centers

The proposed Cisco UCM Cloud solution will be serviced from below locations:

Americas Region		
City	**Equinix Data Center Name**	**Address**
San Jose, CA, USA	Equinix SV1 – San Jose, CA USA (SJC03)	11 Great Oaks Blvd, San Jose, CA 95119 Suite SV:01:001940
Dallas, TX, USA	Equinix DA6 – Dallas, TX USA (DFW10)	1950 N. Stemmons Freeway, Suite 135 Dallas, TX 75207

3.4. CISCO UCM CLOUD CALL FLOWS

Cisco UCM Cloud follows the standard approach of signaling via the cloud and media transmitted directly between phones at different sites.

The call flows described in this section include customer intra-site calls and customer inter-site calls. Calls between different entities flow through the PSTN connection via the customer WAN. If a customer has Mobile and Remote Access (MRA) configured, calls flow through the customer WAN and UCM cloud to the partner aggregation point.

3.4.1. Customer Intra-Site Calls

Customer intra-site call signaling travels via the Cisco UCM Cloud; media stays within the on-premises customer's site.

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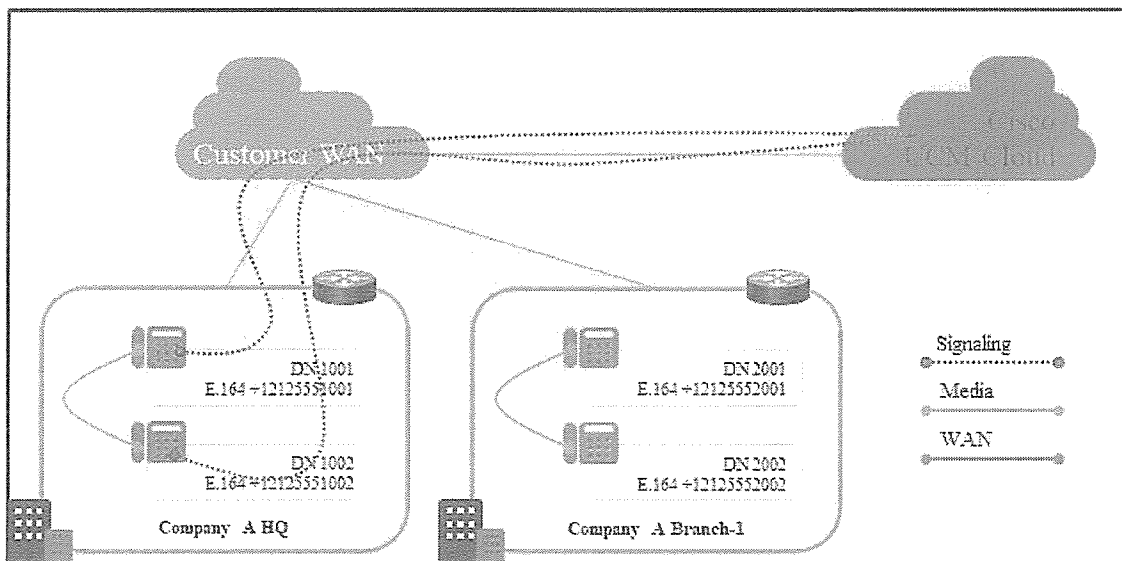
Figure 6: Customer Intra-site Calls

3.4.2. Customer Inter-Site Calls
Signaling for customer inter-site calls travels through Cisco UCM Cloud, while media flows over the customer's WAN as shown in Figure 7.
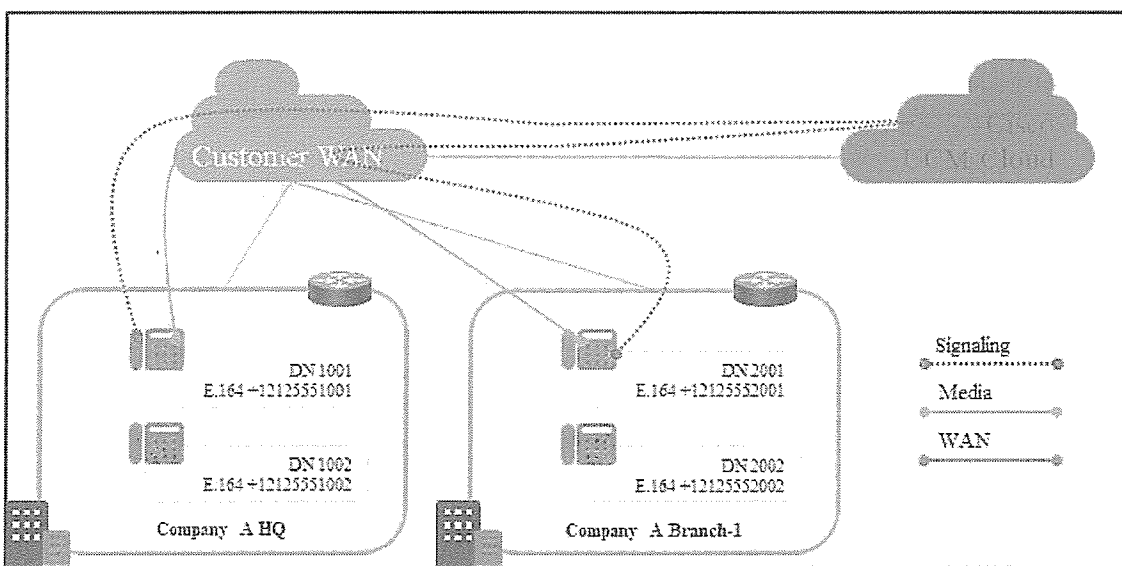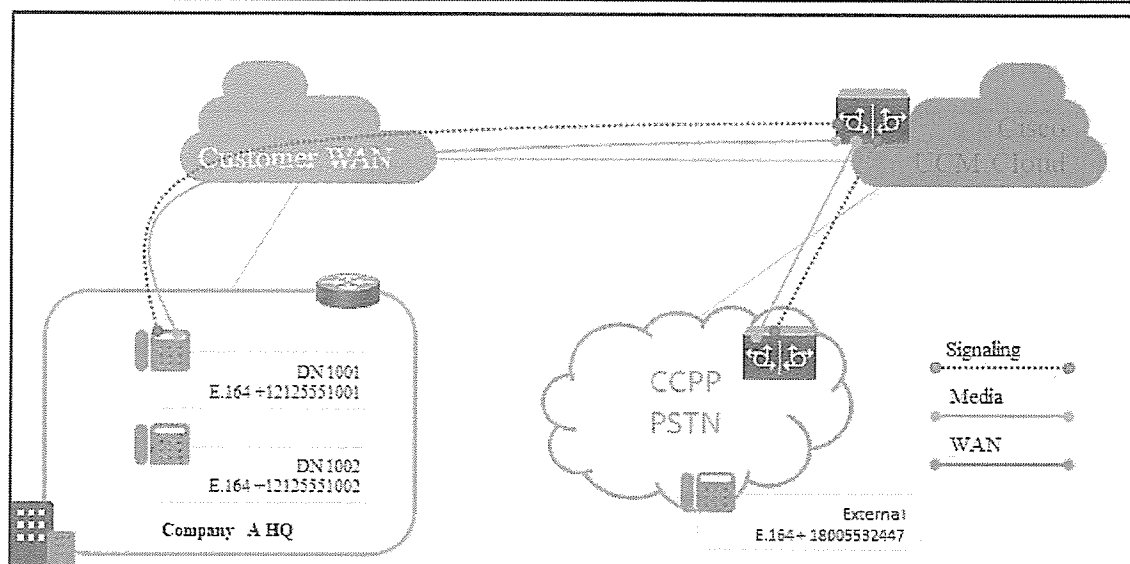

Figure 7: Customer Inter-site Calls

3.4.3. Customer PSTN Calls
Signaling and Media for customer PSTN calls travels over customer's WAN through Cisco UCM Cloud as shown in Figure 8.

EXHIBIT A

Figure 8: Customer PSTN Calls

3.5. CISCO UCM CLOUD SIZING

A UCM Cloud deployment from an application perspective is very similar to a Cisco on-premises deployment, except that computing hardware and virtual machine management are no longer owned and managed by the customer. When considering moving Cisco UCM based call control services to the cloud, you must consider the sizing of the deployment to ensure a successful migration. UC Application sizing is a function of the UCM Cloud team and is not dependent on the on-premises deployment.

The term "cluster size" refers to the number of call processing servers required to support the customer deployment. A cluster consists of a publisher node and multiple subscriber nodes that perform services such as call control, TFTP file delivery, Music-on-Hold services, and so on. Because a cluster is limited by the number of call processing server nodes, the call processing server node count is the limiting factor in determining a cluster size. A fully deployed UCM Cloud cluster can support up to 8 call processing servers or approximately 40,000 devices.

The number of users and the average number of devices per user, captured in the CQ (Customer Questionnaire) process, determines number of call processing nodes deployed in the UCM Cloud cluster. Although there are other considerations that could impact the number of nodes in the cluster, user and device count are the primary factors. A few of the other factors included in sizing decision are Busy Hour Call Attempts (BHCA), CTI application integration, security, and the number of mobile clients.

3.6. PSTN BREAKOUT

Cisco UCM Cloud customers can access the PSTN in several ways: Local Gateway, Partner Bundled, and Cloud Connected Calling Provider (CCPP).

The proposed solution is based on Cloud Connect Calling Provider. Cisco has set up shared SIP integration with a number of Cloud Connected PSTN providers that enables customers to quickly and effortlessly buy PSTN services from a list of authorized, pre-integrated CCP Providers. With CCP, Cisco interconnects with select PSTN providers, enabling UCM Cloud customers to have economical and reliable PSTN directly from the cloud.

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In this design, DSI is proposing SIP Trunk PSTN services from IntelePeer which includes 100 simultaneous SIP call paths and 260 Direct Inward Dial (DID) number porting.
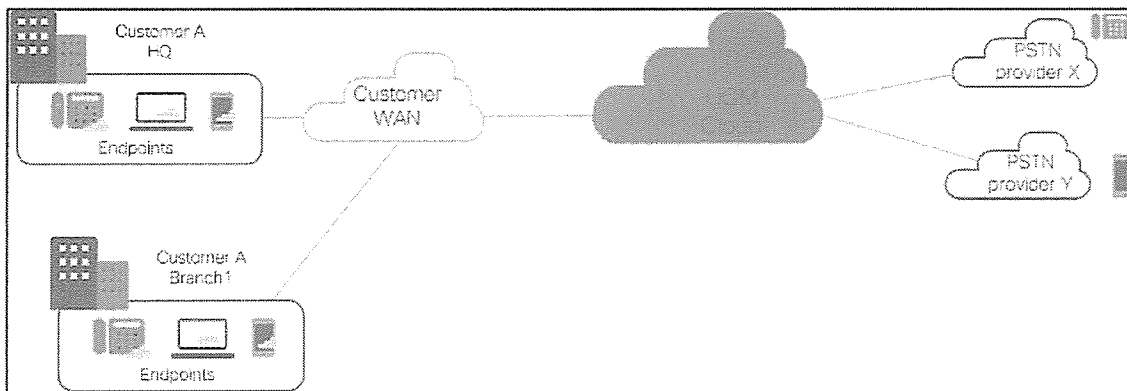
Figure 9: Cloud Connected Calling Provider Option

As shown in Figure 9, customer will connect to the Cloud connected Calling provider via Cisco UCM Cloud. Customer will have the option to connect different sites to different providers for cost optimization. For example, Customer A HQ, can have PSTN from Provider X and customer A Branch 1 site can have PSTN from provider Y and so on.

The following additional services are included in this design by CCCP Provider:

- One U.S. telephone number
- Can include primary & secondary trunks to Cisco UCM data centers
- Unlimited calling to U.S. 50 states and Canada
- Carrier/port transfer fee
- E911 services
- Self-Managed Portal
- 12 month pricing that includes annual renewal (protected pricing) --- up to 36 or 60 months
- Business continuity planning, disaster routing, engagement workflow & analytics

Using an existing PSTN service provider is also an option for UCM Cloud. This is facilitated by the use of a local gateway and this option gives the customer the ability to buy UCM Cloud with PSTN service provided by virtually any PSTN carrier. DSI will work with customer to identify the best and cost effective solution for their environment.

## 4. DEPLOYMENT CONSIDERATION

4.1. CISCO UCM CLOUD IP ADDRESSING

Cisco deploys UC applications using the following IP addressing for each customer UC application instances. Customer need to provide routing to the IP addresses below while making a UCM Cloud connection via Customer Connect models. Note that customer need to be on the management network to be able to access UC applications using the IP address segment described here.

Data Center	IP Addresses
North America	69.168.17.0/24

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Data Center	IP Addresses
EMEA	178.215.138.0/24
APJ	103.232.71.0/24

Cisco UC Applications in the UCM Cloud will be deployed using Cisco IP addresses as shown in Figure 10 (North America DC example)
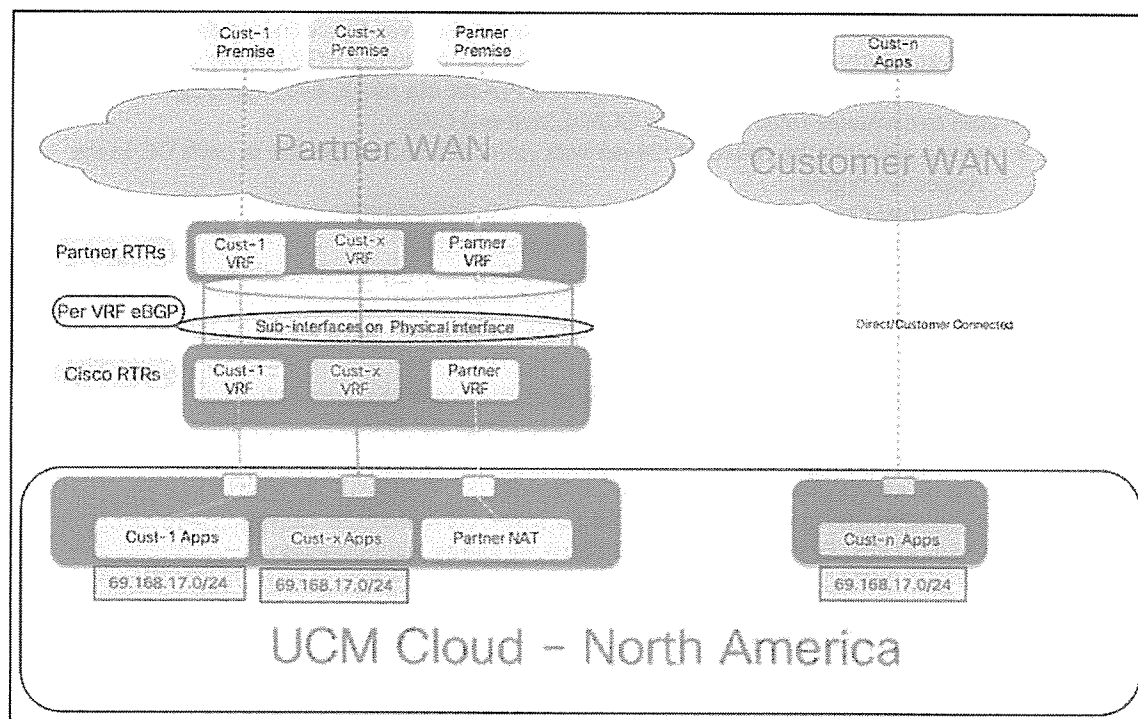
Figure 10: Cisco UCM Cloud IP Addressing

4.2. ROUTING FOR CISCO UCM CLOUD

Routing for all Direct Connect add-ons is implemented using eBGP between UCM Cloud and the CPE. Cisco will advertise the respective networks for each redundant DC in a given region to the customer's CPE and requires that the CPE advertise a default route to Cisco.

The base requirements for establishing Virtual Connect – VPN peering include:

- Customer provides
  - Internet connection with enough available bandwidth to support the deployment
  - Public IP address(es) for two IPSec tunnels
- Partner and Customer
  - Work together to evaluate bandwidth requirements
  - Ensure network device(s) support Border Gateway Protocol (BGP) routing and a GRE over IPSec tunnel design

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- Partner or Customer provides
  - Network team with knowledge of site-to-site VPN tunnel technologies
  - Network team with knowledge of BGP, eBGP, and general routing principles
  - Class C (/24) RFC 1918 network for UCM Cloud instance addressing. Customer also can provide a public network, if desired
- Cisco
  - Cisco assigned private autonomous system numbers (ASNs) and transient IP addressing for GRE tunnel interfaces
- Cisco maintains and assigns:
  - Tunnel Interface IP addressing (transient link for routing).
    - Cisco assigns from a designated Shared Address Space (non-publicly routable).
  - Private Autonomous System Numbers (ASN) for customer BGP routing config.
    - Cisco assigns from the designated Private use range: 64512 through 65535
- eBGP used to exchange routes between UCM Cloud and CPE.
  - Cisco will split the collected /24 network into 2 /25 and assign one to each DC in the respective region.
  - In Virtual Connect (VPN), each /25 network is advertised back to CPE by Cisco over the respective point-to-point VPN tunnels (transient link).
  - CPE must be configured with two separate BGP routing configurations, each using the respective ASN assigned in the PQ.
  - Cisco side of each GRE Tunnel (tunnel interface IP) is configured as the BGP neighbor on the CPE.
  - CPE is required to advertise a default route over each of the tunnels.
  - CPE is responsible for redistributing, as required, the learned routes within the customer enterprise network.
- Internet based services for Direct Connect Customers:
  - Cisco Provides a path to the Internet for MRA/OTT and B2B calling
  - An HTTP(S) Proxy is provided by Cisco for use by the following:
    - MRA Activation Codes
    - Apple Push Notification Service
    - Unified Messaging
    - And additional HTTP(S) Proxy integrations as required for applications included with the UCM Cloud service.

4.3. EXPRESSWAY FOR CISCO UCM CLOUD

Cisco Expressway allows a remote user to access all the collaboration tools they use in their office on their personal device without a VPN. The Cisco Collaboration Edge Architecture enables endpoints like Cisco Jabber to access registration, call control, provisioning, messaging, and presence services from Cisco Unified Communications Manager when the endpoint is not within the enterprise network. Expressway provides secure firewall traversal and line-side support for Unified CM registrations.

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In this design, Cisco Expressway will be hosted in the UCM Cloud as shown in Figure 11: .
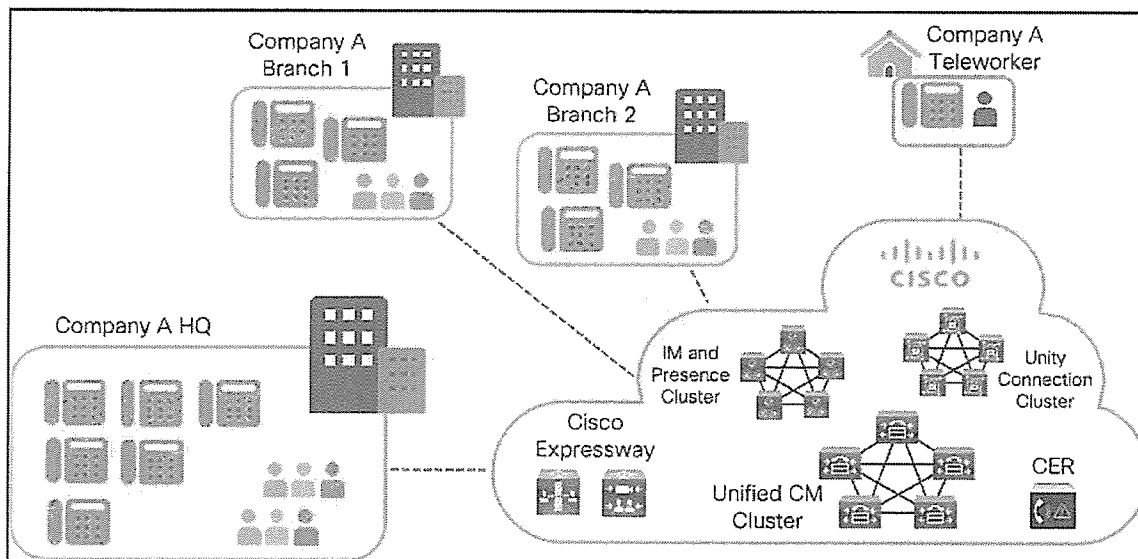

Figure 11: Expressway in Cisco UCM Cloud

Cisco determines the cluster size and capacity to optimize the UCM Cloud solution. Cisco Expressway's capacity is designed for up to 100% of total user count with one device per user for each customer for MRA. Additional MRA capacity is available for purchase.

DSI will work with customer to provision the IP address for Expressway-E in a public (external) DNS. The DNS must be configured with the _collab-edge._tls. service record so endpoints can discover the Expressway-E devices to use for mobile and remote access. The domain referenced in this case is the customer domain, which should match the domain name of UC applications.

DSI will complete integration for Expressway to Cisco UCM Cloud. Cisco is not responsible for applications deployed on customer premises. This includes but is not limited to version compatibility, application upgrades, and backup and restore tasks.

4.4. DIRECTORY/LDAP INTEGRATION
There are multiple ways for Cisco UCM Cloud to establish directory integration with the customer's LDAP. Cisco Unified CM can be integrated with Active Directory for user directory synchronization and authentication. Integrating voice applications with a corporate LDAP directory is a common task for many enterprise IT organizations. However, the exact scope of the integration varies from company to company, and can translate into one or more specific and independent requirements as shown in Figure 12:

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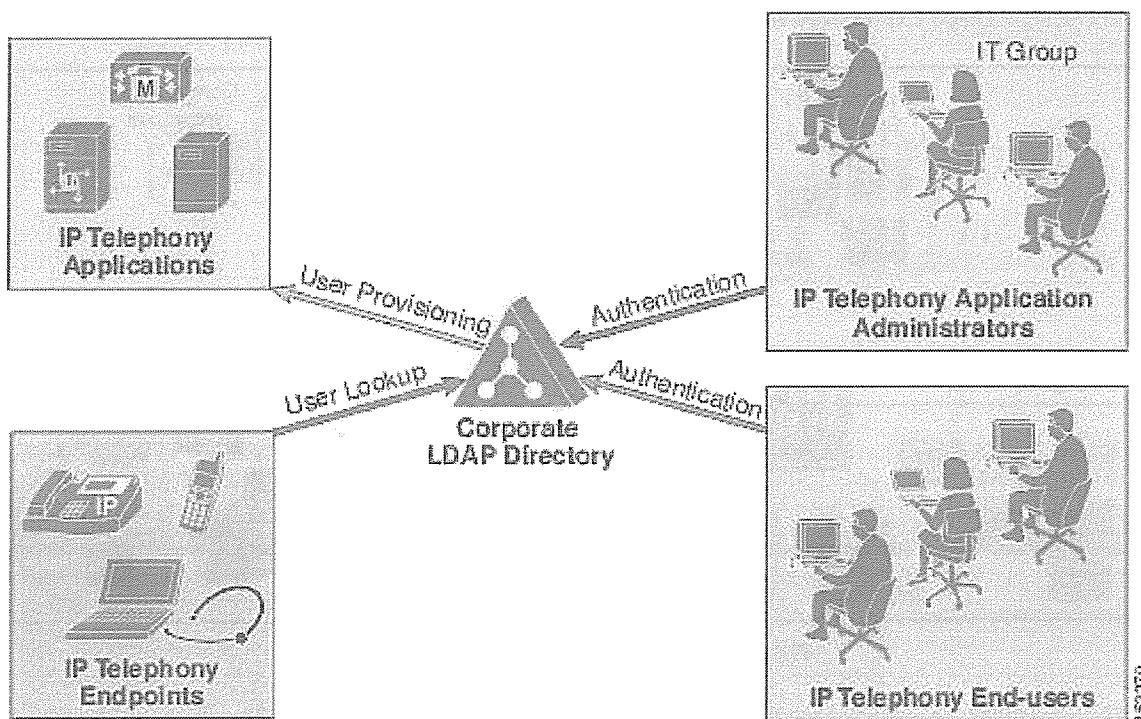
Figure 12: Cisco UCM Integration with Active Directory

One common requirement is to enable user lookups from IP phones or other voice and/or video endpoints, so that users can dial contacts quickly after looking up their numbers in the directory.

Another requirement is to provision users automatically from the corporate directory into the user database for applications. This method avoids having to add, remove, or modify core user information manually each time a change occurs in the corporate directory.

Authentication of end users and administrators of the voice and/or video applications using their corporate directory credentials is also a common requirement. Enabling directory authentication allows the IT department to deliver single log-on functionality while reducing the number of passwords each user needs to maintain across different corporate applications.

4.5. SINGLE SIGN ON (SSO) AUTHENTICATION

Cisco UCM Cloud support for SSO authentication removes the need for users to sign in individually to each application in the solution. SSO allows users to authenticate once for all applications in the trust domain, without requiring their credentials again. For administrators, SSO allows user management to be controlled centrally and updated user privileges can be applied instantly to all applications.

SSO uses the Security Assertion Markup Language (SAML) protocol to exchange authentication and authorization data between an identity provider (IdP) and a service provider. The IdP connects to the LDAP server to authenticate the user. In the context of a Cisco UCM Cloud environment, the IdP is a UC application.

EXHIBIT A

For customers with one LDAP server synchronized to Unified CM, users are passed to Cisco UCM Cloud with the SSO configuration. For customers with multiple LDAP servers, such as multi-domain environments where each domain has one or more LDAP repositories, the partner can create intermediate LDAP servers in the Cisco UCMC hierarchy. The admin configures LDAP and SSO at the intermediate node layer, so users are synchronized and pushed to the correct Unified CM instances. In both scenarios, customer administrators who sign into Unified CM for the first time are asked for credentials from their local IdP and are automatically authorized for subsequent connections to the applications.

4.6. CISCO WEBEX CONTROL HUB
Cisco Webex Control Hub offers a holistic view of all your Cisco Webex services. Manage your services and users, provision devices, view detailed analytics and reporting, and configure security and compliance policies. All of this can help keep data safe and meet regulatory needs.

4.7. CISCO UCM CLOUD ANALYTICS
UCM Cloud Analytics presents data using the following report types:

- Dashboards: Give you a quick view of certain metrics
- Charts: Let you analyze various types of data

Customer can leverage Cisco UCM Cloud analytics in the Cisco Webex Control Hub which they can get access to once the customer onboarding is complete. UCM Cloud analytics features include:

- **Quality of experience**
  - Call success and failures
  - Call quality and metrics

- **Feature adoption**
  - Heat map for call/mid-call features and UC features

- **Actionable insights**
  - Intelligent insights with support for workflow action

- **Asset usage and inventory**
  - Number of calls, talk time and messages
  - Endpoint & headset usage

- **Capacity analysis**
  - Trunk and route utilization

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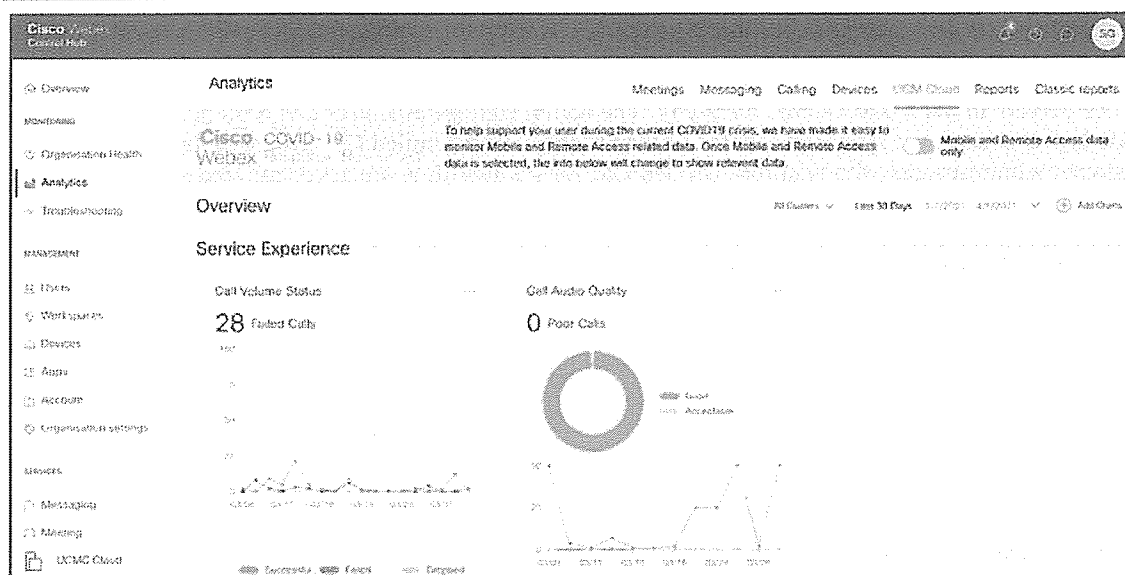
Figure 13: Cisco UCM Cloud Analytics

4.8. CISCO UCM CLOUD MANAGED CERTIFICATES

Cisco UCM Cloud service requires certificates that are signed by a trusted public Certificate Authority (CA). If customer supplied and managed certificates is selected in the completed Customer Questionnaire document, then Cisco does not manage the certificates. If HydrantID certificates are selected in CQ, then Cisco manages the certificates.

Cisco uses HydrantID as the public CA. Cisco renews the certificates annually, reducing the burden of certificate management.

The UC applications that are supported with HydrantID must be in Cisco datacenters and include Cisco Unified CM, Cisco Unified CM IM&P, Cisco Unity Connection, Cisco Emergency Responder and Cisco Expressway-C/E. Cisco obtains signed Certificates (from HydrantID).

5. TECHNICAL SUPPORT

5.1. CISCO RESPONSIBILITIES

Cisco will provide 24x7x365 support to Partner. Cisco is responsible for providing support to Partner for the Cisco network platforms and infrastructure within the Cisco cloud data center, including problem management, communication and resolution. Tickets are opened via a call-in basis and closed upon resolution reported by the partner.

Cisco is not responsible for supporting the Customer network and equipment that is connected to the UCM Cloud Service data center and end user premises to provide the UCM Cloud Service.

5.2. PARTNER SUPPORT RESPONSIBILITIES

DSI will provide Tier-1 support for UCM Cloud Service as described below. If DSI is unable to resolve a Tier-1 support issue because the issue requires Tier-2 support from Cisco, DSI may escalate the issue to Cisco.

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Tier-1 support includes the ability to provide the following:

- General UCM Cloud Service information;
- Explain how to use the service, devices, and soft clients;
- Filtering non-technical problems from technical problems.
- Problem isolation and service defect determination;
- Analysis of where the error occurred; and
- Restoration of improperly configured settings.

Following is a sample of common support issues that are expected to be handled by the partner's Tier-1 technical support:

- Product or service usability / how-to / questions
- Product or service features and functionality
- Billing and invoicing-related issues
- Phones unable to register for use

5.3. CUSTOMER SUPPORT RESPONSIBILITIES

Customer will provide Tier-1 support as described below. If customer is unable to resolve a Tier-1 support issue because the issue requires Tier-2 support from Cisco, then customer may only escalate the issue to DSI, and DSI may then escalate the issue to Cisco.

Tier-1 support includes the ability to provide the following:

- Configuration support;

Following is a sample of common support issues that are expected to be handled by the partner's Tier-1 technical support:

- Configuration of voice and video services
- Setup and configuration of voicemail services
- Setup and configuration of IM&P services
- User service management: voice, video, voicemail, IM&P, meetings, etc.
- Self-care portal access and operation
- Client installation and setup issues
- Client installation, upgrade, and removal
- New account requests and access
- Network connectivity and availability on the customer's network environment

6. PROPOSED HARDWARE

The following hardware components are proposed in this design:

Solution Components	Purpose	Quantity
Cisco IP Phone 7841	Standard Classroom Phone	850
Cisco IP Phone 8841	Standard Office Phone	554
Cisco IP Phone 8851	Front Desk Secretary Phone	21
Cisco IP Phone 8800 Key Expansion Module	Front Desk Secretary Phone Expansion Module	21

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Solution Components	Purpose	Quantity
Cisco IP Phone 8865	Executive Level Phone	150
Cisco IP Conference Phone 8832	Conference Phone	25
Cisco Wireless IP Phone 8821	Café Kitchen Phones	20
Cisco 4000 Series ISR Router	On-Premise Failover Gateway	21
Cisco VG400 Analog Gateway	Analog Gateway for Paging System Integration	17

6.1. CISCO IP PHONE 7841

DSI is proposing Cisco IP Phone 7841 to meet requirements for Classroom Phones. Cisco IP Phone 7841 provides following features and capabilities:

- Cisco IP Phone 7841 offers a 3.5" (396x162) high resolution, graphical grayscale display.
- Direct access to four telephone lines. The line keys are fully programmable.
- Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features.
- The phone supports a built-in Gigabit Ethernet switch for your PC connection.
- Built-in full-duplex speakerphone lets you set up clear multi-party conferences for flexible, productive collaboration.

Figure 14: Cisco IP Phone 7841

6.2. CISCO IP PHONE 8841

DSI is proposing Cisco IP Phone 8841 to meet requirements for Standard Office Phones. Cisco IP Phone 8851 provides following features and capabilities:

- Cisco IP Phone 8841 offers a 5-in. high-resolution (800 x 480) widescreen color display.
- Direct access to five telephone lines. The line keys are fully programmable.

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- Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features.
- The phone supports a built-in Gigabit Ethernet switch for your PC connection.
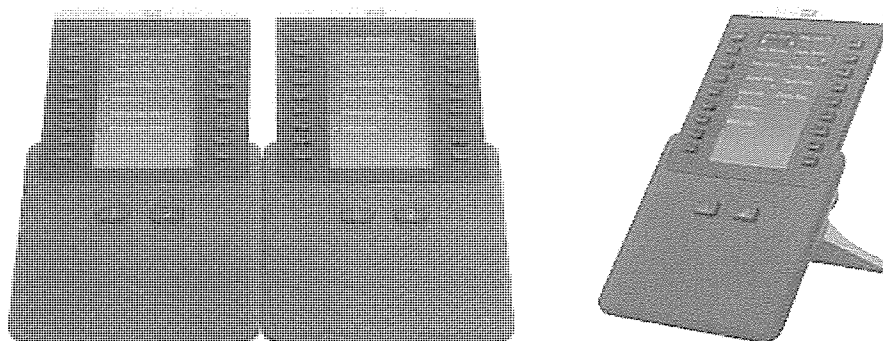

Figure 15: Cisco IP Phone 8841

6.3. CISCO IP PHONE 8851

DSI is proposing Cisco IP Phone 8851 to meet requirements for Front Desk Secretary. Cisco IP Phone 8851 provides following features and capabilities:

- Cisco IP Phone 8851 offers a 5-in. high-resolution (800 x 480) widescreen color display.
- Direct access to five telephone lines. The line keys are fully programmable.
- Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features.
- The phone supports a built-in Gigabit Ethernet switch for your PC connection.
- Supports up to two optional IP Phone 8800 KEM Modules for additional line/feature keys.
- Choice of wired, USB and Bluetooth headsets from Cisco third-party vendor partners.

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Figure 16: Cisco IP Phone 8851

6.4. CISCO IP PHONE 8800 KEM

DSI is proposing Cisco Unified IP Phone 8800 Key Expansion Module to meet requirements of more programmable and feature keys for Front Desk Secretary Phones. The Cisco IP Phone 8800 Key Expansion Module extends the capabilities of Cisco IP Phone 8851 models with additional buttons and a color LCD display. This key expansion module adds 18 physical keys with access to 18 additional keys, using the page keys, for a total of 36 additional keys. You can connect up to two 8800 KEMs to the IP Phone 8851. The 8800 KEM comes with a foot stand and all necessary hardware to connect it directly to the base device in the traditional side-by-side fashion. The following image shows the proposed Cisco IP Phone 8800 Key Expansion Module:

Figure 17: Cisco IP Phone 8800 Key Expansion Module

6.5. CISCO IP PHONE 8865

DSI is proposing Cisco IP Phone 8865 to meet requirements for Executive Level Users. Cisco IP Phone 8865 provides following features and capabilities:

- Cisco IP Phone 8865 offers a 5-in. high-resolution (800 x 480) widescreen color display.
- Provides 720p HD video communication.
- Direct access to five telephone lines. The line keys are fully programmable.

- Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features.
- The phone supports a built-in Gigabit Ethernet switch for your PC connection.
- The phone also supports campuses with 802.11a/b/g/n/ac wireless LAN (WLAN) enabled.
- Supports up to three optional IP Phone 8800 KEM Modules for additional line/feature keys.
- Choice of wired, USB and Bluetooth headsets from Cisco third-party vendor partners

Figure 18: Cisco IP Phone 8865

6.6. CISCO IP CONFERENCE PHONE 8832

DSI is proposing Cisco IP Conference Phone 8832 to meet requirements for Conference Phones. The Cisco IP Conference Phone 8832 provides a simple, flexible, scalable solution that meets the challenges of the most diverse rooms. With the base unit alone, it provides 360-degree coverage for any 20x20-foot room and up to 10 participants. The key design elements include the following:

- 3.9-inch 480x128-pixel color LCD
- Textile cover for soft touch and durability
- Large mute button in the middle of the device for easy access from all angles
- LED indicator above the mute button showing the call status
- Raised edge for easier handling and repositioning on tabletop
- Crisp, precise button tactility
- Single USB-C port on the device to minimize the number of cables on the table (an Ethernet injector is required for any non-Wi-Fi deployment)
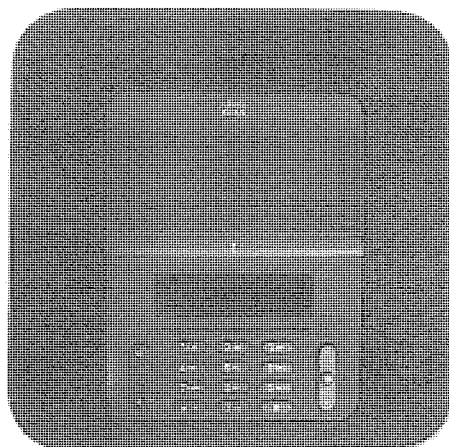
EXHIBIT A

Figure 19: Cisco IP Conference Phone 8832

6.7. CISCO WIRELESS IP PHONE 8821

DSI is proposing Cisco Wireless IP Phone 8821 to meet requirements for Café Kitchen Users. Cisco Wireless IP Phone 8821 provides following features and capabilities:

- IEEE 802.11a/b/g/n/ac radio for VoWLAN communications support
- The large 2.4-inch (6 cm) color (240 x 320 pixels) display makes viewing easy
- IP54-rated for protection against dust, splash, and water
- MIL-STD-810G standard for shock resistance
- The phone offers exceptional voice quality with High-Definition (HD) voice
- A built-in full-duplex speakerphone offers high-quality hands-free communications
- Supports third-party Bluetooth 3.0 headsets and a 3.5-mm headphone jack for added freedom
- Battery life delivers up to 11.5 hours of talk time
- Enhanced encryption support for SHA-1 and SHA-2 signatures
- Fast, secure roaming using 802.11r and Cisco Centralized Key Management roaming
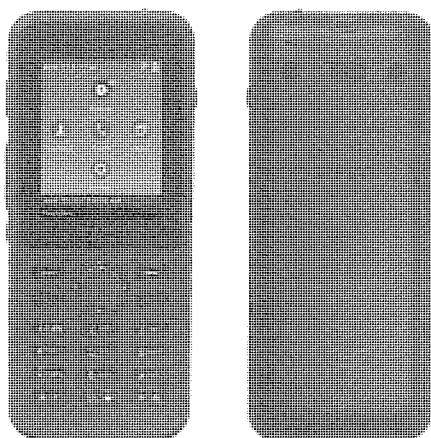

Figure 20: Cisco Wireless IP Phone 8821

<u>EXHIBIT A</u>

6.8. CISCO 4000 SERIES ISR ROUTERS

The proposed solution includes 21 Cisco 4000 Series ISR Routers with Cisco SRST feature for each district location. Each router is provisioned with analog ports to provide PSTN connectivity using POTS lines .

Note: Customer must provide POTS lines from local Service Provider for local failover functionality. It is not included as a part of this proposal.
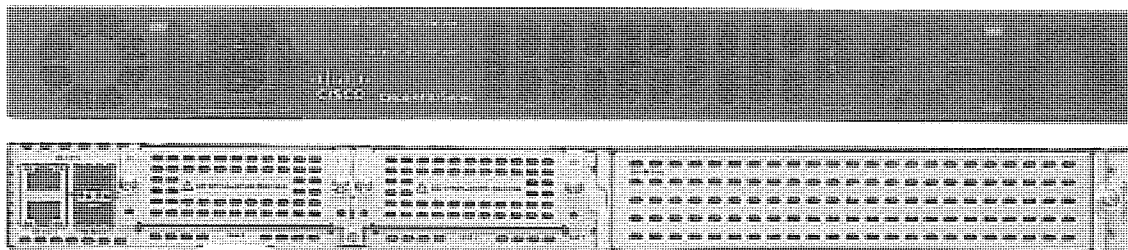

Figure 21: Cisco 4000 Series ISR Router

The Cisco 4331 ISR Router with SRST feature will provide local failover functionality for Cisco IP Phones if they lose their connection to the Cisco UCM Cloud or if the WAN connection is down.

The main site router also includes 2 Port PRI card to integrate with existing PBX system during the migration phase.

6.9. CISCO VG400 ANALOG GATEWAY

The proposed solution includes 17 Cisco VG400 Analog Gateways which has built in 2 FXO and 2 FXS Ports. The Analog Gateways will be used to integrate Cisco UCM Cloud System with Bogen Paging System.
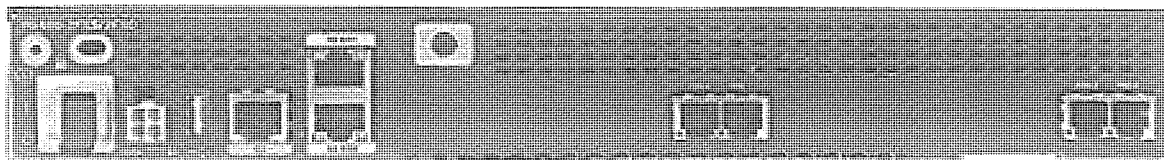
Figure 22: Cisco VG400 2FXS/2FXO Analog Gateway

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

C: PROJECT MANAGEMENT APPROACH, METHODOLOGY AND TIMELINES

1. PROJECT MANAGEMENT

A DSI Project Manager will schedule, coordinate and assist DSI personnel assigned to the project. The Project Manager will communicate regularly with Customer personnel and be the single point of contact for Customer personnel during the project.

Some or all the following activities may be included in the project depending on duration and complexity.

- Project kick off meeting/workshop
  a. Team introductions
  b. Project overview
  c. Initial schedules
  d. Document any follow ups
- Initial project planning meeting
  a. Escalation contacts
  b. Identify proposed project schedule
  c. Identify estimated project completion date
- Ongoing project meetings (for projects lasting more than two weeks)
  a. Current status
  b. Concerns
  c. Follow ups
  d. Identify any changes that may require a Change Order
- Project Close out Meeting
  a. Project review
  b. Address any open issues

2. IMPLEMENTATION / MIGRATION APPROACH

DSI will complete series of project tasks in order to successfully implement Cisco Unified Communications and Collaboration System. The project tasks may be performed in parallel without necessarily completing the previous phase before the next begins.

The statement of work includes following project phases:

- Planning, Preparation and Design
- Infrastructure Deployment
- Site Deployments and Verification
- System Verification and Cutover
- Post Migration Support
- System Management Training
- Documentation

Please refer to the detailed project schedule in Appendix A.

2.1. PLANNING, PREPARATION AND DESIGN
The Planning and Preparation phase is essential to ensure a smooth project implementation. The Planning and Preparation phase will consist of several tasks, including Discovery, Data Collection, Dial Plan Design, System Design etc.

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EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

DSI Tasks

- Work with customer to complete Customer Questionnaire (CQ)
- Conduct network readiness assessment to ensure that the network is ready for new hosted Cisco UCM Cloud solution
- Recommend network optimization measures if deficiencies are found
- Perform interviews with IT and Department staff as needed to determine the system feature requirements.
- Provide data collection spreadsheets to gather the information necessary for system deployment.
- Design a dial plan that meets the needs of the entire system.
- Conduct interviews to determine the needs for the ACD requirements.
- Perform a full inventory of all hardware and software as it is delivered.
- Finalize devices naming conventions.
- Finalize VLAN and IP addressing schema.
- Assessment of scalability and redundancy.
- Develop, deliver and discuss low level design document.

Customer Tasks

- Attend and participate in the design interviews.
- Provide information about existing ACD applications.
- Complete the data collection spreadsheets as required by DSI.

Deliverable Items

- Low Level Design document that outlines the dial plan and network configuration. This document will detail the name and address scheme for all network devices and servers, as well as the dial plan information for internal and external calling. This will also contain design with physical and logical topology.

2.2. INFRASTRUCTURE DEPLOYMENT

The Infrastructure Deployment phase involves installing and configuring the solution components of the proposed system.

Cisco Tasks

- Build cloud premise infrastructure (compute, network, SBC) needed to enable the customer.
- Build the base application installs.
- Setup monitoring for the core applications.
- Test the base functionality of the core applications before handing over to DSI.

DSI Tasks

- Work with customer to configure premise infrastructure to establish connectivity with UCM Cloud.
- Work with CCCP Provider and customer to establish PSTN connectivity into the UCM Cloud.
- Complete application-level configuration (Dial plan, Features, Route Groups etc.) to enable customer requirements.
- Perform all integrations and testing of applications.
- Troubleshoot any application-level configuration with assistance from Cisco TAC.
- Perform verification and testing of features.

Customer Tasks

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EXHIBIT A

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RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

- Participate in meetings with Cisco and CCCP Provider.
- Provide required network information such as VLAN, IP Addresses etc.
- Configure DNS entries for new Application on customer DNS server.
- Configure Option 150 for TFTP servers on customer DHCP server.

Deliverable Items

- Installation of all the system components with their full functionality.

2.3. SITE DEPLOYMENT AND VERIFICATION

During Site Deployment phase, DSI will rollout all handsets and voice gateways to all school locations during an estimated deployment window.

DSI Tasks

- Develop site testing agenda with the school prior to migration.
- Stage, burn-in, and pre-program any equipment destined to be installed onsite.
- Unpack new phone from the boxes, assemble it, and install it on user's desk.
- Disconnect the existing drop from the computer, connect the drop to the handset.
- Use new network cable and then connect the computer to the handset in a daisy-chain fashion.
- Securely affix any wall-mount kits to walls as appropriate, connect handset to wall-mount kit.
- Verify the desktop and phone network connectivity.
- Verify that all phones are registered with the system and have obtained the proper configuration.
- Verify that all phones are on the appropriate VLAN and obtained an IP address from the correct subnet.
- Verify that all phones can place and receive calls as per the configuration policies, permissions, and restrictions for those
- Verify that all voicemail accounts for intended users are set up and have default or predetermined PIN.
- Install and configure SRST voice gateways at each designated site.
- Install and configure ATAs and integrate with Bogen Paging System.
- Label the circuits and analog lines used for PSTN connectivity and survivability at all sites.
- Test internal calling, call routing, hunt groups, call flow, and other system functions.
- Verify that all call flow behavior agreed upon with the Owner.
- Verify that outbound test 911 calls confirm the correct source phone number and physical address by the 911 operator.
- Verify successful testing of redundancy/failover scenarios including campus telephony survivability.
- Verify successful testing of analog devices.
- Conduct one (1) 30-minute, on-site, live, hands-on user training session per district site for district staff.

Customer Tasks

- Work with DSI to develop testing agenda.
- Work with DSI to develop training schedule.
- Provide networking support like creation of VLANS, DHCP Scope etc.
- Provide rack space for all Gateways and ATAs to be installed .
- Provide adequate power for all hardware to be installed on premise.
- Provide network addressing for all hardware to be installed on premise.
- Deploying desktop software to end user workstations.

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EXHIBIT A

- Provide analog lines to terminate on Voice Gateways

Deliverable Items

- Installation and configuration of Phones at designated sites.
- Installation, configuration and verification of SRST Routers.

2.4. SYSTEM VERIFICATION AND CUTOVER

During this phase, flash cut from the existing phone system to the new system will be performed.

DSI Tasks

- Develop the testing agenda with the school prior to migration.
- Lead the effort to migrate DIDs from its current system to CCCP Provider as part of the flash cut.
- Schedule cutover with the school at least two weeks prior to occurrence.
- Test and confirm that all inbound, outbound, 911, caller ID, and all other calls and functions operate as expected. Provide documented confirmation to the district as part of final project documentation.
- Verify that all phones can place and receive calls as per the configuration policies, permissions, and restrictions for those
- Verify that outbound test 911 calls confirm the correct source phone number and physical address by the 911 operator.
- Successful testing of redundancy/failover scenarios including campus telephony survivability.

Customer Tasks

- Work with DSI to develop testing agenda.
- Notify DSI of any issues arising from each site.

Deliverable Items

- Provide complete and fully functional system.
- Provide documented confirmation to the district as part of final project documentation.

2.5. POST MIGRATION SUPPORT

During support phase, DSI will provide a support team for all cutovers including on-site technical and training support for all systems.

DSI Tasks

- Provide an onsite support team fully capable of supporting all systems purchased in this RFP for the first business day following all cutovers.
- Complete any outstanding adds, moves, or changes within the first 15 business days following the cutover of each location.

Customer Tasks

- Provide networking support like creation of VLANS, DHCP Scope etc.
- Notify DSI of any issues arising from each site.

Deliverable Items

- Provide on-site support for each site.

EXHIBIT A

- Resolve any outstanding technical issues.
- Complete any outstanding adds, moves, or changes.

2.6. SYSTEM MANAGEMENT TRAINING

During this phase, provide a minimum of five (5) hours of training for at least two (2) system administrators on the use of the management tools for the telephone system. The training shall include the following:

- Familiarization with features of all components and systems
- Client software installation, if applicable
- Adds, moves, or changes
- Add or change user templates
- Add or change class of service and trunk group restrictions
- Add or change auto attendants
- Configuration details of purchased applications, and how to configure new users, groups, and reports
- Generate reports
- Find unused numbers
- Use IP troubleshooting tools
- Overview of system documentation and use of all system manuals
- Process for obtaining technical support
- Review daily, weekly, monthly, and annual maintenance and backup tasks.

2.7. DOCUMENTATION

When installation is complete, DSI will furnish the customer with soft copy of project documentation. DSI will provide documentation as follows:

- Logical diagrams showing all installed equipment, including locations (MDF or IDF). Diagrams will be submitted in MS Visio 2016 or later. Equipment stencils shall accurately represent the equipment installed.
- Logical diagrams showing each campuses' call flows, including auto attendants, self-service trees, and menu services. Diagrams will be submitted in MS Visio 2016 or later.
- Hostnames, model numbers, serial numbers, software versions, asset tag identification numbers, and IP addresses assigned to all equipment shall be noted both on diagrams and on a separate table/spreadsheet. The spreadsheet will be sorted by telecommunications room (TR or IDF) for all equipment. Spreadsheet will be submitted in MS Excel 2016 or later.
- Confirmation that all applicable licenses have been applied, rendering the system 'in compliance'. This confirmation can be depicted with a screenshot of the management system illustrating compliance and includes the date the screenshot was taken.
- Complete set of all site testing sign-off sheets.
- A thorough list of all passwords and login credentials configured on each device. This list shall be organized by device type.
- Description of warranty and servicing procedures for all components.
- Technical data sheets/cut sheets for all equipment provided. If data sheets are publicly available, the Contractor may provide hyperlinks in a MS Word format to data sheets for all equipment supplied. Links shall be tested prior to submittal of documentation.
- Finalized configuration details as determined in the kick-off meeting.

EXHIBIT A

Brunswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 — TURNKEY PHONE SYSTEM

B. PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	Brunswick County Schools - VOIP	60 days	Tue 06/01/21	Mon 08/23/21		
2	Project Kick-Off	1 day	Tue 06/01/21	Tue 06/01/21		
3	Project Kickoff Meeting	1 day	Tue 06/01/21	Tue 06/01/21		DSI / BCS
4	Procurement Of Equipment	22 days	Wed 06/02/21	Thu 07/01/21		
5	Ordering of equipments on Receipt of PO	1 day	Wed 06/02/21	Wed 06/02/21	3	DSI
6	Receive Equipments	21 days	Thu 06/03/21	Thu 07/01/21	5	DSI
7	Site Readiness and Network Assessment	3 days	Mon 06/07/21	Wed 06/09/21	5FS+2 days	
8	Gather existing telephony system information	3 days	Mon 06/07/21	Wed 06/09/21	5	DSI / BCS
9	Produce Site Requirement Specifications	3 days	Mon 06/07/21	Wed 06/09/21	5	DSI
10	Assess physical, electrical and environmental specifications	3 days	Mon 06/07/21	Wed 06/09/21	5	DSI / BCS
11	Assess the gaps between site requirements and site survey	3 days	Mon 06/07/21	Wed 06/09/21	5	DSI
12	Present and discuss the gap analysis and recomendations	3 days	Mon 06/07/21	Wed 06/09/21	5	DSI
13	Detailed Design Activities	4 days	Tue 06/15/21	Fri 06/18/21	12FS+3 days	
14	Network Infrastructure Design Activities	2 days	Tue 06/15/21	Wed 06/16/21	12	DSI / BCS
15	Cisco Call Control (CUCM) Design Activities	2 days	Tue 06/15/21	Wed 06/16/21	12	DSI / BCS / Cisco
16	Cisco Voice Messaging (UCXN) Design Activities	2 days	Tue 06/15/21	Wed 06/16/21	12	DSI / BCS / Cisco
17	Cisco Unified IM & Presence (IMPS) Design Activities	2 days	Tue 06/15/21	Wed 05/16/21	12	DSI / BCS / Cisco
18	Cisco Emergency Responder (CER) Design Activities	2 days	Tue 06/15/21	Wed 06/16/21	12	DSI / BCS / Cisco
19	Cisco Voice Gateway Design Activities	2 days	Tue 06/15/21	Wed 06/16/21	12	DSI / BCS
20	Prepare Low Level Design Document	2 days	Thu 06/17/21	Fri 06/18/21	19	DSI
21	Installation and Configuration Activities	5 days	Mon 06/28/21	Mon 06/28/21	20FS+5 days	
22	Establish Connectivity with UCM Cloud	1 day	Mon 06/28/21	Mon 06/28/21	20	DSI / BCS / Cisco
23	Cisco Call Control (CUCM) Installation	3 days	Tue 06/29/21	Thu 07/01/21	22	Cisco
24	Cisco Voice Messaging (UCXN) Installation	3 days	Tue 06/29/21	Thu 07/01/21	22	Cisco
25	Cisco Unified IM & Presence (IMPS) Installation	3 days	Tue 06/29/21	Thu 07/01/21	22	Cisco
26	Cisco Emergency Responder (CER) Installation	3 days	Tue 06/29/21	Thu 07/01/21	22	Cisco
27	Cisco Expressway Installation & Configuration	3 days	Tue 06/29/21	Thu 07/01/21	22	Cisco
28	System Verification and Testing	1 day	Fri 07/02/21	Fri 07/02/21	27	Cisco
29	Configuration and Integration Activities	5 days	Wed 07/07/21	Tue 07/13/21	28FS+2 days	
30	Cisco Call Control (CUCM) Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
31	Cisco Voice Messaging (UCXN) Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
32	Cisco Unified IM & Presence (IMPS) Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
33	Cisco Unified Contact Center (UCCX)Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
34	Cisco Emergency Responder (CER) Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI

Legend:

Task	External Milestone	Manual Summary Rollup
Split	Inactive Task	Manual Summary
Milestone	Inactive Milestone	Start-only
Summary	Inactive Summary	Finish-only
Project Summary	Manual Task	Progress
External Tasks	Duration-only	Deadline

Project: City of Port Arthur
Date: Wed 05/05/21

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
35	Cisco Expressway Configuration	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
36	System Verification, Testing and POC	5 days	Wed 07/07/21	Tue 07/13/21	28	DSI
37	Site Deployments (21 Sites)	21 days	Fri 07/16/21	Fri 08/13/21	36FS+2 days	
38	Endpoint and Feature Configuration	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
39	ISR Router Installation and Configuration	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
40	Phone Rollout at End User Desk	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
41	End User Training	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
42	System Integration & Cutover	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
43	Post-Cutover Support	21 days	Fri 07/16/21	Fri 08/13/21	36	DSI
44	System Admin Training	1 day	Tue 08/17/21	Tue 08/17/21	43FS+1 day	DSI
45	Documentation	3 days	Wed 08/18/21	Fri 08/20/21	44	
46	Configuration Reports (CUCM, UCM, UPS, CER etc.)	3 days	Wed 08/18/21	Fri 08/20/21	44	DSI
47	Project Closing	1 day	Mon 08/23/21	Mon 08/23/21	46	
48	Project Sign-off	1 day	Mon 08/23/21	Mon 08/23/21	46	DSI / BCS

Project: City of Port Arthur
Date: Wed 05/05/21

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Progress	
External Tasks		Duration-only		Deadline	

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<u>EXHIBIT A</u>

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

D: EXPERIENCE OF KEY PERSONNEL

Full Resumes follow for the Project/Key Management Team and Technical Staff.

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PANKAJ SHARMA, Regional Sales Manager	
More than 25 years' experience as a management and sales professional **Holds various Cisco certifications enabling IT sales** **Has provided years of support to DSI's customers helping them with their technical needs**	**Brief Excerpt** Has proven experience in exemplary customer support, providing technical input customer needs, interacting with various teams within the company to ensure that project schedules are maintained and any and all technical or non-technical issues are solved. **Education** ○ Bachelors in Commerce, Delhi University, India **Certifications** ○ Cisco Renewals Manager, ○ Cisco Advanced Business Value Analysis and Design Techniques, ○ Cisco IoT Sales Fundamentals, ○ Cisco IoT Connected Safety and Security Account Manager **Experience**

Experience

DISYS Solutions, Inc.   **May 2010 – Present**
Regional Sales Manager

○ Prime responsibilities include business development with state and local government organizations, County governments and board of education.
○ Analyze computer needs of business establishments, government and educational organizations using Information Technology knowledge and current industry standards.
○ Represent DISYS Solutions at contract events e.g. trade shows, conferences etc.
○ Prepare bids/contracts, adopting a start-to-finish modus operandi, ensuring accuracy and biding deadlines.
○ Lead the team to achieve assigned sales goals.
○ Design and customize solutions for the customers.
○ Configure and design of HP, IBM Servers. Customizing LAN/WAN/Security solutions incorporating CISCO networking products.
○ Design storage solutions for the customers. Customize Storage Area Network Solutions (SAN) and Network Attached Storage (NAS) solutions.
○ Provide Enterprise software and licensing solutions to the customers.
○ Compile list of prospective customers for use as sales leads.
○ Recommend Computer products and solutions.
○ Quote prices, credit terms and rates, prepare sales contracts for orders.
○ Government and private sector bid preparation.
○ Technical writing and correspondence.
○ Attend initial and on-going training meetings as required to develop and maintain up-to-date sales skills and product knowledge.

Digital Intelligence System Corp.   **Apr 2001 – May 2010**

○ Five years ago, DSI separated from Digital Intelligence Systems, Inc., to concentrate its resources providing a vast array of it produces and services to meet the government's broad range of it requirements.
○ Same responsibilities as listed for DISYS Solutions, Inc.

Gold-tex Electricals Pvt. Ltd   **May 1997 – Apr 2001**
Manager of Sales

○ Achieved the sales and profit budget of the products
○ Coordination between clients and the teams working on respective targets
○ Add value and the new dimension to the existing skill set of the company sales personnel and works in close coordination with management

<u>EXHIBIT A</u>

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

VAIJANATH SONVANE, Voice Engineer

Over 12+ years' experience as an IT professional

Holder of multiple industry leading IT certifications including CCIE, CCVP and VCP

Has applied professional knowledge and experience in completing several IT Voice projects from installation and deployment to cut-overs

Brief Excerpt
Has proven experience in deploying, implementing, testing and providing training in Cisco Voice and Unified Communications technologies. Is responsible for building and maintaining the design and integrity for Voice network architectures at customer-facing hosted and cloud environments including providing expert technical assistance.

Education
- Bachelor of Engineering – M.S. Bidve Engineering College, Latur, India

Certifications
- 2020 Cisco Designated VIP
- Cisco Certified Internetwork Expert (CCIE) – Voice
- Cisco Certified Voice Professional (CCVP)
- Cisco Certified Network Associate (CCNA) – Voice
- Cisco Certified Network Associate (CCNA) – R&S
- Cisco Telepresence Specialist
- Cisco IP Telephony Design Specialist
- Cisco IP Telephony Operations Specialist
- Cisco IP Telephony Express Specialist
- CICSAW, CICSPW, WSFE - Web Security for Field Engineers (Borderless Network Architecture Specialization)
- VMware Certified Professional (VCP)
- AWS (Amazon Web Services) Certified Advanced Networking Specialty

Experience
DISYS Solutions, Inc.   **March 2012 – Present**
Senior Network Engineer, VoIP and Unified Communications
- Performs remote and on-site client consultation: plan, design, implement, and support the voice, video and contact center infrastructure
- Develops and implement the technical architecture and physical design of the network: analyze existing voice and data networks and recommend solutions encompassing full Cisco collaboration suite
- Set up, configure, and test Cisco Unified Communications solutions
- Troubleshoots, maintains, upgrades, and provide solutions to complex hardware/software problems
- Assists Account Executives during the sales process by educating the customer about new technologies
- Technical writer for Voice and/or Unified Communications Proposals
- Assists in the management of projects
- Ensures a stable performance environment for enterprise computer applications
- Directs the work of other technical team members and subcontractors
- Performs knowledge transfer at completion of projects

Capgemini India Pvt Limited   **April 2010 – March 2012**
Cisco Voice Network Engineer
- Worked as a Voice consultant to support US and UK clients
- Managed Cisco Call Manager Servers, Unity Servers, UCCX, Cisco IPCC Enterprise, Cisco Voice Gateways, Cisco Meeting Place Enterprise and Cisco IP Phones
- Provided and maintained architectural documentation of Voice infrastructure
- Responsible for handling all kind of Voice incident occurring in the environment & provide resolution within predefined SLA
- Configuration of Call Center Agents and Scripts

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<u>EXHIBIT A</u>

Bruswick County Schools
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VAIJANATH SONVANE, Voice Engineer

- Configured Call Manager features like Call Park, Call pickup, Hunt group, Attendant console, extension mobility & IP phone services
- Handled technical escalations from NOC
- Troubleshooting of Call Routing, Call manager, Unity, Meeting Place, UCCX, IPCC Enterprise, IP Phones, Voice gateway issues
- Co-ordination with the Problem management group by analyzing trends and determining the cause of the problem
- Worked with International Service providers like ATT, Sprint, Verizon, Global Crossing, DiData for troubleshooting the Voice Gateways and Voice circuit problems

Network Solutions – an IBM Company   January 2009 – April 2010
Cisco Voice Network Engineer
- Troubleshooting IP Telephony issues in client's network.
- Managed Cisco Call Manager Servers, Unity Servers, UCCX, Cisco Voice Gateways, Cisco Meeting Place Express and Cisco IP Phones
- Implementation of Cisco Call Mangers, Cisco Unity, Cisco Voice gateways, Cisco Switches.
- Troubleshooting of Call Routing, Call manager, Unity, IP Phones, Voice gateway issues
- Configuration of Cisco IP Phones & Directory numbers, Device pools, Route patterns, Translation patterns & AAR
- Configured Call Manager features like Call Park, Call pickup, Hunt group, Attendant console, extension mobility & IP phone services
- Knowledge on IPT troubleshooting tools like RTMT, DNA, Perf Mon, Event Viewer, CAR & QRT

D-Link India Limited   January 2007 – December 2008
Network Engineer – Voice
- Troubleshooting IP Telephony issues in client's network
- Managed D-Link Voice Servers, Voice Gateways, IP Phones and Switches
- Implementation of Voice Servers, Voice Gateways, IP Phones
- Troubleshooting Call Routing, IP Phones, Voice gateway issues
- Configuration of IP Phones & Directory numbers, Route patterns, Translation patterns
- Configured Call Manager features like Call Park, Call pickup, Hunt group, Attendant console, extension mobility & IP phone services
- Provided onsite as well as remote support to the customer

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

VIJAY YADAV, Senior Voice Engineer	
	Brief Excerpt
More than 10 years' experience as an IT professional	Has proven experience in deploying, implementing, testing and providing training in Cisco Data Center and Unified Communications technologies. Is responsible for building and maintaining the design and integrity for Data Center servers and Unified Communications network architectures providing expert technical assistance.
	Education
Holds a dual CCIE in Collaboration and Data Center	○ Bachelor of Engineering - Information Technology, GGV Central University, Bilaspur, India
	Certifications
Has applied professional knowledge and experience in completing several IT Voice and Data Center projects from installation and deployment to cut-overs	○ Cisco Certified Internetwork Expert (CCIE) Collaboration & Datacenter ○ Cisco Certified Network Associate ○ Cisco Certified Network Associate Collaboration ○ Cisco Collaboration Field Engineer Representative 1 ○ Cisco Video Network Representative ○ Cisco Video Network Specialist ○ Express Collaboration Systems Engineer Representative ○ Express Collaboration Systems Engineer Representative v2 ○ IoT Connected Safety and Security Field Engineer Representative ○ IoT Connected Safety and Security Systems Engineer Representative ○ SP Optical Systems Engineer Representative ○ Cisco Certified Design Specialist ○ Cisco Certified Specialist - Collaboration Core ○ Cisco Certified Specialist - Data Center Core ○ AWS Certified Solutions Architect – Professional
	Experience
	DISYS Solutions, Inc. **Jan 2012 – Present** **Senior Network Engineer, Data Center and Unified Communications** ○ Actively participate in the planning, designing pre sales, and post sales implementation of Unified Communication systems, infrastructure and related hardware for customers. ○ Participate in pre-sales and post-sales implementation of Cisco Datacenter Solutions. ○ Create Visio designs and prepare Bill of Materials (BOM) for customers. ○ Develop and Present Cisco Collaboration Solutions to Customers. ○ Involve in solution build up as per the requirements in RFP (Request for Proposals) and technical responses. ○ Troubleshoot, maintain, upgrade, and provide solutions to complex hardware/software problems. ○ Develop and implement the technical architecture and physical design of the network supporting the Unified Communications. ○ Network and application troubleshooting. ○ Deliver high-quality solutions to our customers to ensure their investment in technology is consistent with their business objectives. ○ Assist Account Managers during the sales process by educating the customer about new technologies and Unified Communication methodology. ○ Assist in the management of projects using project management methodology. **Dimension Data** **Sep 2010 – Dec 2011** **Network Engineer** ○ Providing Post-Implementation Migration, Installation and configuration and support of Cisco IP Telephony to various MNC's based in India from finance, IT, government, and educational sector.

EXHIBIT A

VIJAY YADAV, Senior Voice Engineer

- Troubleshooting of IP Telephony issues, Gateways, Call Routing and Unity, PRI, CAS, FXO, FXS, Voice Gateways, SRST, CME, CUE, Voice mail, UCCX (contact Center), installation of Cisco Unity Connection Server and integration with CUCM, Cisco Meeting Place.
- Installation and configuration of Cisco Unified Communication Manager 4.x to 8.x (CUCM), Cisco Unity Connection 7.x to 8.x and New Cisco IP phones.
- Applying new patches for CUCM, Unity Server, Microsoft servers and IP telephone Device pack released by Cisco.
- Create Unity Subscribers (voice mail creation), Password reset, Unity Handlers, and Voicemail.
- Configuring Cisco Call Manager Backup utility like BARS and Disaster Recovery System.
- Working Knowledge of DHCP, DNS, TCP/IP, RTP, VOIP, MGCP, H.323, SIP, JTAPI, QOS and Default Gateways, Voice VLAN's, Cisco Switching and Routing protocols and VMware.
- Usage of RTMT, DNA, PerfMon, Event Viewer, CAR for Troubleshooting Purpose.
- Troubleshoot T1, Voice Quality issue, Server CPU utilization, memory leaks, Call flow issues and Collect logs for RCA (Root Cause Analysis).

Softel Solutions   **Jul 2009 – Jun 2010**
Network Engineer
- Providing Installation, configuration and support of Cisco IP Telephony/Network Infrastructure to India based customers from finance, IT, government, and the educational sector.
- Installation and configuration of wide range of Router and switches.
- Troubleshooting Cisco IP Phones, Switches, and Routers.
- Configuration of Call Manager Express [CME] and Cisco Unity Express [CUE].
- Configuration of call signaling protocols on Voice Gateways H.323 and MGCP.
- Configuration of Various analog and digital voice interfaces like FXO, FXS, and E1 PRI.

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

KASHIF ZAFAR, Project Manager

More than 20+ years' experience as an Project Manager **Certified PMP and trained in Six Sigma Green Belt** **Has applied professional knowledge and experience in Project development, resource planning and staff management.**	**Brief Excerpt** Has proven experience in developing Lead Project plan development, integrated change control, project scope management, QA planning, assurance and control, change management, configuration management, resource management, resource planning and staff management **Education** ○ Engineering in Computer Sciences from in Bergen College of Engineering, Bergen, Norway (1994) **Certifications** ○ Certified Project Management Professional PMP and member of PMI ○ Harvard Manage Mentor Manager Certification (H3MC) for Leadership and Management development (HMM) (2014) ○ PC application from Okinawa International Center, Okinawa, Japan (1999) ○ Professional Project Management Program, Dubai, UAE (2014) ○ MS Project Training course conducted by MSCL, Islamabad, Pakistan ○ Six Sigma Green belt training program, Islamabad, Pakistan ○ Siebel 7.7.1 training essential, Islamabad, Pakistan ○ ORACLE Developer from Comsats, Islamabad, Pakistan ○ Project Management Training course conducted by MSCL, Islamabad, Pakistan ○ Object Oriented Analysis and Designing (OOAD)Training course (5 weeks) conducted by PRAL, Islamabad, Pakistan ○ Java training course conducted by PRAL, Islamabad, Pakistan ○ Internal Quality Auditing course conducted by Skill Development Council Lahore, Pakistan ○ Project Risk Management training conducted Cambridge Educational Institute, Dubai ○ TL 9000 Awareness Training, Dubai, UAE ○ TL 900 R 5.0/R4.5 QMS Auditing course, London, UK ○ TL 9000 Pre-requisite training course for R4.5 Measurements, London, UK ○ TL 9000 Pre-requisite training course for R5.0 Requirements, London, UK ○ Telecommunication Simulation Experiencing Dynamics of Telco industry, Dubai, UAE ○ Advance Project Management, Dubai, UAE

Experience

DISYS Solutions, Inc.,   **Sept 2016 – Present**
Project Manager
○ Provides effective day-to-day project management of key IT infrastructure related projects.
○ Facilitates the definition of project missions, goals, tasks, and resource requirements; resolve or assist in the resolution of conflicts within and between projects or functional areas; develop methods to monitor project or area progress; and provide corrective supervision if necessary.
○ Lead planning and/or implementation of projects. Will participate in the design and/or testing phase of the implementation. Facilitates the definition of service levels and customer requirements. Interact regularly with existing or potential clients to determine their needs and to develop plans for improving delivery. Advocate on behalf of clients and represent clients' needs as appropriate to senior management.
○ Delivers projects on time, within budget, while meeting Client's expectations.
○ Plans, directs and coordinates activities pertaining to technology and business unit projects, on an enterprise level or for a major systems implementation program with multiple releases and work streams.
○ Verifies project goals are accomplished and in line with business objectives.

EXHIBIT A

KASHIF ZAFAR, Project Manager

- Responsible for managing the team that develops and carries out internal information technology projects.
- Responsibility for assembling the project staff; for their technical or functional development, and performance during the project/s.
- Manage project budget and resource allocation.
- Facilitates the definition of service levels and customer requirements. Interact regularly with existing or potential clients to determine their needs and to develop plans for improving delivery. Advocate on behalf of clients and represent clients' needs as appropriate to senior management.
- Follows a defined, agreed upon project management.
- Travels to existing client location to manage the implementation.
- Prepares and provides documentation of all client meetings, including a follow-up action plan.
- Analyzes computer needs of business establishments and government entities, using knowledge of IT industry and available products.
- Maintains confidentiality of the information processed.
- Make suggestions as necessary to improve the working processes and profitability of the Company.
- Work on projects given by supervisors.
- Follows all safety practices of Company as well as Client.
- Develops and maintains relationships with all prospective clients and clients.

Du – Emirates Company   **Feb 2008 - Sept 2016**
Senior Manager Network Quality & Control
- Managing process improvement activities and initiatives that cover the full spectrum of process development lifecycle (Development, Reengineering, Improvement and optimizing)
- Alignment of all the Strategic Network Projects of $100Million dollar to executive management
- Primary interface for dealing timelines, status reporting and management of implementation issues of strategic projects
- Address issue related to network performance and recommendation of corrective action/preventive action
- Prepare and provide analysis on the network outages, root cause analysis, network performance and availability, and recommend network enhancements
- Implementation/reporting of Balance score card across the department
- Providing direction to the portfolio and ensure that all documented requirements support the delivery of business value, objective and meet stakeholders needs
- Lead initiatives to enhance NPS (Net promoter score) related to fixed access network
- Manage Vendor contract, Key Performance Indicator, Service Level Agreement and performance metric
- To ensure TL 9000 requirements are meet for Du's continued certification, data integrity is maintained, and promote usage of TL 9000 metrics as indicator of Customer Experience
- Planning, managing and execution of process improvement initiatives to ensure proper planning, development and deployment of products and services
- Responsible for conducting quality and technical audit and ensuring that effective corrective action is taken for any non-conformances.

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

KASHIF ZAFAR, Project Manager

Telenor, Pakistan   **Sept 2004 to Feb 2008**
Project Manager
- Manage and plan six major Releases which includes (scoping, functionality, task prioritization, budgeting, timelines and resource leveling) for BSS/OSS.
- Defining test strategy, test plan, test scenarios, environments (live/test) readiness and synchronization of environments (Production/Test).
- Successfully lead a Mobile Number Portability Project.
- Responsible for clear communication of project risks, issues, status reporting and dependencies to project stakeholders.
- Developed and implemented Change Management Process within IT Division which includes tracking, reporting and auditing of all changes in Production (live) environment using HP open view.
- Vendor Management and Coordination with vendors includes Siebel/Oracle, Evolving, Accenture, Telcordia, Convergys, TIBCO, Siemens and NCR.

Pakistan Revenue Automation   **Nov 1995 to Aug 2004**
Project Manager National Tax Number
- Coordinate activities to ensure smooth and sustained growth and development of product lifecycle including, but not limited to, product requirement definition and documentation, ongoing R&D activities, launching of services in twenty geographically different sites, implementation plan necessary for new technical product.

Project Manager Economic Affairs Division
- Manage cross functional team of State Bank of Pakistan, IMF, World Bank and ADB for implementation and roll out of Debt Financial Management System (DMFAS)
- Developed and managed Product delivery schedule document to provide overview of various program for deliverable and management.

Project Manager Central Excise Automation System
- Design solution architecture and host internal review with Operations

Team Leader Japan International Cooperation Agency (JICA), Japan
- Lead, develop and implemented statistical information system for library in Okinawa in record time

Team Leader Revenue Collection System
Team Leader Revenue Collection System
Software Developer Programmer

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

E: REFERENCES

Jessica Harris
VoIP Project Manager
Information Systems & Technology |Charlotte-Mecklenburg Schools
jessica1.harris@cms.k12.nc.us
O: (980) 344-0104 | M: (704) 650-5147

Scott Williams
Information Technology Director
City of Goldsboro, NC
P 919-580-4284
swillimas@goldsboronc.gov
www.goldsboronc.gov

Todd Garrett
WAN Engineer
Onslow County Schools
Todd.Garrett@onslow.k12.nc.us
910-455-2211 x20511

DSI DISYS Solutions Inc.
Complete IT Solutions & Services

DISYS
Solutions, Inc.

44670 Cape Court, Suite 100
Ashburn, VA 20147
Phone: (888) 286-3896
Fax: (703) 802-0798
Cage Code: 674Q4
DUNS: 962751918
FEIN: 27-2586114

Quote

Quote Date	5/25/2021
Expiration Date	8/23/2021
Quote Number	5242021-5

Quote Type:

Turnkey Phone System - 153.VAR.21.TECH.163

BILL TO
Brunswick County Schools
35 Referendum Drive NE
Attn: Debra D. Bair
Bolivia, NC 28422

SHIP TO
Brunswick County Schools
35 Referendum Drive NE
Attn: Debra D. Bair
Bolivia, NC 28422

PREPARED BY	PREPARED FOR	PHONE #	EMAIL ADDRESS	SHIP	TERMS
Pankaj Sharma	Debra D. Bair	910-253-1096	dbair@bcswan.net	Best Way	NET30

ITEM #	PRODUCT DESCRIPTION	QTY	LIST PRICE	UNIT PRICE	TOTAL 3-YEAR	1ST YEAR PRICING	2ND YEAR PRICING	3RD YEAR PRICING	SERVICE DURATION (MONTHS)
A-FLEX3-EDU	Flex 3.0 for Education	1	$ 0.00	$ -	$ -	$ -	$ -	$ -	---
Initial Term - 36.00 Months	Auto Renewal Term - 12 Months | Billing Model - Annual Billing | Requested Start Date - 01-Jun-2021 | Requested End Date - 31-May-2024								
SVS-FLEX-SUP-BAS	Basic Support for Flex Plan	1	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-EA-E-K-STU	EA Students for K-12	12500	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-SRST-E	SRST Endpoints (1)	1440	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-EA	UCM Cloud Calling Enterprise Agreement	1440	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-CA	UCM Cloud Calling Common Area	600	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-ACC	UCM Cloud Calling Access	240	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-UCXN	UCM Cloud Calling Unity Connection	2040	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-ER	UCM Cloud Calling Emergency Responder	3600	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-U-SME	UCM Cloud Calling Session Management ENT	1	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-EXP-PAK	Expressway Product Authorization Key (1)	1	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-C-DEV-ENT	Cloud Device Registration Entitlement	1440	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-MSG-ENT	Messaging Entitlement	13940	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-FILESTG-ENT	File Storage Entitlement	278800	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-PROPACK-ENT	Pro Pack for Cisco Control Hub Entitlement	1440	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-EXP-RMS	Expressway Rich Media Session (1)	240	$ -	$ -	$ -	$ -	$ -	$ -	---
A-FLEX-EAUL-EDU	EntW UCM Cloud Calling for Education	1200	$ 12.50	$ 8.50	$ 367,200.00	$ 122,400.00	$ 122,400.00	$ 122,400.00	---
A-FLEX-U-VC-NA	UCM Cloud Virtual Connect - North America (2)	1	$ 1,850.00	$ 1,258.00	$ 45,288.00	$ 15,096.00	$ 15,096.00	$ 15,096.00	---
A-FLEX-SPEECHVIEW	Speechview Standard	100	$ 1.25	$ 0.85	$ 3,060.00	$ 1,020.00	$ 1,020.00	$ 1,020.00	---
	Phones no Smartnet is included								
CP-7841-K9=	Cisco UC Phone 7841	1177	$ 366.28	$ 87.91	$ 103,470.07	$ 103,470.07	$ -	$ -	---
CP-8841-K9=	Cisco IP Phone 8841	265	$ 516.80	$ 124.03	$ 32,867.95	$ 32,867.95	$ -	$ -	---
CP-8851-K9=	Cisco IP Phone 8851	23	$ 617.15	$ 148.12	$ 3,406.76	$ 3,406.76	$ -	$ -	---
CP-8800-A-KEM=	8800 Series Audio KEM, 28 Button	23	$ 566.71	$ 136.01	$ 3,128.23	$ 3,128.23	$ -	$ -	---
CP-8865-K9=	Cisco IP Phone 8865	78	$ 797.78	$ 191.47	$ 14,934.66	$ 14,934.66	$ -	$ -	---
CP-8832-K9	Cisco 8832 In Charcoal with accessories for North America	35	$ 1,726.02	$ 414.24	$ 14,498.40	$ 14,498.40	$ -	$ -	---
CP-8832-POE	Cisco IP Conference Phone 8832 PoE Accessories for Worldwide	35	$ -	$ -	$ -	$ -	$ -	$ -	---
CP-8821-K9-BUN	Cisco Unified Wireless IP Phone 8821, World Mode Bundle	22	$ 1,113.89	$ 267.33	$ 5,881.26	$ 5,881.26	$ -	$ -	---
CP-PWR-8821-NA	Cisco 8821 Power Supply for North America	22	$ -	$ -	$ -	$ -	$ -	$ -	---
CP-BATT-8821	Cisco 8821 Battery, Extended	22	$ -	$ -	$ -	$ -	$ -	$ -	---
	Routers with 1 Year of Smartnet								
ISR4321-V/K9	Cisco ISR 4321 Bundle, w/UC License	2	$ 3,631.53	$ 907.88	$ 1,815.76	$ 1,815.76	$ -	$ -	---
CON-SNT-ISR4321V	SNTC-8X5XNBD Cisco ISR 4321 UC Bundle, PVDM4-32, UC L	2	$ 435.06	$ 304.54	$ 609.08	$ 609.08	$ -	$ -	12
SL-4320-UC-K9	Unified Communication License for Cisco ISR 4320 Series	2	$ -	$ -	$ -	$ -	$ -	$ -	---
SL-4320-IPB-K9	IP Base License for Cisco ISR 4320 Series	2	$ -	$ -	$ -	$ -	$ -	$ -	---
PWR-4320-AC	AC Power Supply for Cisco ISR 4320	2	$ -	$ -	$ -	$ -	$ -	$ -	---
CAB-AC-C5	AC Power Cord, Type C5, US, Canada	2	$ -	$ -	$ -	$ -	$ -	$ -	---
MEM-FLSH-4G	4G Flash Memory for Cisco ISR 4300 (Soldered on motherboard)	2	$ -	$ -	$ -	$ -	$ -	$ -	---

Part #	Description	Qty	Unit	Ext				
MEM-4320-4G	4G DRAM for Cisco ISR 4320 (Soldered on motherboard)	2	$ -	$ -		$ -		---
NIM-BLANK	Blank faceplate for NIM slot on Cisco ISR 4400	2	$ -	$ -		$ -		---
SISR4300UK9-173	Cisco ISR 4300 Series IOS XE Universal	2	$ -	$ -		$ -		---
NIM-1MFT-T1/E1	1 port Multiflex Trunk Voice/Clear-channel Data T1/E1 Module	2	$ 373.75	$ 747.50	1,495.00	$ 747.50		---
PVDM4-32	32-channel DSP module	2	$ 426.49	$ 852.98	1,705.95	$ 852.98		---
	Gateways with 1 Year of Smartnet							
VG400-2FXS/2FXO	Cisco VG400 Analog Voice Gateway	18	$ 662.10	$ 11,917.80	2,648.40	$ 11,917.80		36
CON-SNT-VG4002FO	SNTC-8X5XNBD Cisco VG400 Analog Voice Gateway	18	$ 369.60	$ 6,652.80	528.00	$ 6,652.80		
SL-VG400-UC-K9	Unified Communication License for VG400 Series	18	$ -	$ -		$ -		---
CAB-AC	AC Power Cord (North America), C13, NEMA 5-15P, 2.1m	18	$ -	$ -		$ -		---
PWR-VG400-AC	AC Power Supply for Cisco VG400	18	$ -	$ -		$ -		---
SVG400UK9-1610	Cisco VG400 Series IOS XE Universal Image	18	$ -	$ -		$ -		---
	Per User Pricing Option 36 mo term @ $1797 - monthly commit - no cost for call paths							
	User Bundle Package (# of users)	250						
	Concurrent Call Paths >> Up to 1:1 DID to Call Path	100	$ 5.95	$ 55,692.00	18,564.00	$ 18,564.00	18,564.00	
	1 DID or TFN * (NRC, MRC, e911, CNAM, Directory Listing) per User		$ -			$ -		
	Unlimited usage - local, long distance (lower 48, HI & Canada) + toll free up to 10% overall minutes							
	Reserved Toll Free -- Future use	0	$ 1.00	$ -		$ -		
	Reserved DIDs -- Future use	0	$ 0.50	$ -		$ -		
	Business continuity planning, disaster routing, engagement workflow & analytics							
	Backup Trunk for CoreCloud UC Basic/User	200	$ 250.00	$ 9,000.00	3,000.00	$ 3,000.00	3,000.00	
	Meraki SD-WAN Solution for UCM Cloud							
LIC-VMX-L-ENT-3Y	Meraki vMX Enterprise License, Large, 3 Year	2	$ 4,214.70	$ 10,035.00		$ 8,429.40		---
MX250-HW	Meraki MX250 Router/Security Appliance	2	$ 4,212.59	$ 10,029.98		$ 8,425.18		---
LIC-MX250-ENT-3YR	Meraki MX250 Enterprise License and Support, 3YR	2	$ 4,214.70	$ 10,035.00		$ 8,429.40		---
MX67-HW	Meraki MX67 Router/Security Appliance	21	$ 292.92	$ 697.43		$ 6,151.32		---
LIC-MX67-ENT-3YR	Meraki MX67 Enterprise License and Support, 3YR	21	$ 295.03	$ 702.45		$ 6,195.63		---
MG21E-HW-NA	Meraki MG21E Cellular Gateway External Antennas - N America	21	$ 398.29	$ 948.31		$ 8,364.09		---
LIC-MG21-ENT-3Y	Meraki MG21 Enterprise License and Support, 3YR	21	$ 189.66	$ 451.58		$ 3,982.86		---
MA-ANT-C1-B	Meraki MG21E Patch Antenna	21	$ 208.63	$ 496.73		$ 4,381.23		---
DSI Professional Services	Turnkey Cisco Hosted Solution	1	$ 150,000.00	$ 150,000.00		$ 150,000.00		---

Additional comments or special instructions
The pricing is for a 3 year contract and year 2 and 3 will be invoiced automatically

SUBTOTAL	$ 885,382.36	565,222.36	160,080.00
TAX RATE	6.750%	6.750%	6.750%
TAX	$59,763.31	$38,152.51	$10,805.40
S & H	$0.00	$0.00	$0.00
OTHER	$0.00	$0.00	$0.00
TOTAL	$945,145.67	603,374.87	170,885.40

(handwritten: $876,086.94   580,355.50   147,865.85)

Remittance:
DISYS Solutions Inc (DSI)
44670 Cape Court, Suite 100
Ashburn, VA 20147

Pankaj Sharma
Authorized by

3/12/2019
Date

If you have any questions regarding this quote, please contact
Pankaj Sharma @ 571-707-3610 or Pankaj.Sharma@disyssolutions.com

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

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EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

RFP 153.VAR.21.TECH.163

BRUNSWICK COUNTY SCHOOLS
OPERATIONS DIVISION
199 Sessions Dr, Bolivia NC 28422
Phone (910) 253-1036

April 26, 2021

REQUEST FOR PROPOSAL

BID NUMBER:	153.VAR.21.TECH.163		TO BE RETURNED BY:	May 10, 2021

TURNKEY PHONE SYSTEM

Offeror: DISYS Solution, Inc.	Refer Inquiries To: Debra Bair, Director of Technology
Attention: Vinu Luthra	
Address: 44670 Cape Court, Suite 100	Telephone Number: 910.253.1096
Ashburn, VA 20147	E-Mail Address: dbair@bcswan.net

==

NOTICE TO OFFEROR

Sealed Proposals, subject to the conditions made a part hereof, will be received at this office until, but not later than 2:00 PM., on the date referenced above, for furnishing the supplies, materials and/or services, as described herein. Refer to Instructions for Response, Item 10 for proper mailing instructions.

Proposals and/or addenda submitted via E-Mail or facsimile (FAX) machine in response to this Request for Proposal will not be acceptable. Proposals may be subject to rejection unless submitted on this form.

==

EXECUTION

In compliance with this Request for proposal, and subject to all the conditions herein, the undersigned offers and agrees to furnish and deliver any or all items upon which prices are bid within the time specified herein. By executing this bid, I certify that this bid is submitted competitively and without collusion (G.S. 143-54), that none of our officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and that we are not an ineligible vendor as set forth in G.S. 143-59.1. False certification is a Class I felony. Failure to execute/sign bid prior to submittal may render bid invalid. Late bids will not be accepted.

OFFEROR: DISYS Solution, Inc.	FEDERAL ID OR SOCIAL SECURITY NO. 27-2586114	
STREET ADDRESS: 44670 Cape Court, Suite 100	P.O. BOX:	ZIP:
CITY & STATE & ZIP: Ashburn, VA 20147	TELEPHONE NUMBER: 571-707-3636	TOLL FREE TEL. NO 888-286-3896
TYPE OR PRINT NAME & TITLE OF PERSON SIGNING: Vinu Luthra/Chief Operating Officer	FAX NUMBER: 800-601-2944	
AUTHORIZED SIGNATURE:	DATE: May 4, 2021	E-MAIL: bidsdistribution@dsitech.com

Offer valid for 45 days from date of opening unless otherwise stated here: _90____ days (See Instructions for Bids, Item 6)
Prompt Payment Discount:_____ N/A _%_____ N/A _____days (See Instructions for Bids, Item 7)

ACCEPTANCE OF BID

If any or all parts of this bid are accepted by Brunswick County Schools, an authorized representative of the School System shall affix their signature hereto and this document and the provisions of the Instructions for Bids, the special terms and the conditions specific to this Request for Bid, the specifications, and the Brunswick County Schools General Contract Terms and Conditions shall then constitute the written agreement between the parties. A copy of this acceptance will be forwarded to the successful offeror(s).

FOR BRUNSWICK COUNTY SCHOOLS USE ONLY
Offer accepted and contract awarded this _____ day of _____, 20_____, as indicated on attached certification,
by _____(Authorized representative of Brunswick County Schools)
Director of Administration & Safety

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools

RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PAGE 2   BID NO. IT1067L   OFFEROR: DISYS Solutions, Inc.

INSTRUCTIONS FOR BIDS

1. **READ. REVIEW AND COMPLY:** It shall be the offeror's responsibility to read this entire document, review all enclosures and attachments, and comply with all requirements specified herein.

2. **NOTICE TO OFFERORS:**
   All bids are subject to the provisions of the Instructions for Bids, special terms and conditions specific to this Request for Bids, the specifications, and the Brunswick County Schools General Contract Terms and Conditions.

   Brunswick County Schools object to and will not evaluate or consider any additional terms and conditions submitted with a bid response. This applies to any language appearing in or attached to the document as part of the offeror's response. DO NOT ATTACH ANY ADDITIONAL TERMS AND CONDITIONS.

   By execution and delivery of this document, the offeror agrees that any additional terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect.

3. **DEFINITIONS:**
   OFFEROR: Company, firm, corporation, partnership, individual, etc., submitting a response to a Request for Bids.

   TERM CONTRACT: A contract generally intended to cover all normal requirements for a commodity for a specified period of time based on estimated quantities only.

4. **EXECUTION:** Failure to sign under EXECUTION section may render bid invalid.

5. **ORDER OF PRECEDENCE:** In cases of conflict between specific provisions in this bid, the order of precedence shall be (1) special terms and conditions specific to this bid, (2) specifications, (3) Brunswick County Schools General Contract Terms and Conditions, and (4) Instructions for Bids.

6. **TIME FOR CONSIDERATION:** Unless otherwise indicated on the first page of this document, the offer shall be valid for a minimum of 45 days from the date of bid opening. Preference may be given to bids allowing not less than 45 days for consideration and acceptance.

7. **PROMPT PAYMENT DISCOUNTS:** Offerors are urged to compute all discounts into the price offered. If a prompt payment discount is offered, it will not be considered in the award of the contract except as a factor to aid in resolving cases of identical prices.

8. **MAILING INSTRUCTIONS:**
   In an effort to support the sustainability efforts of the State of North Carolina we solicit your cooperation in this effort.

   * It is desirable that all responses are printed double sided;

   * Submit one (1) signed, original executed proposal responses, along with 2 photocopies and 1 electronic copy (emails not accepted) of your proposal simultaneously to the address identified below.

   * *Clearly mark each sealed package with: (1) Vendor name; (2) the RFP number; and (3) the due date. Address the package(s) for delivery as shown in the table below. If Vendor is submitting more than one (1) proposal, each proposal shall be submitted in separate envelopes and marked accordingly. For delivery purposes, separate envelopes from a single Vendor may be included in the same outer package. Proposals are subject to rejection unless submitted with the information above included on the outside of the proposal package.*

Brunswick County Schools Operations Division Attention: Megan Grissett 35 Referendum Drive Bolivia, NC 28422	Request For Proposal # 153.VAR.21.TECH.163
	Contract Type: Open Market
	Commodity: Electronics
	Using Agency Name: Brunswick County Schools
Refer ALL Inquiries to: Debra Bair	
E-Mail dbair@bcswan.net	

9. **RFP SCHEDULE:**
   The table below shows the *intended* schedule for this RFP. Brunswick County Schools will make every effort to adhere to this schedule.

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Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PAGE 3   BID NO. IT1067L   OFFEROR: DISYS Solutions, Inc.

Event	Responsibility	Date and Time
Issue RFP	BCS	April 26, 2021
Attend Non Mandatory Pre-Proposal Meeting	Vendor	N/A
Questions submitted to **dbair@bcswan.net** (Reference RFP # in subject line)	Vendor/BCS	May 3, 2021
Provide Response to Questions	BCS	May 5, 2021
Submit Proposals	Vendor	May 10, 2021

10. PROPOSAL QUESTIONS
Upon review of the RFP documents, Vendors may have questions to clarify or interpret the RFP in order to submit the best proposal possible. To accommodate the Proposal Questions process, Vendors shall submit any such questions, in written form by the above due date. Brunswick County Schools will not respond to questions via telephone or telephone message(s). Written questions shall be emailed to at date and time specified above. Vendors should enter "RFP # ************** Questions" as the subject for the email. Questions submittals should include a reference to the applicable RFP section and be submitted in a format shown below:

Reference	Vendor Question
RFP Section, Page Number	Vendor question ...?

Questions received prior to the submission deadline date, Brunswick County Schools' response, and any additional terms deemed necessary by Brunswick County Schools will be posted in the form of an addendum to the Brunswick County Schools Operations website https://www.bcswan.net/site/Default.aspx?PageID=2411 , and shall become an Addendum to this RFP. No information, instruction or advice provided orally or informally by any Brunswick County Schools personnel, whether made in response to a question or otherwise in connection with this RFP, shall be considered authoritative or binding. **Vendors shall rely only on written material contained in an Addendum to this RFP.**

11. INFORMATION AND DESCRIPTIVE LITERATURE: Offeror is to furnish all information requested and in the spaces provided in this document. Further, if required elsewhere in this bid, each offeror must submit with their bid sketches, descriptive literature and/or complete specifications covering the products offered. Reference to literature submitted with a previous offer will not satisfy this provision. Bids which do not comply with these requirements will be subject to rejection.

12. RECYCLING AND SOURCE REDUCTION: It is the policy of Brunswick County Schools to encourage and promote the purchase of products with recycled content to the extent economically practicable, and to purchase items which are reusable, refillable, repairable, more durable, and less toxic to the extent that the purchase or use is practicable and cost-effective.

We also encourage and promote using minimal packaging and the use of recycled/recyclable products in the packaging of commodities purchased. However, no sacrifice in quality of packaging will be acceptable. The company remains responsible for providing packaging that will protect the commodity and contain it for its intended use.

Companies are strongly urged to bring to the attention of purchasers those products or packaging they offer which have recycled content and that are recyclable.

13. ACCEPTANCE AND REJECTION: Brunswick County Schools reserves the right to reject any and all bids, to waive any informality in bids and, unless otherwise specified by the offeror, to accept any item in the bid. If either a unit price or extended price is obviously in error and the other is obviously correct, the incorrect price will be disregarded.

14. REFERENCES: Brunswick County Schools reserves the right to require a list of users of the exact item offered. Brunswick County Schools may contact these users to determine acceptability of the bid. Such information may be considered in the evaluation of the bid.

15. TAXES:

FEDERAL: All agencies participating in this contract are exempt from Federal Taxes, such as excise and transportation. Exemption forms submitted by the contractor will be executed and returned by the using agency.

OTHER: Prices offered are not to include any personal property taxes, nor any sales or use tax (or fees) unless required by the North Carolina Department of Revenue.

16. AWARD OF CONTRACT: As directed by statute, qualified bids will be evaluated and acceptance may be made of the lowest and best bid most advantageous to Brunswick County Schools as determined upon consideration of such factors as: prices offered; the quality of the articles offered; the general reputation and performance capabilities of the offerors; the substantial and other conditions set forth in the bid; the suitability of the articles for the intended use; the related services needed; the date or dates of delivery and performance; and such other factors deemed by Brunswick County Schools to be pertinent or peculiar to the purchase in question. Unless otherwise specified by Brunswick County Schools or the offeror, Brunswick County Schools reserves the right to accept any item or group of items on a multi-item bid.

BIDS ARE SUBJECT TO REJECTION UNLESS SUBMITTED ON THIS FORM

EXHIBIT A

Bruswick County Schools
RFP Number: 153.VAR.21.TECH.163 – Turnkey Phone System

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PAGE 4   BID NO. IT1067L   OFFEROR: DISYS Solutions, Inc.
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In addition, on TERM CONTRACTS, Brunswick County Schools reserves the right to make partial, progressive or multiple awards; where it is advantageous to award separately by items; or where more than one supplier is needed to provide the contemplated requirements as to quantity, quality, delivery, service, geographical areas; other factors deemed by Brunswick County Schools to be pertinent or peculiar to the purchase in question.

17. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150, Brunswick County Schools invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.

18. **CONFIDENTIAL INFORMATION:** As provided by statute and rule, Brunswick County Schools will consider keeping trade secrets which the offeror does not wish disclosed confidential. Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the offeror. Cost information shall not be deemed confidential. In spite of what is labeled as a trade secret, the determination whether it is or not will be determined by North Carolina law.

19. **SAMPLES:** Sample of items, when required, must be furnished as stipulated herein, free of expense, and if not destroyed will, upon request be returned at the offeror's expense. Request for the return of samples must be made within 10 days following date of bid opening. Otherwise the samples will become School property. Each individual sample must be labeled with the offeror's name, bid number, and item number. A sample on which an award is made, will be retained until the contract is completed, and then returned, if requested, as specified above.

20. **MISCELLANEOUS:** Masculine pronouns shall be read to include feminine pronouns, and the singular of any word or phrase shall be read to include the plural and vice versa.

21. **RECIPROCAL PREFERENCE:** G.S. 143-59 establishes a reciprocal preference law to discourage other states from applying in-state preferences against North Carolina's resident bidders. The "Principal Place of Business" is defined as the principal place from which the trade or business of the bidder is directed or managed.

22. **UNIFORM ADMINISTRATIVE REQUIREMENTS:** By entering into this Contract the Contractor agrees to comply with all applicable provisions of Title 2, Subtitle A, Chapter II, PART 200—UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS contained in Title 2 C.F.R. § 200 et seq.

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REQUIREMENTS

USER: Brunswick County Schools

TRANSPORTATION CHARGES: FOB Destination.

OPTIONAL INSTALLATION REQUIREMENTS *(if applicable)*: Awarded Vendor shall be responsible for installing, inspecting, and leaving the equipment ready for use, and removing all empty shipping cartons from school property. Optional Installation Charges shall be listed as a separate item.

DELIVERY: Delivery is required within thirty (30) days after receipt of order. State here whether this requirement can be met: yes/no_____. If this requirement cannot be met, delivery will be made from
_____ (City & State) within _____ consecutive days after receipt of order. Brunswick County Schools reserves the right to evaluate delivery offered as a factor in determining the award of the proposed contract.

NOTE: BRUNSWICK COUNTY SCHOOLS RESERVES THE RIGHT TO ADJUST QUANTITIES UP OR DOWN AT THE UNIT PRICE AS BUDGETED FUNDS MAY ALLOW OR REQUIRE.
BRUNSWICK COUNTY SCHOOLS ALSO RESERVES THE RIGHT TO AWARD CONTRACT ON A SPLIT ORDER BASIS OR LUMP SUM BASIS IF IT IS IN OUR BEST INTEREST.

ALL MATERIALS SHOULD BE NEW AND CURRENT UNLESS OTHERWISE STATED. REFURBISHED MODELS WILL NOT BE CONSIDERED.

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EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PAGE 5   BID NO. IT1067L   OFFEROR: DISYS Solutions, Inc.

Scope of Project

Brunswick County Schools is a rural public school system consisting of 12,500 students attending 20 schools, a district office and 1500 staff. The District seeks proposals from qualified vendors for migration and setup, configuration and deployment of a full-featured Hosted VOIP System with local failover capability that will fully integrate with Netfortris Fonality (temporarily during migration) and Bogen systems used by the District. Failover capability is defined as the ability to call site to site, receive inbound and send outbound calls without internet connection.

It is Brunswick County School's intent to contract with the successful bidder by entering into a (3) or (5) year agreement defined as one (1) year with two (2) or four (4) option years.

Specifications listed herein are not to be considered restrictive to one source of supply. Items offered must be equal in quality and performance. Bidders must include supporting product data with the proposal to determine equality and acceptability. Bidders shall submit a listing of any deviations from specifications. Brunswick County Schools reserves the right to reject any proposal in which the items offered are considered unsatisfactory in any manner.

Scope of Services: General Requirements and Minimum Specifications

Brunswick County Schools is seeking an enterprise grade cloud hosted and fully managed VOIP solution to support the needs of our staff and students. Brunswick County Schools currently supports twenty one (21) locations with a need of approximately 1,600 phones. The current system is a Netfortris (Fonality) local server VOIP system with full VOIP capability over SIP trunks serviced by Carolina Digital. This system integrates with our analog Intercom System (Bogen) in our schools via a Vega ATA. Three schools will be upgraded to a digital Bogen Intercom System by deployment of this new system. Distance learning and primary video conferencing used by the District is Zoom and Google Meet. The District's wireless and switch network infrastructure is Cisco. **Brunswick County School's expectation is that the solution be implemented over Summer 2021 and ready for start of school on August 23rd. As deployment is being executed to all sites, the existing Polycom phones (Model VVX 500) and ATA (Vega) devices must work to maintain phone service throughout the district until all phones can be switched over. The District has adequate network drops and switches throughout the locations to facilitate the deployment.** The District reserves the right to add or subtract from the quantities listed below throughout the term of the contract as enrollment changes. Charges need to be on a per phone/user basis, with the District responsible for current year usage needs.

1. VOIP Cloud Calling Solution:
    1. The complete solution will be bundled as a service. This includes all hardware including ATA's, Gateways and Phones.
    2. Import existing extensions, groups and call configurations from existing system
    3. Supports SIP Trunks and Gateways to meet objectives
    4. Solution will support 1,600 phones and extensions with the ability to expand as needed.
    5. Easy scaling of phone and extension requirements
    6. Intercom and Paging Integration with Bogen Systems via ATA
    7. Independently operated sites for intercom and room to room paging
    8. Logical path to integrate PA and intercom functionality to IP speakers in upgraded schools
    9. E911 services tied to correct physical address and location within the building would be a plus
    10. Voicemail translation (text) to email (GMail), not just the audio
    11. Softphone support for iOS, Android and Windows
    12. Call Forwarding on Busy/No Answer or Time of Day Routing
    13. Voicemail on Hold
    14. HD audio and video calling
    15. Centralized phonebook (good if it syncs with AD)
    16. Extend calls to cell phone if desired
    17. Transfer calls
    18. Access mailbox from inside and outside district sites
    19. Call parking/pickup call transfer
    20. Call queuing
    21. Message waiting indicator
    22. Automatic pickup on busy
    23. Security and encryption
    24. Ability for staff to make calls at home or on cellphone and be recognized as a BCS district number and not their personal numbers.
2. Management Features:
    1. Intuitive, user friendly web-based management console that allows for distributed administration and real-time web based system status
    2. Single management platform for user licensing and calling
    3. Call logging and reporting capabilities
    4. Usage graphs for monitoring
    5. Integration with Microsoft Active Directory
    6. Automated provisioning of devices

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7. Integrated Web Server
8. Easy backup and restore of system
9. Failover functionality if internet connection is lost
10. LDAP/SSO integration capabilities to include user provisioning and authentication for end users

3. Training in Software and Hardware
1. Training for IT Department on System Management
2. Online training support for end users on basic phone usage

4. Support
1. Ticket support online
2. Phone call support

5. Hardware
1. 1600 VOIP Phones with 1Gb pass through, must support SIP with warranty details specified. Warranties will be a consideration for evaluation.
2. Phones must have two ports allowing daisy chaining of desktop equipment if desirable.
3. 4 phone options should be presented based on the use case. Video phones should be added as a separate option.
    1. 850 Standard classroom
    2. 554 Standard office
    3. 21 Front Desk Secretary (expansion panels for easy routing to classrooms and offices)
    4. 150 Executive level
    5. 25 Conference room
4. Solution will be completely hosted with the only exception being of on premise gateways and ATA devices.
5. 17 ATA adapters for VOIP that provide full connectivity to existing PA and Intercom systems as well as copper phone lines as needed with warranty details specified. Warranties will be a consideration for evaluation.
6. Option to purchase additional phones and ATA adapters during agreement period at RFP cost.
7. Installation of all hardware at all sites
8. District will consider options of buyback of existing Polycom phones

6. SIP Trunk Services
1. Direct in Dialing for 200 users with Auto Attendant/Digital Receptionist and Call Routing
2. 100 Concurrent Call Passes in addition to unlimited internal extension calls
3. Long distance included
4. Equipment (if needed)

7. Other
1. RFP Response - All vendors must provide a proposed Bill of Materials based on the RFP. The vendors' response must include all required components for an operational system including all recommended equipment and materials listed for the system, estimated calendar for procurement and installation, solutions to specification requirements, and design configuration with manufacturer specific information and value add. These materials will be referenced as a part of the RFP evaluation criteria.
2. Installation and Implementation - The contact agreement, this document, the response with the associated finalized materials make-up the "blue-prints" for this project. The product provider will be responsible for all equipment configurations. All related services required to install and implement the agreed upon design and products are to be included in this RFP. The vendor is responsible for identifying all required services for the implementation. "Out of Scope" services will be provided through a change order; however, Out-of-Scope services will only be required if a change in product or design is defined in the project.
3. Installation Documentation - One complete set of hardware and software documentation for all provided items per site at no additional cost. Vendors must provide installation method documentation for all equipment including mounts.
4. Maintenance - The vendor will provide complete maintenance options. Cost for maintenance will be broken down and reflected in the proposal form. Maintenance will be a consideration for evaluation. All Core Components should be between 8 AM to 5 PM next business day maintenance contracts.
5. Equipment Management - The respondent will deliver and manage equipment with the District. BCS will be billed for materials consumed only. Documentation is required to support distribution of materials prior to billing. The vendor will provide electronic documentation of all equipment installed with the following information: purchase order, part number, site, serial number, location, extension and asset tag. BCS will provide asset tags for equipment and the Vendor will install per BCS instructions on all equipment.
6. Project Management - The respondent will have a project manager to be the single point of contact for BCS. The respondent will submit a Management Team description of each key member, with responsibilities and qualifications. The project team will include technical people certified by the proposed manufacturer on the proposed products. The project manager is responsible for the coordination of resources to meet the vendor proposed project schedule. The successful respondent must have the capability and resources to meet the project schedule and an organizational structure that will allow the project manager the access to the required resources to meet the schedule. The respondent will provide information that demonstrates their capability in delivering the services requested in this RFP. Experience, qualifications, and certifications will help determine the respondent's ability to deliver the specified services and help assure BCS of a successful project.

8. Requirements
1. BCS
    1. BCS will provide all documentation listed above to the successful vendor and access to existing equipment.
    2. BCS will provide Internet circuit between hosted solution and on premise datacenter
    3. BCS will make necessary firewall and
    4. BCS will purchase equipment listed in the RFP once an award is made.

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5. BCS will provide upon reward full details of existing phone VOIP system and PA systems
6. BCS will provide access to all locations.
7. BCS will manage ongoing moves, adds and changes.
2. Vendor
   1. Vendor will provide a Project manager, Networking Engineer and a procurement person identified to the BCS project.
   2. Vendor will provide procurement, inventor and accounting support/management for the life of the project.
   3. Vendor will provide configuration and physical installation of all components.
   4. Vendor will provide required documentation of network
   5. Product descriptions, equipment placement, serial number, IP address, switch port, test results, final configuration, purchase order, statement of work and acceptance sign off.
   6. Vendor will fully configure the hosted cloud solution and local failover in the datacenter. This includes but is not limited to, call routing, dial-plans, hunt groups and analytics.
   7. Vendor is responsible for trash removal and cleanup of all work locations.
   8. The vendor shall be responsible for and repair all damage to the building due to negligence of its workers, and report to the school system any such damage to the building which may exist or may occur during the occupancy of the quarters.
   9. Vendor must replace any equipment damaged by the Vendor due to the negligence and shall make all necessary repairs at the Vendor's expense.
   10. The awarded vendor will provide all necessary equipment to aid in the successful completion of all proposed work.
   11. Awarded vendor must be an approved distributor/service provider and partner in good standing with the manufacturer for which products and services are being rendered by BCS.
   12. Awarded vendor is responsible for establishing and maintaining good and acceptable status with manufacturer, distributors of manufacturer and its products and services. It is the responsibility of the awarded vendor for the acquisition, transportation, storage and security of all products and services until at which time the product or services is delivered or implemented.
3. Work Plan
   1. The work plan should describe in detail the specific methods, tasks, and activities proposed to be undertaken from system selection to system maintenance. Any anticipated theoretical or practical problems associated with the completion of each requirement should be discussed. Solutions, alternatives, or contingency plans related to these problems should also be proposed if appropriate. Additionally, the Work Plan should include task initiation and completion schedules and vendor's proposed staff assignments. Provide an overview of the professional services you offer, note any third party is involved in the implementation process. Include your project management process.
4. Company Background and Experience
   1. Provide information on company background to include number of years in business,m size of firm, location of main office, and resumes /certifications of key personnel that are to be assigned to the project if awarded.
   2. References from prior projects, specifically K-12, are to be included in the RFP submittal.

FORMAT.

The response, at a minimum, shall include the following information labeled as indicated:
A. **Respondent's Profile and Submittal Letter – (10 points max)**
   RFP Submittal Letter signed by authorized agent of the business/corporation with proof of authorization from business. A brief profile of the firm, including:
   1. Business History (Limited to one page)
   2. Organizational Chart
   3. Documentation from the appropriate state's agency confirming firm's legal entity type (i.e. sole proprietorship, partnership, limited liability partnership, corporation, Limited Liability Corporation, etc.). For non-North Carolina businesses submit documentation from the state in which the business was formed and documentation from the State of North Carolina providing authorization to perform business in the state of North Carolina.
   4. Federal Identification Number of firm.
   5. Ownership interests
   6. Current Client List
   7. Active business venues (counties, states, etc.)
   8. Present status and projected direction of business
   9. Reseller and partner of proposed system
B. **Functional General and Minimum Requirements (40 points max)**
   Describe the Firm's understanding of the District's needs and the objectives to be accomplished. Refer to the Scope of Services of this Request for Proposal. Detail how the proposed system meets the functional requirements outlined in the Scope of Services.
C. **Project Management, Approach, Methodology and Timelines (10 points max)**
   Describe the approach and methods for managing the migration and deployment as well as the documentation and training of the system. Describe the Scope of Services proposed for the project, including the firm's overall approach to address the tasks assigned. Suggested deviations from the tasks or schedule may be proposed but shall be clearly identified as such and explained. The work plan shall include a sample Project Schedule, with a projected timetable for completion of services.

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D. **Experience of Key Personnel – (15 points max)**
Provide a list of staff who will be assigned to the District's account. Include a resume for each listed individual, with a description of their qualifications, certifications and nature of their previous assignments.

E. **References – (15 points max)**
Provide a minimum of three (3) recent and relevant reference letters from Respondent's clients where the proposed services have been used within the past three (3) years. Reference letters should include general description of work performed. The degree of relevant experience exhibited in the letters from the clients as it relates to North Carolina School Districts and/or political subdivisions will be a primary factor.

F. **Fee Structure (10 points max)**
   1. Include a proposed Bill of Materials for services based on the submitted proposal. It must include all required components for an operational system.
   2. Provide estimates of other costs or charges, exclusive of fixed fee. If no additional costs are specifically detailed, the District will consider the basic fees as the only proposed and contractual fee schedule.

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BRUNSWICK COUNTY SCHOOLS ("the District")
GENERAL CONTRACT TERMS AND CONDITIONS

1. PERFORMANCE:

a) It is anticipated that the tasks and duties undertaken by the Vendor under the contract which results from the Brunswick County Schools' solicitation in this matter (Contract) shall include Services, and/or the manufacturing, furnishing, or development of goods and other tangible features or components, as deliverables.

b) Except as provided herein, and unless otherwise mutually agreed in writing prior to award, any deliverables not subject to an agreed Vendor license and provided by Vendor in performance of this Contract shall be and remain property of Brunswick County Schools. During performance, Vendor may provide proprietary components as part of the deliverables that are identified in this Contract. Vendor grants Brunswick County Schools a personal, permanent, non-transferable license to use such proprietary components of the deliverables and other functionalities, as provided under this Contract. Any technical and business information owned by Vendor or its suppliers or licensors made accessible or furnished to Brunswick County Schools shall be and remain the property of the Vendor or such other party, respectively. Vendor agrees to perform under the Contract in at least the same or similar manner provided to comparable users and customers. Brunswick County Schools shall notify the Vendor of any defects or deficiencies in performance or failure of deliverables to conform to the standards and specifications provided in this Contract. Vendor agrees to timely remedy defective performance or any nonconforming deliverables on its own or upon such notice provided by Brunswick County Schools.

c) Vendor has a limited, non-exclusive license to access and use Brunswick County Schools' Data provided to Vendor, but solely for performing its obligations under and during this Agreement and in confidence as further provided for herein or by law.

d) Vendor or its suppliers, as specified and agreed in the Contract, shall provide support assistance to Brunswick County Schools related to all Services performed or other deliverables procured hereunder during the District's normal business hours. Vendor warrants that its support, customer service, and assistance will be performed at a minimum in accordance with generally accepted and applicable industry standards.

e) Brunswick County Schools may document and consider in awarding or renewing future procurement contracts the general reputation, performance and performance capabilities of the Vendor under this Contract as provided by G.S. 143-52 and 143-135.9 (a) and (b) (Best Value).

2. COMPENSATION:

Provider shall provide School System with invoice(s) itemized by service provided, the date(s) that services were provided, and the amount owed, along with any supporting documentation that may be requested in advance by School System. The School System shall process payments to Provider within Thirty (30) days of submission of such invoice(s). In the event of inclement weather, fire, power failure, or other similar occurrence, which may necessitate the cancellation of the delivery of the service(s), and an alternate date cannot be agreed upon, the School System will be under no obligation to compensate Provider for services not rendered.

BIDS ARE SUBJECT TO REJECTION UNLESS SUBMITTED ON THIS FORM

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EXHIBIT A

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3. **TERMINATION FOR CONVENIENCE:** The School System may terminate this Contract at any time at its complete discretion upon twenty (20) calendar days' notice in writing from the School System to Provider prior to the date of termination. In addition, all finished or unfinished documents and other materials produced by Provider pursuant to this Contract shall, at the request of the School System be turned over to it and become its property. If the Contract is terminated by the School System in accordance with this section, the School System will pay Provider at the rate set out in Section 2.1 for all services performed as of the date of termination.

4. **TERMINATION BY THE OWNER FOR CAUSE:** At any time, the School System may terminate this Contract with two (2) days prior notice if Provider is unable to meet goals and timetables or if the School System is dissatisfied with the quality of services provided. The School System may without prejudice to any other rights or remedies of the School System and after giving the Contractor two (2) days' written notice, terminate the Contract and may:

   1. Exclude the Provider from School System property and take possession of all materials, equipment, or supplies paid for by the School System; and

   2. Finish the Work by whatever reasonable method the School System may deem expedient.

   If the School System terminates the whole or any part of the Work, the School System may procure, upon such terms and in such manner as the School System may deem appropriate, supplies or services similar to those so terminated and the Provider shall be liable to the School System for any excess costs for such similar supplies or services. The Provider shall continue the performance of the Contract to the extent not terminated hereunder.

   When the School System terminates the Contract, the Provider shall not be entitled to receive further payment until the Work is finished. If the Work was being performed on a lump sum basis and an unpaid balance of the Contract sum exceeds costs of finishing the Work, and other damages incurred by the School System, such excess shall be paid to the Provider. If such costs and damages exceed the unpaid balance, the Provider shall pay the difference to the School System. If the Work was being performed on a time and material basis, the Provider shall only be entitled to payment for Work performed and accepted by the School System prior to the date of termination. Upon written request of the Provider, the School System shall furnish to the Provider a detailed accounting of the costs incurred by the School System in finishing the Work.

5. **INTERPRETATION, CONFLICT OF TERM:**

   The definitions in the Instructions to Vendors in the relevant solicitation for this Contract are specifically incorporated herein.

   If federal funds are involved in the transactions under this Contract, the Vendor shall comply with all applicable state and federal requirements and laws, except where State requirements are more restrictive. See the additional federal requirements included in the "Federal Funds Provisions" section below.

   "Purchasing Agency" herein is as defined in 01 NCAC 05A.0112.

   Contracts made in contravention of General Statutes, Chapter 143, Article 3, are void. G.S. 143-58.

   In cases of conflict between specific provisions in this Contract and any other referenced documents, the Order of Precedence shall be (high to low) (1) any special terms and conditions specific to this Contract, including any negotiated terms; (2) requirements, specifications and administrative terms; (3) these GENERAL CONTRACT TERMS AND CONDITIONS, including the Federal Funds Provisions; (4) Definitions and other provisions in INSTRUCTIONS TO VENDORS in this solicitation, which is specifically incorporated in this Contract; (5) PRICING, and (6) Vendor's Bid, to the extent specifically and mutually incorporated into this Contract.

   In the event of conflict of terms between applicable provisions of the Federal Funds Provisions and the other provisions of these North Carolina General Contract Terms and Conditions, the more restrictive provision will govern.

6. **TERMS AND METHODS OF PAYMENT:** Provider shall submit to the School System monthly invoices itemized by service provided, the number of hours worked and by whom, the date(s) that services were provided, and the amount owed, along with any supporting documentation that may be requested in advance by the School System. Such invoices shall be submitted within thirty (30) days of the rendering of services. The School System shall process payments to Provider within Thirty (30) days of submission of such invoices. Invoices should be sent to vendorinvoice@bcswan.net for review and approval.

7. **CONTRACT FUNDING:** It is understood and agreed between Provider and the School System that the School System's payment obligation under this Contract is contingent upon the availability of appropriated funds from which payment for Contract purposes can be made.

8. **INSURANCE:** Provider agrees to maintain Commercial General Liability in amount of $1,000,000 each occurrence with $2,000,000 General Aggregate. Provider shall maintain $1,000,000 in automobile liability, and other appropriate

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insurance, as well as Workers Compensation in the required statutory amount for all employees participating in the provision of services under this Contract. Provider also agrees to maintain $1,000,000 in professional liability insurance if the Provider is engaged in a professional service pursuant to this Contract. The Board of Education shall be named by endorsement as an additional insured on the general and automobile liability policies. Certificates of such insurance shall be furnished by Provider to the School System and shall contain an endorsement to provide the School System at least 10 days' written notice of any intent to cancel or terminate by either Provider or the insuring company. Failure to furnish insurance certificates or maintain such insurance shall be a default under this contract and shall be grounds for immediate termination of this Contract.

Taxes. Provider shall pay all federal, state, and FICA taxes for all employees participating in the provision of services under this Contract.

9. **NON-DISCRIMINATION COMPLIANCE:**
Wholly State Funded Contracts.

a) The Vendor will take affirmative action in complying with all State requirements and laws concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin or disability or rights, such as preserved by Governor Roy Cooper Order E.O. 24 or 25, and will take necessary action to ensure that its internal employee policies and procedures are consistent with Executive Order #82 (Roy Cooper, December 6, 2018), which extends workplace protections and accommodations to pregnant employees.

b) Federal Law, such as the following, applies as provided for therein: Titles VI and VII of the Civil Rights Act of 1964 (PL 88-352), and the regulations issued pursuant thereto (prohibiting discrimination on the basis race, color, national origin and ensuring that individuals are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age); Title IX of the Education Amendments of 1972 (codified as amended at 20 U.S.C. § 1681 et seq.) (prohibiting discrimination on the basis of sex); Titles I, II, III, IV, and V of the Americans with Disability Act of 1990 (prohibiting discrimination on the basis of disability); Section 504 of the Rehabilitation Act of 1973 (codified as amended at 29 U.S.C. § 794) (prohibiting discrimination on the basis of handicap); the Age Discrimination Act of 1975 (codified as amended at 42 U.S.C. § 6101 et seq.) (prohibiting age discrimination); Executive Order 11063 as amended by Executive Order 2259; and Section 109 of the Housing and Community Development Act of 1974, as amended.

Contracts Partially or Wholly Federally Funded.

To the extent federal funding is involved in this procurement, in whole or in part, compliance with the following is required:

c) The Vendor shall comply with all Federal Funds Provisions requirements (below) and not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Vendor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Vendor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

d) The Vendor shall, in all solicitations or advertisements for employees placed by or on behalf of the Vendor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin;

e) The Vendor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or

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applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Vendor's legal duty to furnish information.

f) The Vendor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Vendor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

g) The Vendor shall comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

h) The Vendor shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and shall permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

i) In the event of the Vendor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Vendor may be declared ineligible for further Government contracts or federally assisted construction Contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

j) The Vendor shall include the portion of the sentence immediately preceding paragraph (a) and the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Vendor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Vendor (or herein "applicant," as applicable in context within these Federal Funds Provisions) becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Vendor may request the United States to enter into such litigation to protect the interests of the United States.

k) The Vendor further agrees that it shall be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the Vendor so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the Contract.

l) The Vendor agrees that it shall assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of Vendors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it shall furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it shall otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

m) The Vendor further agrees that it shall refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Vendor debarred from, or who has not demonstrated eligibility for, Government Contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon Vendors and subcontractors by the administering agency or the Secretary of Labor pursuant to

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Part II, Subpart D of the Executive Order. In addition, the Vendor agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part any relevant grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the Vendor under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such Vendor; and refer the case to the Department of Justice for appropriate legal proceedings.

10. **MONITORING AND AUDITING:** Provider shall cooperate with the School System, or with any other person or agency as directed by the School System, in monitoring, auditing, or investigating activities related to this Contract. Provider shall permit the School System to evaluate all activities conducted under this contract as dictated by the School System. Provider shall provide auditors retained by the School System with access to any records and files related to the provision of services under this Contract. The School System agrees that its auditors will maintain the confidentiality of any identified and actual trade secrets of Provider accessed during an audit conducted under this Contract.

11. **CONFIDENTIALITY OF STUDENT INFORMATION:** Provider agrees that all student records or personally identifiable information contained in student records that may be obtained in the course of providing services to the School System under this contract shall be subject to the confidentiality and disclosure provisions of applicable federal and state statutes and regulations as well as the School System's policies. All student records shall be kept in a secure location preventing access by unauthorized individuals. Provider will maintain an access log delineating date, time, agency, and identity of individual accessing student records who is not in the direct employ of Provider. Provider shall not forward to any person other than parent or the School System any student record or personally identifiable information obtained from a student record (including, but not limited to, the student's identity) without the written consent of the School System. Upon termination of this Contract, Provider shall turn over to the School System all student records or personally identifiable information about students obtained by Provider while providing services under this Contract. Nothing in this Contract gives Provider any right to access any student records or personally identifiable information.

12. **LUNSFORD ACT:** Provider also acknowledges that G.S. § 14-208.18 prohibits anyone required to register as a sex offender under Article 27A of Chapter 14 of the General Statutes from knowingly being on the premises of any school. Provider shall conduct or arrange to have conducted, at its own expense, sexual offender registry checks on each of its owners, employees, agents and subcontractors ("contractual personnel") who will engage in any service on or delivery of goods to School System property or at a School System sponsored event, except checks shall not be required for individuals who are solely delivering or picking up equipment, materials, or supplies at: (1) the administrative office or loading dock of a school; (2) non-school sites; (3) schools closed for renovation; or (4) school construction sites. The checks shall include at a minimum checks of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry ("the Registries"). For Provider's convenience only, all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at *http://www.nsopw.gov/*. Provider shall provide certification on the Sexual Offender Registry Check Certification Form (Attachment A) that the registry checks were conducted on each of its contractual personnel providing services or delivering goods under this Contract prior to the commencement of such services or the delivery of such goods. Provider shall conduct a current initial check of the registries. The sex offender registry checks shall be conducted within 30 days of Provider's execution of the Contract and prior to performing any services on School System property. In addition, Provider agrees to conduct the registry checks and provide a supplemental certification form before any additional contractual personnel are used to deliver goods or provide services pursuant to this Contract. Provider further agrees to conduct annual registry checks of all contractual personnel and provide annual certifications at each anniversary date of this Contract. Provider shall not assign any individual to deliver goods or provide services pursuant to this Contract if said individual appears on any of the listed registries. Provider agrees that it will maintain all records and documents necessary to demonstrate that it has conducted a thorough check of the registries as to each contractual personnel, and agrees to provide such records and documents to the School System upon request. Provider specifically acknowledges that the School System retains the right to audit these records to ensure compliance with this section at any time in the School System's sole discretion. Failure to comply with the terms of this provision shall be deemed a material breach of the Contract. If requested by the School System, the Provider shall provide sufficient background information regarding any or all contractual personnel who may deliver goods or perform services under this contract in order to allow the School System to perform a criminal background check on each individual at the School System's expense. Provider further agrees that it has an ongoing obligation to provide the School System with the name of any new contractual personnel who may deliver goods or provide services under the Contract. The School System reserves the right to prohibit any contractual personnel of Provider from delivering goods or providing services under this Contract if the School System determines, in its sole discretion, that such contractual personnel may pose a threat to the safety or well-being of students, school personnel or others, or if such contractual personnel may otherwise pose a risk to the School System's operations. Failure to comply with the terms of this provision shall be deemed a material breach of the Contract.

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13. **GENERAL INDEMNITY:** The Vendor shall hold and save Brunswick County Schools, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, Services, materials, or supplies in connection with the performance of the Contract, and also from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the Vendor in the performance of the Contract that are attributable to the negligence or intentionally tortious acts of the Vendor, provided that the Vendor is notified in writing within 30 days from the date that the District has knowledge of such claims. The Vendor represents and warrants that it shall make no claim of any kind or nature against the District's agents who are involved in the delivery or processing of Vendor deliverables or Services to the District. As part of this provision for indemnity, if federal funds are involved in this procurement, the Vendor warrants that it will comply with all relevant and applicable federal requirements and laws, and will indemnify and hold and save Brunswick County Schools harmless from any claims or losses resulting to the District from the Vendor's noncompliance with such federal requirements or law in this Contract. The representations and warranties in the preceding two sentences shall survive the termination or expiration of the Contract. Brunswick County Schools does not participate in indemnification due to Constitutional restrictions, or arbitration, which effectively and unacceptably waives jury trial. *See,* G.S. 22B-3, -10.

14. **RELATIONSHIP OF PARTIES:** Provider shall be an independent contractor of the School System, and nothing herein shall be construed as creating a partnership or joint venture; nor shall any employee of Provider be construed as an employee, agent, or principal of the School System.

15. **COMPLIANCE WITH APPLICABLE LAWS:** Provider shall comply with all applicable laws and regulations in providing services under this Contract. In particular, Provider shall not employ any individuals to provide services to the School System who are not authorized by federal law to work in the United States. Provider represents and warrants that it is aware of and in compliance with the Immigration Reform and Control Act and North Carolina law (Article 2 of Chapter 64 of the North Carolina General Statutes) requiring use of the E-Verify system for employers who employ twenty-five (25) or more employees and that it is and will remain in compliance with these laws at all times while providing services pursuant to this Contract. Provider shall also ensure that any of its subcontractors (of any tier) will remain in compliance with these laws at all times while providing subcontracted services in connection with this Contract. Provider is responsible for providing affordable health care coverage to all of its full-time employees providing services to the School System. The definitions of "affordable coverage" and "full-time employee" are governed by the Affordable Care Act and accompanying IRS and Treasury Department regulations.

16. **COMPLIANCE WITH IRAN DIVESTMENT ACT OF 2015:** Provider represents that as of the date of this Contract, Provider is not included on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C. Gen. Stat. § 147-86.58. Provider also represents that as of the date of this Contract, Provider is not included on the list of restricted companies determined to be engaged in a boycott of Israel created by North Carolina State Treasurer pursuant to N.C. Gen Stat. 147-86.81.

17. **ANTI-NEPOTISM:** Provider warrants that, to the best of its knowledge and in the exercise of due diligence, none of its corporate officers, directors, or trustees and none of its employees who will directly provide services under this Contract are immediate family members of any member of the Brunswick County Board of Education or of any principal or central office staff administrator employed by the School System. For purposes of this provision, "immediate family" means spouse, parent, child, brother, sister, grandparent, or grandchild, and includes step, half, and in-law relationships. Should Provider become aware of any family relationship covered by this provision or should such a family relationship arise at any time during the term of this Contract, Provider shall immediately disclose the family relationship in writing to the Superintendent of Schools. Unless formally waived by the School System, the existence of a family relationship covered by this Contract is grounds for immediate termination by School System without further financial liability to Provider.

18. **APPLICABLE SCHOOL BOARD OF EDUCATION POLICIES:** Provider acknowledges that the Brunswick County Board of Education has adopted policies governing conduct on School System property and agrees to abide by any and all relevant Board policies while on School System property. The Provider acknowledges that Board's policies are available on the School System's website.

19. **ASSIGNMENT:** Provider shall not assign, subcontract, or otherwise transfer any interest in this contract without the prior written approval of the School System.

20. **CONTRACT MODIFICATIONS:** This contract may be amended only by written amendments duly executed by and between the School System and Provider.

21. **NORTH CAROLINA LAW:** North Carolina law will govern the interpretation and construction of the Contract.

22. **ORDER OF PRECEDENCE:** The Parties do hereby agree that in the event of conflict between the terms and conditions of this Contract and the terms and conditions in an agreement entered into between the parties at the same time as or prior to this Agreement, the terms and conditions of this Agreement shall prevail.

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23. **ENTIRE AGREEMENT:** This Contract, including the purchase order, if any, used in connection herewith and any other document(s) expressly incorporated by reference as a part of this Contract, constitutes and expresses the entire agreement and understanding between the parties concerning its subject matter. This Contract supersedes all prior and contemporaneous discussions, promises, representations, agreements and understandings relative to the subject matter of this contract. To the extent there may be any conflict between the four corners of this Contract and other documents incorporated by reference herein, the terms of this Contract will control.

24. **SEVERABILITY:** If any provision of this Contract shall be declared invalid or unenforceable, the remainder of the Contract shall continue in full force and effect.

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BRUNSWICK COUNTY SCHOOLS
REQUIRED CONTRACT PROVISIONS FOR NON-FEDERAL ENTITY CONTRACTS
UNDER FEDERAL AWARDS – APPENDIX II TO 2 CFR PART 200

The following provisions are required and apply when federal funds are expended by Brunswick County Schools (the District) for any contract resulting from this procurement process.

(A)Contracts for more than the simplified acquisition threshold currently set at $150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

Pursuant to Federal Rule (A) above, when federal funds are expended by Brunswick County Schools, the District reserves all rights and privileges under the applicable laws and regulations with respect to this procurement in the event of breach of contract by either party.

(B)Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of $10,000)

Pursuant to Federal Rule (B) above, when federal funds are expended by Brunswick County Schools, the District reserves the right to immediately terminate any agreement in excess of $10,000 resulting from this procurement process in the event of a breach or default of the agreement by Vendor. In the event vendor fails to: (1) meet schedules, deadlines, and/or delivery dates within the time specified in the procurement solicitation, contract, and/or a purchase order; (2) make any payments owed; or (3) otherwise perform in accordance with the contract and/or the procurement solicitation.   Brunswick County Schools also reserves the right to terminate the contract immediately, with written notice to vendor, for convenience, if Brunswick County Schools believes, in its sole discretion that it is in the best interest of the District to do so. The vendor will be compensated for work performed and accepted and goods accepted by Brunswick County Schools as of the termination date if the contract is terminated for convenience of the District. Any award under this procurement process is not exclusive and Brunswick County Schools reserves the right to purchase goods and services from other vendors when it is in the best interest of the District.

(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

Pursuant to Federal Rule (C) above, when federal funds are expended by Brunswick County Schools on any federally assisted construction contract, the equal opportunity clause is incorporated by reference herein.

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

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Pursuant to Federal Rule (D) above, when federal funds are expended by Brunswick County Schools, during the term of an award for all contracts and subgrants for construction or repair, the vendor will be in compliance with all applicable Davis-Bacon Act provisions.

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of $100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

Pursuant to Federal Rule (E) above, when federal funds are expended by Brunswick County Schools, the vendor certifies that during the term of an award for all contracts by the District resulting from this procurement process, the vendor will be in compliance with all applicable provisions of the Contract Work Hours and Safety Standards Act.

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

Pursuant to Federal Rule (F) above, when federal funds are expended by Brunswick County Schools, the vendor certifies that during the term of an award for all contracts by the District resulting from this procurement process, the vendor agrees to comply with all applicable requirements as referenced in Federal Rule (F) above.

(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of $150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251- 1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

Pursuant to Federal Rule (G) above, when federal funds are expended by Brunswick County Schools, the vendor certifies that during the term of an award for all contracts by the District resulting from this procurement process, the vendor agrees to comply with all applicable requirements as referenced in Federal Rule (G) above.

(H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

Pursuant to Federal Rule (H) above, when federal funds are expended by Brunswick County Schools, the vendor certifies that during the term of an award for all contracts by the District resulting from this procurement process, the vendor certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency.

(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-

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Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

Pursuant to Federal Rule (I) above, when federal funds are expended by Brunswick County Schools, the vendor certifies that during the term and after the awarded term of an award for all contracts by the District resulting from this procurement process, the vendor certifies that it is in compliance with all applicable provisions of the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). The vendor further certifies that:

(1) No Federal appropriated funds have been paid or will be paid for on behalf of the vendor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with the awarding of a Federal contract, the making of a Federal grant, the making of a Federal loan, the entering into a cooperative agreement, and the extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all covered sub-awards exceeding $100,000 in Federal funds at all appropriate tiers and that all subrecipients shall certify and disclose accordingly.

(J) Prohibition on certain telecommunications and video surveillance services or equipment.

This Contract, if federal funding is used, is a covered transaction for purposes of 2 C.F.R. §200.216. Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1)   Procure or obtain;

(2)   Extend or renew a contract to procure or obtain; or

(3)   Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Telecommunications or video surveillance services provided by such entities or using such equipment.

Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained. See Public Law 115-232, section 889 for additional information. See also §200.471.

BIDS ARE SUBJECT TO REJECTION UNLESS SUBMITTED ON THIS FORM

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PAGE 18   BID NO. IT1067L   OFFEROR: DISYS Solutions, Inc.

RECORD RETENTION REQUIREMENTS FOR CONTRACTS PAID FOR WITH FEDERAL FUNDS – 2 CFR § 200.333

When federal funds are expended by Brunswick County Schools for any contract resulting from this procurement process, the vendor certifies that it will comply with the record retention requirements detailed in 2 CFR § 200.333. The vendor further certifies that vendor will retain all records as required by 2 CFR § 200.333 for a period of three years after grantees or subgrantees submit final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

CERTIFICATION OF COMPLIANCE WITH EPA REGULATIONS
APPLICABLE TO GRANTS, SUBGRANTS, COOPERATIVE AGREEMENTS, AND CONTRACTS
IN EXCESS OF $100,000 OF FEDERAL FUNDS

When federal funds are expended by Brunswick County Schools for any contract resulting from this procurement process in excess of $100,000, the vendor certifies that the vendor is in compliance with all applicable standards, orders, regulations, and/or requirements issued pursuant to the Clean Air Act of 1970, as amended (42 U.S.C. 1857(h)), Section 508 of the Clean Water Act, as amended (33 U.S.C. 1368), Executive Order 117389 and Environmental Protection Agency Regulation, 40 CFR Part 15.

CERTIFICATION OF COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT

When federal funds are expended by Brunswick County Schools for any contract resulting from this procurement process, the vendor certifies that the vendor will be in compliance with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

CERTIFICATION OF COMPLIANCE WITH BUY AMERICA PROVISIONS

Vendor certifies that vendor is in compliance with all applicable provisions of the Buy America Act. Purchases made in accordance with the Buy America Act must still follow the applicable procurement rules calling for free and open competition.

CERTIFICATION OF NON-COLLUSION STATEMENT

Vendor certifies under penalty of perjury that its response to this procurement solicitation is in all respects bona fide, fair, and made without collusion or fraud with any person, joint venture, partnership, corporation or other business or legal entity.

By "Execution" (see page 1) of this contract, vendor agrees to comply with all federal, state, and local laws, rules, regulations and ordinances, as applicable. It is further acknowledged that vendor certifies compliance with all provisions, laws, acts, regulations, etc. as specifically noted above.

Rev 04/23/21 tbf

BIDS ARE SUBJECT TO REJECTION UNLESS SUBMITTED ON THIS FORM

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

EXHIBIT A

Bruswick County Schools
RFP NUMBER: 153.VAR.21.TECH.163 – TURNKEY PHONE SYSTEM

PRODUCT DATA SHEETS

1. Cisco 4000 Series ISR Router Data Sheet
2. Cisco IP Conference Phone 8832 Data Sheet
3. Cisco IP Phone 7800 Series Data Sheet
4. Cisco IP Phone 8800 Key Expansion Module Data Sheet
5. Cisco IP Phone 8851 Data Sheet
6. Cisco IP Phone 8865 Data Sheet
7. Cisco UCM Cloud Data Sheet

DSI
DISYS Solutions Inc.
Complete IT Solutions & Services

<u>EXHIBIT A</u>

Cisco 4000 Family Integrated Services Router

<u>EXHIBIT A</u>

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Cisco® 4000 Family Integrated Services Routers (ISRs) form an Software Defined WAN platform that delivers the performance, security, and convergence capabilities that today's branch offices need.

Product Overview

The Cisco 4000 Family Integrated Services Router (ISR) revolutionizes WAN communications in the enterprise branch. With new levels of built-in intelligent network capabilities and convergence, it specifically addresses the growing need for application-aware networking in distributed enterprise sites. These locations tend to have lean IT resources. But they often also have a growing need for direct communication with both private data centers and public clouds across diverse links, including Multiprotocol Label Switching (MPLS) VPNs and the Internet.

The Cisco 4000 Family contains the following platforms: the 4461, 4451, 4431, 4351, 4331, 4321 and 4221 ISRs.
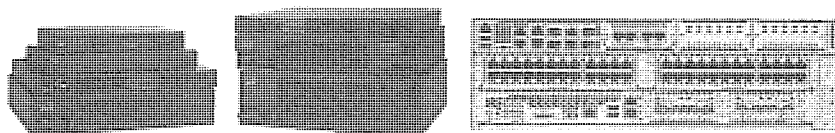
Figure 1.
Cisco 4000 Series Integrated Services Routers

Features and Benefits

Cisco 4000 Family ISRs provide you with Cisco® Software Defined WAN (SDWAN) software features and a converged branch infrastructure. Along with superior throughput, these capabilities form the building blocks of next-generation branch-office WAN solutions.

Cisco Software Defined WAN

Cisco SDWAN is a set of intelligent software services that allow you to reliably and securely connect users, devices, and branch office locations across a diverse set of WAN transport links. SDWAN-enabled routers like the ISR 4000 dynamically route traffic across the "best" link based on up-to-the-minute application and network conditions for great application experiences. You get tight control over application performance, bandwidth usage, data privacy, and availability of your WAN links - control that you need as your branches conduct greater volumes of mission-critical business.

Cisco Converged Branch Infrastructure

The Cisco 4000 Series ISRs consolidate many must-have IT functions, including network, compute, and storage resources. The high-performance, integrated routers run multiple concurrent services, including encryption, traffic management, and WAN optimization, without slowing your data throughput. And you can activate new services on demand through a simple licensing change.

EXHIBIT A

Cisco Intent Based Networking and Digital Network Architecture (Cisco DNA)

The last few years has seen a rapid transformation and adoption of digital technologies. This puts pressure on the on the Network teams supporting this changing infrastructure - especially when provisioning, managing, monitoring and troubleshooting these diverse devices. Additionally innovations such as Software Defined WAN (SDWAN), Network Function Virtualization (NFV), Open APIs and Cloud Management show great promise in transforming Organizations IT networks. This transformation raises further questions and challenges for the IT teams.

The Cisco Digital Network Architecture (Cisco DNA) is an open, extensible, software-driven architecture that provides for faster innovation, helping to generate deeper insights, and deliver exceptional experiences across many different applications. Cisco DNA relies on intent-based networking, a revolutionary approach in networking that helps organizations automate, simplify, and secure the network.

The intent-based Cisco DNA network is:

- Informed by Context: Interprets every byte of data that flows across it, resulting in better security, more customized experiences, and faster operations.

- Powered by Intent: Translates your intent into the right network configuration, making it possible to manage and provision multiple devices and things in minutes.

- Driven by Intuition: Continually learns from the massive amounts of data flowing through it and turns that data into actionable insight. Helps you solve issues before they become problems and learn from every incident.

Cisco DNA Center provides a centralized management dashboard across your entire network — the branch, campus, data center, and cloud. Rather than relying on box-by-box management, you can design, provision, and set policy end-to-end from the single Cisco DNA Center interface. This allows you to respond to organizational needs faster and to simplify day-to-day operations. Cisco DNA Analytics and Assurance and Cisco Network Data Platform (NDP) help you get the most from your network by continuously collecting and putting insights into action. Cisco DNA is open, extensible, and programmable at every layer. It integrates Cisco and third-party technology, open APIs, and a developer platform, to support a rich ecosystem of network-enabled applications.

Table 1 breaks out many of the features and benefits of the Cisco 4000 Family that create a Software Define WAN (SDWAN) and a converged branch infrastructure.

Table 1.   Cisco 4000 Family ISR General Feature Highlights

Business Requirement(s)	Feature/Solution
Performance • Throughput • Service reliability	• Concurrent software services at speeds up to 2 Gbps. Backplane architecture supports high-bandwidth module-to-module communication at speeds up to 10 Gbps. • A distributed multicore architecture with the industry's first internal services plane. • Remote installation of application-aware services, which run identically to their counterparts in dedicated appliances.
Lower WAN expenditures	• Embedded SDWAN solution for creating lower-cost, business-class Internet connections.
Pay-as-you-grow • Performance upgrade model • Investment protection • CapEx budget management	• Router capacity can be increased with a remote performance-on-demand license upgrade (no hardware upgrade) for exceptional savings.
Superior and secure user application experiences	• ISR-AX "Application Experience" software bundle with advanced routing and network monitoring services. • Dynamic Multipoint VPN (DMVPN), zone-based firewalls, Intrusion Prevention (Snort & Umbrella Branch) and Content Management using Cisco Cloud Web security & OpenDNS protecting data,

EXHIBIT A

Business Requirements	Required Solution
	providing authentication credentials, and transmissions not backhauled through the data center.
	○ Secure boot feature performs hardware-based authentication of the bootloader software to prevent malicious or unintended software from booting on the system.
	○ Code signing verifies digital signatures of executables prior to loading to prevent execution of altered or corrupted code.
	○ Hardware authentication protects against hardware counterfeiting by using an on-board tamper-proof silicon, including field replaceable modules. If authentication fails, the module is not allowed to boot.
IT consolidation, space savings, and improved Total Cost of Ownership (TCO)	○ Single converged branch platform integrates routing, switching, virtual server, storage, security, unified communications, WAN optimization, and performance management tools.
Business continuity and increased resiliency	○ ISR 4400 Series models (4461, 4451, and 4431 ISRs) support dual integrated power supplies for backup. The entire ISR 4000 Family supports optional power supply capable of delivering additional PoE power to endpoints.
	○ Modular network interfaces with diverse connection options for load-balancing and network resiliency.
	○ Modular interfaces with online removal and insertion (OIR) for module upgrades without network disruption.
	○ Cisco Unified Survivable Remote Site Telephony (SRST), which serves as a resiliency complement to Cisco Hosted Collaboration Solution (HCS), a Cisco cloud-based UC service.
	○ Support for multiple, diverse access links: T1/E1, T3/E3, Serial, xDSL, Gigabit and Ten-Gigabit Ethernet.
Lower telephony costs with VoIP and rich media experiences	○ High-performance analog/digital gateway, allowing VoIP over less expensive Session Initiation Protocol (SIP) trunks.
	○ Integrated IP PBX (Cisco Unified Communications Express) and Session Border Controller (Cisco Unified Border Element, or CUBE).
Easier manageability and support	○ Single, universal software image for all features and performance-on-demand licensing flexibility.
	○ No additional services and support needed for compute and storage.
	○ Supported by Cisco and third-party management tools, with programmability and automation.

Platform Architecture

Table 2 lists the primary hardware architectural features and benefits of the Cisco 4000 Family. The routers run modular Cisco IOS XE Software, widely deployed in the world's most demanding networks. The software's comprehensive portfolio of services spans multiple technology areas, including security, WAN optimization, app and network Quality of Service (QoS), and embedded management.

Table 2.   Architectural Highlights

Architectural Features	Benefits/Description
Multicore processors	○ High-performance multicore processors support high-speed WAN connections. The data plane uses an emulated Flow Processor (FP) that delivers Application-Specific Integrated Circuit (ASIC)-like performance that does not degrade as services are added.
Embedded IP Security (IPsec) VPN hardware acceleration	○ Increases scalability. When combined with an optional Cisco IOS XE Software Security license, enables WAN link security and VPN services.

EXHIBIT A

Architectural Features	Benefits/Description
Integrated Gigabit Ethernet ports	• The Cisco 4000 Family provides up to four built-in 10/100/1000 Ethernet ports for WAN or LAN. • Based on the platform, some of the 10/100/1000 Ethernet ports can support Small Form-Factor Pluggable (SFP)-based connectivity in addition to RJ-45 connections, enabling fiber or copper connectivity. • Optionally, depending on the platform, up to 30W PoE+ can be enabled on two of the built-in front panel Gigabit Ethernet interfaces to provide power to external devices such as fourth-generation (4G) LTE routers. • An additional dedicated Gigabit Ethernet port is provided for device management[1].
USB-based console access	• A mini type-B USB console port[1] supports management connectivity when traditional serial ports are not available. • Traditional console and auxiliary ports are also available[2].
Optional integrated power supply for distribution of PoE	• An optional upgrade to the internal power supply provides inline power (802.3af-compliant PoE or 802.3at-compliant PoE+) to optional integrated switch modules. • Redundant PoE conversion modules provide an additional layer of fault tolerance.
Optional integrated Redundant Power Supply (RPS)	• For the ISR 4400 Series, power redundancy is available by installing an optional integrated RPS for decreasing network downtime and protecting the network from power failures. • Optional PoE boost mode increases total PoE capacity to up to 1000W.
Cisco Enhanced Services Module (SM-X)	• Each service-module slot offers high data-throughput capability of up to 10 Gbps toward the system and up to 1 Gbps to other module slots. • Support for both single- and double-wide service modules provides flexibility in deployment options. • An SM-X slot can be converted into a Network Interface Module (NIM) slot using an optional carrier card. • Service modules support Online Insertion and Removal (OIR), avoiding network disruption when installing new or replacement modules[2].
Cisco Network Interface Modules (NIMs)[3]	• Up to three integrated NIM slots on the Cisco 4000 Family allow for flexible configurations. • Each NIM slot offers options of up to two 2Gbps connections. One towards the route processor and one for direct module to module communication. The ISR 4221 has only one 1Gbps connection to the Route Processor • NIMs support OIR. • Special NIMs add support Solid-State Drives (SSDs) and Hard Disk Drives (HDDs)[2].
Cisco Integrated Services Card (ISC) slot on motherboard	• Integrated Services Card natively supports the new Cisco High-Density Packet Voice Digital Signal Processor Modules (PVDM4s), providing greater-density rich-media voice. • Each Integrated Services Card slot connects to the system architecture through an up-to 2-Gbps link. • Future modules can be hosted on the Integrated Services Card slot, improving system functions.
Flash memory support	• A single flash memory slot is available to support high-speed storage densities, upgradable to up to 32 GB. The ISR4221 ships with a fixed 8GB Flash • Two USB type A 2.0 ports provide capabilities for convenient storage[2].

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[1] Not supported on ISR4221

[2] ISR4221 supports shared Console & Auxiliary ports

[3] Unified Communications (UC) and UC based NIM's are not supported

EXHIBIT A

Architectural Features	Benefits/Description
DRAM	• For the ISR 4400 Series, the default control-plane memory is 4 GB, upgradable to 16 GB to provide additional scalability for control-plane features. The default data-plane memory is 2 GB. • For the ISR 4300 Series, the default memory is 4 GB, upgradable to 16 GB (only 8GB for 4321) to provide additional scalability. • The ISR 4200 Series comes with 4GB Fixed DRAM

Managing your Cisco ISR 4000 Family ISRs

The Cisco network management applications listed at the top of Table 3 are standalone products that can be purchased or downloaded to manage your Cisco network devices. The applications are built specifically for the different operational phases; select those that best fit your needs. Those management capabilities listed under the "Cisco IOS Software XE Embedded Management" heading are directly integrated into the routers' software operating system.

Table 3. Cisco DNA Center

Operational Phase	Application	Description
Device staging and configuration	WebUI	• A GUI-based device-management tool for Cisco IOS and Cisco IOS XE Software-based access routers. This tool simplifies routing, firewall, VPN, unified communications, and WAN and LAN configuration through easy-to-use wizards.
Network-wide deployment, configuration, monitoring, and troubleshooting	Cisco Prime™ Infrastructure	• Offers comprehensive lifecycle management of wired and wireless access, campus, and branch-office networks, rich visibility into end-user connectivity, and application performance assurance. • Provides wired lifecycle functions such as inventory, configuration, and image management; automated deployment; compliance reporting; integrated best practices; and reporting.
Staging, deployment, and changes to configuration and image files	Cisco Configuration Engine	• A secure network management product that provides zero-touch image and configuration distribution through centralized, template-based management.
Context-aware security configuration and monitoring	Cisco Prime Security Manager	• Management tool for configuring and managing context-aware security. The application supports both single- and multi-device manager form factors. • Provides the ability to write and enforce the granular context-aware security policies.
Cisco Wide Area Application Service (WAAS) management	Cisco WAAS Central Manager	• The management tool for the WAAS[a] (WAN optimization and application acceleration) integrated service. It provides a centralized mechanism for configuring WAAS features, reporting, and monitoring.

Cisco IOS XE Software Embedded Management Capabilities	
Feature	**Description**
Cisco IOS Embedded Event Manager (EEM)	• A distributed and customized approach to event detection and recovery. • Offers the ability to monitor events and take informational, corrective, or any desired EEM action when the monitored events occur or when a threshold is reached.
Cisco IOS XE IP Service-Level Agreements (IP SLAs)	• Helps assure the performance of new business-critical IP applications as well as IP services that use data and voice in an IP network.
SNMP, Remote Monitoring (RMON), syslog, NetFlow, IP Flow Information Export (IPFix)	• Network monitoring and accounting tools.

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[a] It is suggested to use AppNav with an External WAAS device for the ISR4221

EXHIBIT A

Product Specifications

Table 4 lists the general product specifications for the Cisco 4000 Family routers.

Table 4.   Specifications of Cisco 4000 Family Integrated Services Routers

Feature and specifications							
Aggregate Throughput (Default)	1.5Gbps	1 Gbps	500 Mbps	200 Mbps	100 Mbps	50 Mbps	35Mbps
Aggregate Throughput (Performance License)	3Gbps	2 Gbps	1 Gbps	400 Mbps	300 Mbps	100 Mbps	75 Mbps
Aggregate CEF Only[5] Throughput (Boost License)	Over 7Gbps	Over 4Gbps	Over 4Gbps	Over 2Gbps	Over 2Gbps	1.5Gbps	1.2Gbps
Total onboard WAN or LAN 10/100/1000 ports	4	4	4	3	3	2	2
Total onboard WAN or LAN 10Gbps ports	2	-	-	-	-	-	-
RJ-45-based ports	4	4	4	3	2	2	2
SFP-based ports	4	4	4	3	2	1	1

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[5] Using onboard Gigabit Ethernet Interfaces

EXHIBIT A

Physical specifications							
Enhanced service-module slots	3	2	0	2	1	0	0
Doublewide service-module slots	2	1 (assumes no singlewide SM-X modules installed)	0	1 (assumes no singlewide SM-X modules installed)	0	0	0
NIM slots	3	3	3	3	2	2	2
OIR (all I/O modules)	Yes	Yes	Yes	Yes	Yes	Yes	No
Onboard ISC slot	1	1	1	1	1	1	No
Default memory double-data-rate 3 (DDR3) error-correction-code (ECC) DRAM (Combined control/services/data planes)	NA	NA	NA	4 GB	4 GB	4 GB	4GB
Maximum memory DDR3 ECC DRAM (Combined control/services/data planes)	NA	NA	NA	16 GB	16 GB	8 GB	4GB
Default memory DDR3 ECC DRAM (data plane)	4 GB	2 GB	2 GB	NA	NA	NA	NA
Maximum memory DDR3 ECC DRAM (data plane)	4 GB	2 GB	2 GB	NA	NA	NA	NA
Default memory DDR3 ECC DRAM (control/services plane)	8 GB	4 GB	4 GB	NA	NA	NA	NA

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Technical Specifications							
Maximum memory DDR3 ECC DRAM (control/services plane)	32 GB	16 GB	16 GB	NA	NA	NA	NA
Default flash memory	8 GB	8 GB	8 GB	4 GB	4 GB	4 GB	8GB
Maximum flash memory	32 GB	32 GB	32 GB	16 GB	16 GB	8 GB	8GB
External USB 2.0 slots (type A)	2	2	2	2	1	1	1
USB console port -type B mini (up to 115.2 kbps)	1	1	1	1	1	1	0
Serial console port - RJ45 (up to 115.2 kbps)	1	1	1	1	1	1	1 (combo CON/AUX port)
Serial auxiliary port - RJ45 (up to 115.2 kbps)	1	1	1	1	1	1	1 (combo CON/AUX port)
Power-supply options	Internal: AC, DC and PoE	Internal: AC, DC and PoE	Internal: AC, DC, and PoE	Internal: AC, DC and PoE	Internal: AC,DC and PoE	External: AC and PoE	External AC only
Redundant power supply	Internal: AC, DC and PoE	Internal: AC, DC and PoE	Internal: AC, DC, and PoE	N/A	N/A	N/A	NA

Power Specifications							
AC input voltage	100 to 240 VAC autoranging	100 to 240 VAC autoranging	100 to 240 VAC autoranging	100 to 240 VAC autoranging	100 to 240 VAC autoranging	100 to 240 VAC autoranging	100 to 240 VAC autoranging
DC Input Voltage							
Input Voltage	48 – 60V	48 – 60V	48 – 60V	NA	24 – 60V	NA	NA
Input Current	12A Max	12A Max	12A Max	NA	14 - 5A	NA	NA
AC input frequency	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz	47 to 63 Hz
AC input current range, AC power supply (maximum)	7.1 to 3.0A	7.1 to 3.0A	3 to 1.3A	7.1 to 3.0A	3 to 1.3A	1.5 to 0.6A	1.5 to 0.6A
AC input surge current	60 A peak and less than 5 Arms per half cycle	<50 A	60 A peak and less than 5 Arms per half cycle	60 A peak and less than 12 Arms per half cycle	60 A peak and less than 5 Arms per half cycle	90 A peak and less than 3 Arms per half cycle	90 A peak and less than 3 Arms per half cycle
Typical power (no		158	65	48	42	36	24

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Product specifications							
modules) (watts)							
Maximum power with AC power supply (watts)	1000W (no PoE)	450 (no PoE)	250 (no PoE)	430	250	125	90
Maximum power with DC power supply (watts)	437 (no PoE)	437 (no PoE)	437 (no PoE)	437 (no PoE)	250 (no PoE)		
Maximum power with PoE power supply (platform only) (watts)	1000 with PoE redundant 1450 with PoE boost no redundancy	1000 with PoE redundant 1450 with PoE boost no redundancy	500 with PoE redundant 1000 with PoE boost no redundancy	990	530	260	NA (No PoE Support)
Maximum endpoint PoE power available from PoE power supply (watts)	500 W with optional redundancy	500 W with optional redundancy	250 W with optional redundancy	500	250	120	NA (No PoE Support)
Maximum endpoint PoE power capacity with PoE boost (watts)	950 W no redundancy	950 W no redundancy	500 W no redundancy	N/A	N/A	N/A	NA (No PoE Support)
Sizes and Weights							
Dimensions (H x W x D)	3.5 X 17.25 X 18.5 in 88.9 x 438.15 x 469.9 mm)	3.5 X 17.25 X 18.5 in (88.9 x 438.15 x 469.9 mm)	1.73 X 17.25 X 19.97 in (43.9 x 438.15 x 507.2 mm)	3.5 X 17.25 X 18.5 in (88.9 x 438.15 x 469.9 mm)	1.75 X 17.25 X 17.25 in (44.45 x 438.15 x 438.15 mm)	1.75 X 14.55 X 11.60 in (44.55 x 369.57 x 294.64 mm)	1.72 X 12.7 X 10" (43.7 x 322.6 x 254 mm)

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Technical Specifications							
External Power Supply Dimensions (H x W x D)	N/A	N/A	N/A	N/A	N/A	2.95 x 1.18 x 6.10 in (75 x 30 x 155 mm)	37 x 73 x 152 mm (Phihong mfg PN: AA90U-120A-R) / 36.5 x 67 x 155 mm (Delta mfg PN: ADP90GR BA)
Shipping Box Dimensions (H x W x D)	9.75 x 22.25 x 26 in (24.76 x 56.51 x 66.04 mm)	9.75 x 22.25 x 26 in (24.76 x 56.51 x 66.04 mm)	7.88 x 22.25 x 28.75 in (200.2 x 565.1 x 730.25 mm)	9.75 x 22.25 x 26 in (24.76 x 56.51 x 66.04 mm)	7.125 x 22.75 x 22.5 in (180.98 x 577.85 x 571.5 mm)	7.0 x 21.5 x 16.125 in (177.8 x 546.1 x 409.6 mm)	4.13 x 18.25 x 12.94" (104.9 x 463.6 x 328.7 mm)
Rack height	3 Rack Units (3RU)	2 Rack Units (2RU)	1 Rack Units (1RU)	2 Rack Units (2RU)	1 Rack Unit (1RU)	1 Rack Unit (1RU)	1 Rack Unit (1RU)
Rack-mount 19in. (48.3 cm) EIA	Included	Included	Included	Included	Included	Included	Optional
Rack-mount 23in. (58.4 cm) EIA	Optional	Optional	Optional	Optional	Optional	N/A	NA
Wall-mount	No	No	Yes	No	Yes	Mounting holes under chassis	Yes
Weight with 1,450-WAC power supply (no modules)		28.8 lb (13.1 kg)	N/A	28.8 lb (13.1 kg)	N/A	N/A	NA
Weight with 1 1,000-WAC power supply+ 1 PoE power module (no other modules)		30.6 lb (13.9 kg)	N/A	29.0 lb (13.2 kg)	N/A	N/A	NA
Weight with AC PS (no modules)		N/A	18.5 lb (8.4 kg)	N/A	13.5 lb (6.2 kg)	7.7 lb (3.5 kg) + 1.2 lb (0.66 kg) external PS	7.1 lb (3.22kg)
Weight with DC PS (no modules)		28.8lb (13.1kg)	28.8lb (13.1kg)	28.8lb (13.1kg)	13.5 lb (6.2 kg)		
Weight with AC PS with POE (no modules)		N/A	18.6 lb (8.4 kg)	N/A	14.1 lb (6.4 kg)	N/A	NA
Typical weight (fully loaded with modules)		42.7 lb (19.4 kg)	22.4 lb (10.2 kg)	37.7 lb (17.1 kg)	16.1 lb (7.3 kg)	9.14 lb (4.2 kg) + 1.2 lb (0.66 kg) external PS	8.11 lb (3.68kg)
Packaging		6.4 lb (2.9 kg)	5.9 lb (2.7 kg)	6.4 lb (2.9 kg)	4.6 lb (2.1 kg)	2.2 lb (1 kg)	1.28 lb (0.58kg)

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Technical Specifications							
Weight							
Airflow	I/O side to bezel side	I/O side to bezel side	I/O side to bezel side	I/O side to bezel side	I/O side to bezel side	Right I/O side to Left I/O side	I/O side to bezel side
MTBF (Hours)	480770	480770	512970	566310	587250	593270	593270
Environmental Specifications							
Operating Conditions							
Temperature	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)	32 to 104°F (0 to 40°C)
Altitude (China)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)	0 – 6,560 ft. (0 – 2,000 m)
Altitude (Rest of the world)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)	0 – 10,000 ft. (0 – 3,050 m)
Short Term Temperature upto 656oft per NEBS GR-63-CORE	NA	NA	NA	NA	32° to 131° (0° to 55° C) (for ISR4331-DC version)	NA	NA
Relative humidity	5% to 85%	5% to 85%	5% to 85%	5% to 85%	5% to 85%	5% to 85%	5% to 85%
Short-term humidity	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air	5% to 90%, not to exceed 0.024 kg water/kg of dry air
Acoustics: Sound pressure (Typical/ maximum)	50.6/73.1 dBA	50.6/73.1 dBA	54.3/79.1 dBA	50.6/73.1 dBA	52.8/74.8 dBA	24.2/51.9 dBA	28.5/53 dBA

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Technical Specifications							
Acoustics: Sound power (Typical/ maximum)	58.2/78.8 dBA	58.2/78.8 dBA	57.2/80.8 dBA	58.2/78.8 dBA	61.2/81.6 dBA	31.9/59.9 dBA	41 / 68 dBA
Nonoperating Conditions							
Temperature	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)	-40 to 158°F (-40 to 70°C)
Relative humidity	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%	5% to 95%
Altitude	15,584 ft (4750m)	15,584 ft (4750m)	15,584 ft (4750m)	15,584 ft (4750m)	15,584 ft (4750m)	15,584 ft (4750m)	15,584 ft (4750m)
Regulatory and Compliance							
Safety	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1
EMC	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24 EN 50121-1 EN61000-6-4 EN 50121-4	ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24	ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24
Telecom	T1 IC CS-03:2004	T1 IC CS-03:2004 TIA-968-	TIA-968-B CS-03 ANSI T1.101	TIA-968-B CS-03 ANSI T1.101	TIA-968-B CS-03 ANSI T1.101	TIA-968-B CS-03 ANSI T1.101	TIA-968-B CS-03 ANSI T1.101

EXHIBIT A

TIA-968-B:2009 HKTA 2028:2010 HKTA 2017:2010 HKTA 2015:2006 G.703:2001 ID0002:2007 IS6100:2004 DSPR Gray Book:2000 DSPR Technical Condition: 2004 E1 AS/ACIF S016: 2001 AS/ACIF S038: 2001 G.703:2001 TBR 4:1995 TBR 12:1993 TBR 13:1996 RRA 2009-38 (RRL 2005-96) IDA TS DLCN:2011 IDA TS ISDN PRA:2005 IS6100: 2004 PTC 220:2008 Ethernet IEEE 802.3 ANSA X3.263	B:2009 HKTA 2028:2010 HKTA 2017:2010 HKTA 2015: 2006 G.703:2001 ID0002:2007 IS6100:2004 DSPR Gray Book:2000 DSPR Technical Condition: 2004 E1 AS/ACIF S016: 2001 AS/ACIF S038: 2001 G.703:2001 TBR 4:1995 TBR 12:1993 TBR 13:1996 RRA 2009-38 (RRL 2005-96) IDA TS DLCN:2011 IDA TS ISDN PRA:2005 IS6100: 2004 PTC 220:2008 Ethernet IEEE 802.3 ANSA X3.263	ITU-T G.823, G.824 IEEE 802.3 RTTE Directive Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: https://www.ciscofax.com/.	ITU-T G.823, G.824 IEEE 802.3 RTTE Directive Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: https://www.ciscofax.com/.	ITU-T G.823, G.824 IEEE 802.3 RTTE Directive Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: https://www.ciscofax.com/.	ITU-T G.823, G.824 IEEE 802.3 RTTE Directive Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: https://www.ciscofax.com/.	ITU-T G.823, G.824 IEEE 802.3 RTTE Directive Homologation requirements vary by country and interface type. For specific country information, refer to the online approvals data base at: https://www.ciscofax.com/.

Cisco IOS XE Software

Protocols	IPv4, IPv6, static routes, Routing Information Protocol Versions 1 and 2 (RIP and RIPv2), Open Shortest Path First (OSPF), Enhanced IGRP (EIGRP), Border Gateway Protocol (BGP), BGP Router Reflector, Intermediate System-to-Intermediate System (IS-IS), Multicast Internet Group Management Protocol Version 3 (IGMPv3), Protocol Independent

EXHIBIT A

Technical Specifications							
	Multicast sparse mode (PIM SM), PIM Source Specific Multicast (SSM), RSVP, CDP, ERSPAN, IPSLA, Call Home, EEM, IKE, ACL, EVC, DHCP, FR, DNS, LISP, OTV[6], HSRP, RADIUS, AAA, AVC, Distance Vector Multicast Routing Protocol (DVMRP), IPv4-to-IPv6 Multicast, MPLS, Layer 2 and Layer 3 VPN, IP sec, Layer 2 Tunneling Protocol Version 3 (L2TPv3), Bidirectional Forwarding Detection (BFD), IEEE802.1ag, and IEEE802.3ah						
Encapsulations	Generic routing encapsulation (GRE), Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR) (FR.15 and FR.16), High-Level Data Link Control (HDLC), Serial (RS-232, RS-449, X.21, V.35, and EIA-530), and PPP over Ethernet (PPPoE)						
Traffic management	QoS, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Hierarchical QoS, Policy-Based Routing (PBR), Performance Routing, and NBAR.						
Cryptographic Algorithms	Encryption: DES, 3DES, AES-128 or AES-256 (in CBC and GCM modes); Authentication: RSA (748/1024/2048 bit), ECDSA (256/384 bit); Integrity: MD5, SHA, SHA-256, SHA-384, SHA-512						

Services plane: Enabling the Branch-in-a-Box

All Cisco ISR 4000 routers contain processing cores built-in as standard to allow full-featured services to run on-board. This includes the full-featured Cisco WAAS engine that provides application acceleration and highly responsive virtual desktop experience. The technology is known as Cisco Service Containers and it uses a standard hypervisor to allow x64 based applications to run.

The 4000 series routers can be fitted with Solid State Drives (SSD) and server cards for local storage and computing capability. The Cisco UCS-E server cards are available with 8-core Intel Xeon processors with up to 48GB of high speed DDR3 memory and three drives built in offering RAID 0, 1 and 5. This immense amount of compute power can eliminate the need for any dedicated servers at branch sites. UCS-E cards can be configured and managed using VMware vCenter and pooled with Data Center compute resources.

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[6] Supported only on the 4451 for Bandwidths <100Mbps

Software Subscription through Cisco DNA Licensing

The ISR4000 series supports software based subscription using Cisco DNA based licensing. Three Cisco DNA based software subscription licenses are available for the WAN portfolio: Cisco DNA Essentials, Cisco DNA Advantage and Cisco ONE Advantage allowing customers to have a single unified solution that spans across the ISR4000 series routers and its ASR1000 and ISR1000 counterparts

The license tiers are structured to support the growth in business needs enabling the customer to move from basic functionality using the Cisco DNA Essentials to full-functionality with the Cisco DNA Advantage and expanding that to include WAN Optimization and Analytics on the Cisco ONE Advantage. This provides complete flexibility to move the same license across end-points based on growing network and security requirements, growth in bandwidth based on user and application growth at the sites as also the ability to change the management of the platform from on-prem to cloud or vice-versa.

Cisco DNA Licenses are supported for all ISR4000 platforms using the Cisco DNA Center, the controller and analytics platform at the heart of Cisco's intent-based network. For more information on the Cisco DNA Center and supported platforms, please refer to https://www.cisco.com/c/en/us/products/cloud-systems-management/dna-center/index.html

Enterprise NFV on ISR4000

Built to reduce costs without compromising vital network services, the UCS E-Series router-integrated branch blade servers provide support for a Virtualization-ready and Application-centric platform that can be seamlessly integrated on the ISR4000 platform. Customers can now install virtualized applications on the ISR4000 routers through the Cisco[®] Enterprise NFV Infrastructure Software (NFVIS) – a virtualization infrastructure that integrates full VM lifecycle management, monitoring, device programmability, and service chaining in a single, installable package. For more information on Enterprise NFV and NFVIS, please refer to the link at https://www.cisco.com/c/en/us/solutions/enterprise-networks/enterprise-network-functions-virtualization-nfv/index.html#~stickynav=2

Support for DC Power

ISR4000 platforms support both DC and AC Power Supplies as options. Specifically, the ISR 4331 has two separate product SKU's – the ISR4331/K9 and the ISR4331-DC/K9 which support AC and DC Power respectively, The ISR4400 can independently support an AC or a DC Power supply on the same chassis. While the 4300 supports between 24V and 60Vdc, the 4400 supports between 48V and 60Vdc. The 4331 provides for upto 250W of power rating while the 4400 provides upto 437W. It is important to note that when DC Power supplies are installed on the router, PoE based modules may not be used.

More details about the DC Power supplies and its capabilities can be found at the below url
https://www.cisco.com/c/en/us/td/docs/routers/access/4400/hardware/installation/guide4400-4300/C4400_isr/FRUs_Modules.html#49534

Product Performance and Scalability

The Cisco 4000 Family is built on a multicore CPU architecture. It runs modular Cisco IOS XE Software, which allows the platform to use to full advantage a distributed multicore architecture. The architecture of the Cisco 4000 separates control- and data-plane operations and integrates an industry-first services plane. This design delivers full-featured integrated services up to Layer 7 at high performance with the ability to deliver application-aware network services while maintaining a stable platform and a high level of performance during periods of heavy network traffic.

The ISR 4000 consists of 3 series of Routers – the ISR 4400 series, the 4300 series and ISR 4200 series whose performance levels maybe represented by the chart below

EXHIBIT A
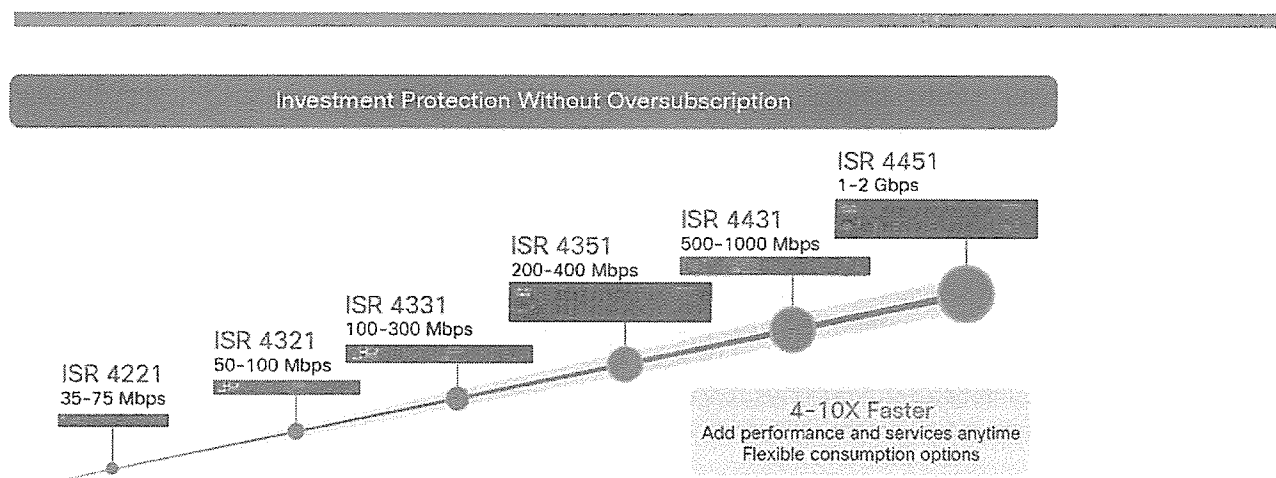
Common for the new 4000 Family is that all platforms come with fixed maximum performance levels. One fixed base performance level is delivered as factory default with an optional performance-on-demand license to increase the base forwarding throughput. This scenario enables deployment in high-speed WAN environments through performance-on-demand licensing to double or, for one of the platforms, triple the router capacity without any hardware upgrades.

All 4000 platforms have their fixed performance levels set well within actual capacity, with the result that performance does not necessarily degrade when a service is added to the configuration. This setup provides a deterministic performance, eliminating a network administrator's guesswork when planning for new services.

For a more detailed document on ISR 4000 Series Performance and Platform Scalability, please refer to the Performance Whitepaper at https://www.cisco.com/c/en/us/products/collateral/routers/4000-series-integrated-services-routers-isr/white-paper-c11-734550.html

ISR 4000 Boost License

In addition to the Performance License, customers may now order a Booster (or Boost) License that allows the router to perform between five or more times than that of the throughput with Performance License. In contrast to the deterministic performance described above, in the Booster mode, the router does not provide the deterministic level of performance as provided when operating with the default license or with the Performance license.

The Boost License provides a license tier above the Performance License allowing customers to completely remove the ISR4000's performance limiters. This will make the ISR 4000 platforms perform at entirely new performance levels, allowing for 4+ Gbps of IP Routing (CEF) performance on the 4400 series ISRs. For deployments using encryption, IPSec throughput with AES 256 increases to 250Mbps on the lowest platform up to 10Gbps on the ISR4461.

<u>EXHIBIT A</u>

ISR 4000 Interfaces and Modules Support

The Cisco 4000 Series Integrated Services Routers (ISRs) are modular routers with LAN and WAN connectivity. The routers provide for Network Interface Module (NIM) slots and Enhanced service module (SM-X) slots offering a rich set of Modules, such as LAN, WAN and Wireless Interfaces plus a range of Compute engines for embedded services

For the complete list of supported modules on the ISR4000 Series refer to the Interfaces and Modules sheet at https://www.cisco.com/c/en/us/products/routers/4000-series-integrated-services-routers-isr/relevant-interfaces-and-modules.html.

Software defined WAN with the ISR4000 Series

The ISR 4000 series is optimized for the Software Defined WAN (SD-WAN). For enterprises this means that business critical applications run faster, with more reliability and reduced Operational Expenditure (OpEx). The SDWAN achieves this by making all branches and Data Centers have the ability to monitor, control, move and report on streams of application data such as specific web (HTTP) traffic for example. The ISR 4000 series has deep packet inspection capability and can accurately identify and control thousands of different applications including custom in-house enterprise applications.

The entire SD-WAN implementation on the ISR4000 is maybe implemented by managing the end device either from the Cloud or On-Premise through ascending levels of throughput based licenses. All licenses that support SD-WAN, whether On-Premise or on Cloud are all enabled using Subscription Licenses. These subscription licenses enable all customers to seamlessly transition between On-Premise and Cloud management as needed. The license tiers are structured to support the growth in business needs through simple subscriptions that help simplify the journey to intent-based networking for the WAN.

The SDWAN subscriptions are aligned across three subscription licenses of **Cisco DNA Essentials, DNA Advantage and Cisco DNA Premier,** each expanding functionally. The **Cisco DNA Essentials** covers all types of connectivity & router life cycle management, support for Network & application visibility coupled with basic premise and transport security. The **Cisco DNA Advantage** provides for Advanced WAN topologies, Application aware policies supported by enhanced network security. The **Cisco DNA Premier** provides for Cloud connectivity with unlimited segmentation, Advanced Application optimization & Network Analytics, secured by advanced threat protection

For more information on Cisco SDWAN please refer to https://www.cisco.com/c/en/us/products/software/one-wan-subscription/index.html

The benefits are immense;

1. Business-critical applications no longer have to contend each other or with traffic that should be served on best effort basis.

2. The Enterprise network becomes more reliable because multiple paths can be used.

3. Costs are greatly reduced because dual MPLS links can be replaced with a mix of MPLS and Internet.

4. The time to bring up new remote sites is dramatically reduced because the SD-WAN supports rapidly deployed DSL and 3G/4G LTE connections as easily as MPLS.

5. Security is assured across these connections using a zero-touch secure VPN technology used by governments and finance organizations worldwide.

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From a platform perspective, the ISR 4000 series has

1. Separated control and data planes for Denial of Service (DoS) attack prevention and Intrusion Prevention System (IPS) and firewall capability built-in.

2. SaaS applications can have content locally cached. The caching is automatic and peers directly with Akamai technology to obtain intelligence.

3. Application performance speed is greatly increased using in-built application acceleration technology that can locally cache at a byte-level.

Cisco Security Solutions for the ISR4000 Series

Cisco WAN MACsec,

Cisco routers support a wide-range of ever enhancing security features on the ISR4000 routers. Cisco WAN MACsec is supported on the ISR4000 series routers using the NIM-2GE-CU-SFP module. WAN MACsec provides a line-rate network encryption solution over Layer 2 Ethernet transport services and can be leveraged outside campus networks, whether it be over Metro Ethernet transport or Data Center Interconnect (DCI) links. MACsec also secures WAN connections that are leveraging Ethernet as the link-layer media. For more information refer to the whitepaper at https://www.cisco.com/c/dam/en/us/td/docs/solutions/CVD/Aug2016/WP-WAN-MACsecDep-Aug2016.pdf

Cisco Encrypted Threat Analytics

The rapid rise in encrypted traffic is changing the threat landscape. As more businesses become digital, a significant number of services and applications are using encryption as the primary method of securing information. Encrypted Threat Analytics (ETA) is a functionality that allows customers to do cryptographic assessments and identify malware communications in encrypted traffic through passive monitoring. Using information about events that occur inside of a flow or intraflow telemetry to identify malware communication in encrypted traffic means Encrypted Traffic Analytics can maintain the integrity of the encrypted flow without the need for bulk decryption. For more information and platform support refer to https://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise-networks/enterprise-network-security/nb-09-encrytd-traf-anlytcs-wp-cte-en.pdf

Cisco Snort IPS and Cisco Umbrella Branch

Cisco® Snort® IPS for Cisco 4000 Series Integrated Services Routers (ISRs) offers a lightweight threat defense solution that uses industry-recognized Snort open-source Intrusion Prevention System (IPS) technology. It is perfect for customers who are looking for a cost-effective solution that provides one box for both advanced routing capabilities and integrated threat defense security to help comply with regulatory requirements.

Cisco Umbrella Branch is a cloud-delivered security service for the Cisco Integrated Services Router (ISR). It provides the first layer of defense against threats at branch offices. And it offers the simplest, fastest way to protect every device on your branch network. You gain visibility and enforcement at the DNS layer, so you can block requests to malicious domains and IPs before a connection is ever made.

When enabling MACsec, you will need to procure the Security and HSEC licenses to stay within the limits of federal export control regulations. When customers wish to enable ETA, the Security (SEC) license needs to be enabled. Enabling Snort needs a Security (SEC) license and a signature subscription license. Enabling Cisco Umbrella Branch needs an Umbrella Branch license and a subscription license.

<u>EXHIBIT A</u>

Reducing Operational Costs using Cisco ISR
Support for Data Modelling

Enterprises and Service Providers (SP's) wish to drive down the operational cost (opex) of their networks and increase the agility and speed with which they deliver new services furthered by investments in Software Defined Networking (SDN) and Network Function Virtualization (NFV). Cisco routers provide support for Netconf and YANG data-modelling with increasing model coverage in successive releases

Software Maintenance Upgrades (SMU)

The ISR4000 routers now support Software Maintenance Upgrades (SMU)[7]. The Software Maintenance Upgrade (SMU) is a package that can be installed on a system to provide a patch fix or security resolution to a released image. An SMU package is provided on a per release and per component basis and is specific to the platform. An SMU is an independent and self-sufficient package and it does not have any prerequisites or dependencies. Please refer to https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/config-mgmt/configuration/xe-16-6/config-mgmt-xe-16-6-book/cm-smu.html for additional details

Network Plug and Play

Network Plug and Play helps automate the onboarding of new devices on your network by applying configuration settings without manual intervention. With the ease of a centrally managed controller, it reduces the time a new device takes to join your network and become functional. For more information on Plug and Play (PnP), please refer to https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Plug-and-Play/release/notes/pnp-connect-release-notes.html

Cisco IOS Software Licensing and Packaging
Universal IOS XE and XE-SDWAN Image

A single Cisco IOS XE Universal image encompassing all functions is delivered with the platform. Advanced features can be enabled by simply activating a software license on the Universal image. Technology packages and feature licenses, enabled through right-to-use licenses, simplify software delivery and decrease the operational costs of deploying new features.

Beginning IOS version 16.9.1, SDWAN support is provided for IOS image on the ISR4000 series router. The SDWAN features are provisioned through a separate image, the XE-SDWAN image. While the Universal IOS-XE image provides for routing features, the XE-SDWAN image provides support for OnPrem or Cloud based Software Defined WAN solutions. Unified Communications for XE-SDWAN will be supported in upcoming releases

When ordering an ISR router, a customer may choose either of IOS-XE or XE-SDWAN image. With IOS-XE image, customers may opt for subscription based licensing or for perpetual licensing. With XE-SDWAN image, customers may order only subscription licensing. Refer to Cisco DNA Ordering Guide at https://www.cisco.com/c/dam/en/us/products/collateral/cloud-systems-management/dna-center/nb-09-dna-1-x-ordering-guide-cte-en-latest.pdf.

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[7] Supported from IOS-XE16.6.1 for all ISR4000 and ASR1000 series routers

EXHIBIT A

Four major technology licenses are available on the Cisco 4000 Family and use the IOS-XE image; these licenses can be activated through the Cisco software activation process identified at https://www.cisco.com/go/sa. The following licenses are available:

- IP Base: This technology package is available as default.

- Application Experience (APPX): This license includes data and application performance features.

- Unified Communications (UC)[8]: This license includes voice features.

- Security (SEC) or Security with No Payload Encryption (SEC-NPE): This license includes features for securing network infrastructure.

The Cisco 4000 Series has a performance-on-demand license to increase the base forwarding throughput with no hardware changes. Also present is the High Security (HSEC) license, which removes the curtailment enforced by the U.S. government export restrictions on the encrypted tunnel count and encrypted throughput. The HSECK9 license is a separately required license for a feature to have full crypto functionality. Without the HSECK9 license, only 1000 secure tunnels and 250[9] Mbps of crypto bandwidth would be available.

For additional information and details about Cisco IOS Software licensing and packaging on the Cisco 4000 Family, please visit https://www.cisco.com/c/en/us/td/docs/routers/access/4400/software/configuration/guide/isr4400swcfg.pdf.

IOS-XE provides support for both perpetual and subscription licensing. Subscription Licensing with support for Cisco DNA Center is offered using the 3-Licenses of Cisco DNA Essentials, Cisco DNA Advantage and Cisco DNA Premier in-line with similar licenses that provide support on the XE-SDWAN side. Please refer to Cisco DNA Ordering Gide at: https://www.cisco.com/c/dam/en/us/products/collateral/cloud-systems-management/dna-center/nb-09-dna-1-x-ordering-guide-cte-en-latest.pdf.

Software Defined Networks maybe provisioned through three major licenses on the Cisco 4000 Family; these licenses can be activated through the Cisco software activation process identified at https://www.cisco.com/go/sa using the Cisco DNA Center or through the vManage management portal. The XE-SDWAN image provides for its own licensing schema through the Cisco DNA Licensing

The following licenses are available:

- **Cisco DNA Essentials** covers all types of connectivity & router life cycle management, support for Network & application visibility coupled with basic premise and transport security

- **Cisco DNA Advantage** provides for Advanced WAN topologies, Application aware policies supported by enhanced network security

- The **Cisco DNA Premier** provides for Cloud connectivity with unlimited segmentation, Advanced Application optimization & Network Analytics, secured by advanced threat protection

For more information please refer to https://www.cisco.com/c/dam/en/us/products/collateral/software/dna-software-routing-subscription.pdf

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[8] Unified Communications is not supported by ISR4221

[9] The change to 250Mbps was achieved in the IOS-XE version 16.8.1 pursuant to revised Federal regulations

EXHIBIT A

Smart Software Licensing Support for IOS-XE

IOS-XE supports Smart Licensing beginning with image version 16.6.1 and Device Led Conversion with image version 16.9.1. Smart Software licensing is a simplified license management system that delivers visibility into customer license ownership and consumption. Licenses are managed through a central Cisco Smart License cloud portal (CSSM). The cloud portal maintains an account of what the customer has bought and what they are using, thus alerting the customer if they go out of compliance. Customers can determine what licenses they own and how they are being used. Customers benefit from being able to pool available licenses thus providing for a more straightforward license usage across like-platforms, thus decreasing operational costs.

While customers can purchase existing SKU's, they must mandatorily create a Smart Account when implementing Smart Licensing. One or more Virtual Accounts maybe created under the Smart Account to enable the organization to logically segregate the purchased licenses. Device Led Conversion (DLC) allows the customer to convert all existing PAK and RTU licenses on the router into a Smart License. For more information, refer to the link at https://www.cisco.com/c/en/us/products/software/smart-accounts/software-licensing.html.

Cisco ISR 4000 Bundles

Cisco ISR 4000 is available is several attractive bundles. The AX bundles integrate Cisco Wide Area Application Services (WAAS), Security (SEC), and Data (DATA) licenses into a single bundle that is simple to order, configure, and deploy. For customers who are also interested in voice along with all of these features, AXV presents an attractive option. See Table 6 for details.

Table 5.   Cisco ISR 4000 Feature Bundles

Bundles	Features
Application Experience with Voice (AXV)	AX + Voice
Voice with Security (VSEC)	Voice + Security
Application Experience (AX)	IP Base + Security + advanced networking protocols: L2TPv3, BFD, MPLS, VRF, VXLAN[10] (Bandwidth <100Mbps)
	Application Experience: PfRv3, WAAS with AppNav, NBAR2, AVC, IP SLA
	Hybrid Cloud Connectivity: LISP, OTV (for Bandwidth <100Mbps), VPLS, EoMPLS
	Intelligent Web Caching: Akamai Connect
Voice (V)	IP Base + Unified Communications: CME, SRST, CUBE
Security (SEC)	IP Base + Advanced Security: Zone Based Firewall, IPSec VPN, EZVPN, DMVPN, FlexVPN

Note: ISR4221/K9 does not support UC (Voice), hence no V, VSEC, AXV bundles for ISR4221/K9

More information on ISR AX bundles is available at https://www.cisco.com/go/ax.

A pay-as-you-grow licensing model lets you increase the performance level for the platforms from the base level to a higher level. So you can purchase at an attractive entry-level price point and increase the performance level as your business demand grows. Table 7 describes the performance licenses.

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[10] Supported only on the ISR4451

EXHIBIT A

Table 6.   Cisco ISR 4000 Performance Licenses

Platform	Performance-on-Demand License	Features
ISR4461	FL-4460-PERF-K9	Increases the performance from base performance 1.5 Gbps to 3 Gbps
ISR4451	FL-44-PERF-K9	Increases the performance from base performance 1 Gbps to 2 Gbps
ISR4431	FL-44-PERF-K9	Increases the performance from base performance 500 Mbps to 1 Gbps
ISR4351	FL-4350-PERF-K9	Increases the performance from base performance 200 Mbps to 400 Mbps
ISR4331	FL-4330-PERF-K9	Increases the performance from base performance 100 Mbps to 300 Mbps
ISR4321	FL-4320-PERF-K9	Increases the performance from base performance 50 Mbps to 100 Mbps
ISR4221	FL-4220-PERF-K9	Increases the performance from base performance 35 Mbps to 75 Mbps

Table 7.   Cisco ISR 4000 Booster (boost) Performance Licenses

Part number	Description
FL-4220-BOOST-K9 (=)	Booster Performance License for 4220 Series Router
FL-4320-BOOST-K9 (=)	Booster Performance License for 4320 Series Router
FL-4330-BOOST-K9 (=)	Booster Performance License for 4330 Series Router
FL-4350-BOOST-K9 (=)	Booster Performance License for 4350 Series Router
FL-4430-BOOST-K9 (=)	Booster Performance License for 4430 Series Router
FL-44-BOOST-K9 (=)	Booster Performance License for 4450 Series Router
FL-4460-BOOST-K9 (=)	Booster Performance License for 4460 Series Router

<u>EXHIBIT A</u>

Ordering Information

The Cisco ISR 4000 Family is orderable and shipping. To place an order, refer to Table 8 below and visit the <u>Cisco Ordering Home Page</u>.

Table 8.   Cisco ISR 4000 Series Ordering Information

Product Name	Product Description
ISR4461/K9	Cisco ISR 4461 with 4 onboard GE, 3 NIM slots, 1 ISC slot, 3 SM slots, 8 GB Flash Memory default, 2 GB DRAM default (data plane), 4 GB DRAM default (control plane)
ISR4451-X/K9	ISR 4451 with 4 onboard GE, 3 NIM slots, 1 ISC slot, 2 SM slots, 8 GB Flash Memory default, 2 GB DRAM default (data plane), 4 GB DRAM default (control plane)
ISR4431/K9	ISR 4431 with 4 onboard GE, 3 NIM slots, 1 ISC slot, 8GB Flash Memory default, 2 GB DRAM default (data plane), 4 GB DRAM default (control plane)
ISR4351/K9	ISR 4351 with 3 onboard GE, 3 NIM slots, 1 ISC slot, 2 SM slots, 4 GB Flash Memory default, 4 GB DRAM default
ISR4331/K9	ISR 4331 with 3 onboard GE, 2 NIM slots, 1 ISC slot, 1 SM slots, 4 GB Flash Memory default, 4 GB DRAM default
ISR4321/K9	ISR 4321 with 2 onboard GE, 2 NIM slots, 1 ISC slot, 4 GB Flash Memory default, 4 GB DRAM default
ISR4221/K9	ISR 4221 with 2 onboard GE, 2 NIM slots, 1 ISC slot, 8 GB Flash Memory default, 4 GB DRAM default

For additional product numbers, including the Cisco 4000 Family bundle offerings, please contact your local Cisco account representative. To place an order, visit the <u>Cisco Ordering Home Page</u>. To download software, visit the <u>Cisco Software Center</u>.

Integrated Services Router Migration Options

The Cisco ISR 4000 Family is included in the standard Cisco Technology Migration Program (TMP). Refer to <u>https://www.cisco.com/go/tmp</u> and contact your local Cisco account representative for program details.

Warranty Information

The Cisco ISR 4000 Series Integrated Services Routers have a 90-day limited liability warranty.

Cisco and Partner Services for the Branch Office

Services from Cisco and our certified partners help you transform the branch-office experience and accelerate business innovation and growth. We have the expertise to create a clear, replicable, optimized branch-office footprint across technologies. Planning and design services align technology with your business goals and can increase deployment efficiency. Technical services help you improve operational efficiency, save money, and mitigate risk. Optimization services help you continuously improve performance and succeed with new technologies. For more information, please visit <u>https://www.cisco.com/go/services</u>.

EXHIBIT A

Cisco SMARTnet® technical support for the Cisco ISR 4000 Family is available on a one-time or annual contract basis. Support options range from help-desk assistance to proactive, onsite consultation. All support contracts include:

- Major Cisco IOS Software updates for protocol, security, bandwidth, and feature improvements
- Full access rights to Cisco.com technical libraries for technical assistance, electronic commerce, and product information
- Access 24 hours a day to the industry's largest dedicated technical support staff

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

For More Information

For more information about the Cisco ISR 4000 Family, visit https://www.cisco.com/go/ISR4K or contact your local Cisco account representative.

Document History

New or revised topic	Described in	Date
Change 4461 from 2RU to 3RU	Sizing Section	December 4, 2018
Added 4461 and SD-WAN		November 13, 2018
Added support for Cisco SD-WAN with IOS XE SD-WAN, 16.9.1 software release. Added Encrypted Traffic Analytics as well as Boost Performance Licensing support information.	Ordering Information	August 8, 2018
Added new ISR 4000 Series model, the ISR 4221. Updated all related modules, memory, licenses and bundles support related to the ISR 4221.	Features and Benefits	August 23, 2017

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<u>EXHIBIT A</u>

CISCO

Cisco IP Conference Phone 8832 Data Sheet

The Cisco® IP Conference Phone 8832 is a business-class conferencing station for large meeting rooms and executive offices.
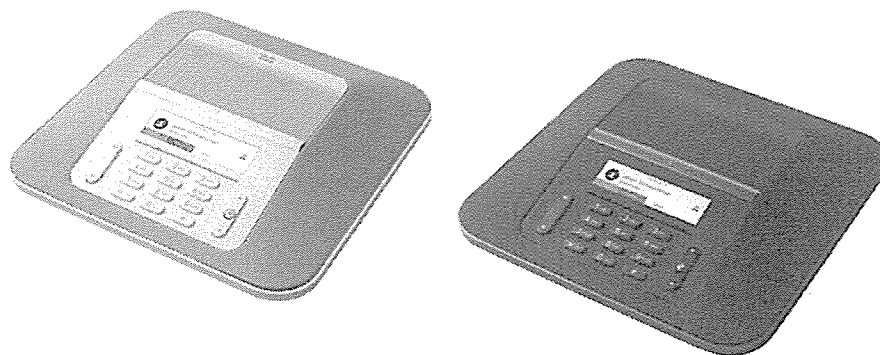
The Cisco IP Conference Phone 8832 enhances people-centric collaboration by delivering easy-to-use audio conferencing with astounding voice quality and clarity. Newly developed microphones and loudspeakers provide the richest sound of any conference phone on the market. Our unique acoustic design includes a "studio-monitor" full-range speaker. This loudspeaker architecture provides a dynamic, detailed sound with low distortion and low-frequency clarity, making conferencing an in-person experience with exceptionally clear and natural audio quality.

The Cisco IP Conference Phone 8832 provides a simple, flexible, scalable solution that meets the challenges of the most diverse rooms. With the base unit alone, it provides 360-degree coverage for any 20x20-foot room and up to 10 participants. With the optional wired extension microphone kit, it covers any 20x34-foot room and up to 22 participants. With the optional wireless extension microphone kit (using Digital Enhanced Cordless Telecommunications [DECT] technology), it covers any 20x40-foot room and up to 26 participants. With a daisy-chain configuration of two 8832 units along with the optional wireless extension microphone kit, it covers up to a 20x57-foot room and up to 42 participants. It is ideal for executive offices, conference rooms, and boardrooms.

The 8832 unit has a sleek form by using approachable materials for a differentiated, modern look and feel. The key design elements include the following:

- 3.9-inch 480x128-pixel color LCD
- Textile cover for soft touch and durability
- Large mute button in the middle of the device for easy access from all angles
- LED indicator above the mute button showing the call status
- Raised edge for easier handling and repositioning on tabletop
- Crisp, precise button tactility
- Single USB-C port on the device to minimize the number of cables on the table (an Ethernet injector is required for any non-Wi-Fi deployment)

EXHIBIT A

The optional wired microphone kit includes two wired microphones with anodized aluminum top housing.

The key features of this conference phone are as follows:

- 360-degree room coverage; base unit alone covers up to a 10-foot microphone pickup range
- Single line with a user experience of multiple calls per line
- Session Initiation Protocol (SIP) signaling
- Codec support, including G.711(u/A), G.729a, G.729ab, iLBC, G.722, and OPUS
- IPv6 support
- Secure Hash Algorithm (SHA)-256 enabled for advanced security features
- Mobile and Remote Access (MRA) support
- Wi-Fi support
- Wired extension microphone support
- Wireless extension microphone support
- Daisy-chain support
- Client Matter Code (CAC) and Forced Authorization Code (FAC) Support
- Compatible with both IEEE 802.3af and 802.3at Power over Ethernet (PoE) Class 3 consumption (both PoE and non-PoE Ethernet injector options are available)

Features and benefits

Table 1 lists the features and benefits of the Cisco IP Conference Phone 8832.

Table 1.   Features and benefits

Feature	Benefits
Graphical display	480x128-pixel backlit 24-bit color LCD, 3.9-in. (9.9-cm) diagonal
Ethernet switch	10/100 BASE-T via an Ethernet injector
Keys	The phone has the following keys: • Four context-sensitive soft key bars • Two-way navigation bar and select button • Standard keypad • Volume-control bar • Large mute key for ease of access
IEEE PoE	IEEE PoE Class 3; compatible with both IEEE 802.3af and 802.3at switch blades; supports both Cisco Discovery Protocol and Link Layer Discovery Protocol - Power over Ethernet (LLDP-PoE)
Call control support	Native support in Cisco Unified Communications Manager 12.0(1); DevPack required for Cisco Unified Communications Manager 10.5.2, 11.0, and 11.5

Licensing

The Cisco IP Phone 8832 requires an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

Product specifications

Table 2 lists the specifications of the Cisco IP Conference Phone 8832.

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Table 2. Specifications

Feature	Specifications
Audio	G.711 a-law and mu-law, wideband (G.722), G.729a, G.729ab, Internet Low Bitrate Codec (iLBC), OPUS Automatic Gain Control Comfort Noise Generation Silence Suppression/Voice Activity Detection Echo Suppression Dynamic Noise Reduction
Acoustics	Frequency: Speaker, 100 Hz to 20 kHz; microphones, 100 Hz to 12 kHz, ±3 dB Max adjustable volume: 89 dB within 0.5 m
Call features	° + Dialing ° Adjustable ring tones and volume levels ° Barge ° Call forward ° Call history lists ° Call park ° Call timer ° Call waiting ° Caller ID ° Corporate directory ° Conference ° Hold ° Music on Hold (MoH) ° Mute ° Predialing before sending ° Redial ° Shared line ° Speed dial (Favorites) ° Time and date display ° Transfer ° Voicemail (messages)
Quality-of-Service (QoS) options	The phone supports Cisco Discovery Protocol and 802.1Q/p standards and can be configured with an 802.1Q VLAN header containing the VLAN ID overrides configured by the admin VLAN ID.
Network features	° Session Initiation Protocol (SIP) for signaling ° Session Description Protocol (SDP) ° IPv4 ° IPv6 ° User Datagram Protocol (UDP) (used only for Real-Time Transport Protocol streams) ° Dynamic Host Configuration Protocol (DHCP) client or static configuration ° Gratuitous Address Resolution Protocol (GARP) ° Domain Name System (DNS) ° Trivial File Transfer Protocol (TFTP) ° Secure HTTP (HTTPS) ° VLAN ° Real-Time Transport Protocol (RTP) ° Real-Time Control Protocol (RTCP) ° Cisco Discovery Protocol ° LLDP (including LLDP-MED) ° Switch speed auto-negotiation
Security features	° Secure credential storage ° Image authentication ° Random bit generation ° Manufacturer-Installed Certificates (MICs) ° Secure boot ° SHA-256 enabled for advanced security features

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Feature	Specifications
	• Ethernet 802.1X supplicant options: Extensible Authentication Protocol – Flexible Authentication via Secure Tunneling (EAP-FAST) and Extensible Authentication Protocol – Transport Layer Security (EAP-TLS)
	• Signaling authentication and encryption using TLS v1.2
	• Media authentication and encryption using SRTP
	• HTTPS for client and server
	• Secure Shell (SSH) Protocol server
Physical dimensions (H x W x D)	10.9 x 10.9 x 2.4 in. (278 x 278 x 61 mm)
Weight	4.07 lb (1.85 kg)
Phone-casing composition	Acrylonitrile Butadiene Styrene (ABS) textured plastic; Cisco cosmetic class A
Operational temperature	32° to 104°F (0° to 40°C)
Nonoperational temperature shock	14° to 140°F (−10° to 60°C)
Humidity	• Operating 10% to 90%, noncondensing
	• Nonoperating 10% to 95%, noncondensing
Language support	• Arabic (Arabic Area)
	• Bulgarian (Bulgaria)
	• Catalan (Spain)
	• Croatian (Croatia)
	• Czech (Czech Republic)
	• Danish (Denmark)
	• Dutch (Netherlands)
	• English (United Kingdom)
	• Estonian (Estonia)
	• French (Canada)
	• French (France)
	• Finnish (Finland)
	• German (Germany)
	• Greek (Greece)
	• Hebrew (Israel)
	• Hungarian (Hungary)
	• Italian (Italy)
	• Japanese (Japan)
	• Korean (Korea Republic)
	• Latvian (Latvia)
	• Lithuanian (Lithuania)
	• Norwegian (Norway)
	• Polish (Poland)
	• Portuguese (Portugal)
	• Portuguese (Brazil)
	• Romanian (Romania)
	• Russian (Russian Federation)
	• Serbian (Republic of Serbia)
	• Serbian (Republic of Montenegro)
	• Simplified &Traditional Chinese (China)
	• Slovak (Slovakia)
	• Slovenian (Slovenia)
	• Spanish (Columbia)
	• Spanish (Spain)
	• Swedish (Sweden)
	• Thai (Thailand)
	• Turkish (Turkey)
	• Ukrainian (Ukraine)

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Feature	Specifications
Certifications and compliance	○ Regulatory compliance 　　○ CE Markings per directives 2014/30/EU and 2014/53/EU and 2014/35/EU ○ Safety 　　○ UL 60950 Second Edition 　　○ CAN/CSA-C22.2 No. 60950 Second Edition 　　○ EN 60950 Second Edition (including A11 and A12) 　　○ IEC 60950 Second Edition (including A11 and A12) 　　○ EN 60950-1 　　○ IEC 60950-1 　　○ AS/NZS 60950.1 ○ EMC – Emissions 　　○ 47CFR Part 15 (CFR 47) Class B 　　○ AS/NZS CISPR32 Class B 　　○ CISPR32 Class B 　　○ EN55032 Class B 　　○ EN 300 386 　　○ ICES003 Class B 　　○ VCCI Class B 　　○ EN61000-3-2 　　○ EN61000-3-3 　　○ EN61000-4-2 　　○ IEC61000-4-2 　　○ EN61000-4-3 　　○ IEC61000-4-3 　　○ EN61000-4-6 　　○ IEC61000-4-6 　　○ KN22 Class B ○ EMC – Immunity 　　○ EN55024 　　○ CISPR24 　　○ KN24 　　○ Armadillo Light ○ Telecom 　　○ AS/ACIF S004 　　○ NZPTC220 　　○ Industry standards: TIA 810 B and TIA 920 A 　　○ Industry standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at ○ Radio 　　○ FCC Part 2.1093 (BT RF Exposure TR) 　　○ RSS-102 (BT RF Exposure TR) 　　○ RSS-210 　　○ RSS-213 　　○ RSS-247 　　○ EN 300 328 　　○ EN 300 440 　　○ EN 301 406 　　○ EN 50385 (BT RF Exposure TR) 　　○ EN 301-489-1 　　○ EN 301-489-3 　　○ EN 301-489-6 　　○ EN 301-489-17 　　○ EN 301 893 　　○ NCC LP0002

EXHIBIT A

Product Specifications

Table 3 gives ordering information for the phone and its accessories.

Table 3. Ordering information

Product number	Description
CP-8832-K9	Cisco IP Conference Phone 8832 base in charcoal color for North America. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-W-K9	Cisco IP Conference Phone 8832 base in white color for North America. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-EU-K9	Cisco IP Conference Phone 8832 base in charcoal color for APAC, EMEA, Australia and New Zealand. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-EU-W-K9	Cisco IP Conference Phone 8832 base in white color for APAC, EMEA, Australia and New Zealand. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-LA-K9	Cisco IP Conference Phone 8832 base in charcoal color for LATAM. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-LA-W-K9	Cisco IP Conference Phone 8832 base in white color for LATAM. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-J-W-K9	Cisco IP Conference Phone 8832 base in white color for Japan. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-NR-K9	Cisco IP Conference Phone 8832 base No-Radio (NR) version in charcoal color. This also includes an adapter along with a 9.8-ft (3-m) USB-C cable.
CP-8832-MIC-WIRED=	Optional Cisco IP Conference Phone 8832 Wired Microphone Kit in silver color for worldwide use. Kit includes two wired microphones.
CP-8832-MIC-WLS=	Optional Cisco IP Conference Phone 8832 Wireless Microphone Kit in silver color for North America. Kit includes two wireless microphones, a charging tray, a power adapter and a USB-C cable.
CP-8832-MIC-WLS-E=	Optional Cisco IP Conference Phone 8832 Wireless Microphone Kit in silver color for APAC, EMEA, Australia and New Zealand. Kit includes two wireless microphones, a charging tray, a power adapter and a USB-C cable.
CP-8832-MIC-WLS-J=	Optional Cisco IP Conference Phone 8832 Wireless Microphone Kit in silver color for Japan. Kit includes two wireless microphones, a charging tray, a power adapter and a USB-C cable.
CP-8832-DC=	Optional Cisco IP Conference Phone 8832 Daisy Chain Kit for North America. This includes a smart adapter, a power adapter and three USB-C cables.
CP-8832-DC-EU=	Optional Cisco IP Conference Phone 8832 Daisy Chain Kit for Europe. This includes a smart adapter, a power adapter and three USB-C cables.
CP-8832-DC-UK=	Optional Cisco IP Conference Phone 8832 Daisy Chain Kit for United Kingdom. This includes a smart adapter, a power adapter and three USB-C cables.
CP-8832-DC-AUNZ=	Optional Cisco IP Conference Phone 8832 Daisy Chain Kit for Australia and New Zealand. This includes a smart adapter, a power adapter and three USB-C cables.
CP-8832-POE=	Cisco IP Conference Phone 8832 PoE Adapter Spare for Worldwide. A USB-C cable is included.
CP-8832-ETH=	Cisco IP Conference Phone 8832 non-PoE Ethernet Adapter Spare for North America. A USB-C cable is included.
CP-8832-PWR=	Cisco IP Conference Phone 8832 Power Adapter Spare for North America. A USB-C cable is included.
CP-8832-ETH-WW=	Cisco IP Conference Phone 8832 non-PoE Ethernet Adapter Spare for Worldwide, with configurable Power Clip. A USB-C cable is included
CP-8832-PWR-WW=	Cisco IP Conference Phone 8832 Power Adapter Spare for Worldwide, with configurable Power Clip. A USB-C cable is included

Here are the recommended ordering options based on the power sources:

- Power over Ethernet (PoE) deployment option: A Cisco IP Conference Phone 8832 PoE Adapter is required.

- Non-PoE Ethernet deployment option: A Cisco IP Conference Phone 8832 non-PoE Ethernet Adapter is required.

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- Wi-Fi deployment option: A Cisco IP Conference Phone 8832 Power Adapter is required.

For 8832 purchase, please order the phone PID (for example, CP-8832-K9, CP-8832-EU-K9, CP-8832-NR-K9, etc.) and select one of the above options. The base package includes one of the power sources selected.

For daisy-chain deployment, please order two phone PIDs (for example, CP-8832-K9) and a daisy-chain kit (for example, CP-8832-DC=).

Warranty

The Cisco IP Conference Phone 8832 is covered by a standard 1-year replacement warranty.

Cisco Unified Communications Services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what's needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs. Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

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More information

For additional details about the Cisco IP Phone 8800 Series, go to https://www.cisco.com/go/ipphones/8800.

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CISCO
The bridge to possible

Cisco IP Phone 7800 Series

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The Cisco® IP Phone 7800 Series is a cost-effective, high-fidelity voice communications portfolio designed to improve your organization's people-centric communications, while reducing your operating costs.

It combines an attractive new ergonomic design with "always-on" reliability and secure encrypted communications. The Cisco® IP Phone 7800 Series delivers advanced IP Telephony features and crystal clear wideband audio performance to deliver an easy-to-use, full-featured voice communications experience on Cisco on-premises and hosted infrastructure platforms and third party hosted call control.

The Cisco® IP Phone 7800 Series introduces four models to the Cisco IP Phone portfolio. From left-to-right (Figure 1), they are:

- Cisco IP Phone 7811 supporting one line (available in charcoal only)
- Cisco IP Phone 7821 supporting two lines (available in charcoal and white)
- Cisco IP Phone 7841 supporting four lines (available in charcoal and white)
- Cisco IP Phone 7861 supporting sixteen lines (available in charcoal and white)

Figure 1.
Cisco IP Phone 7800 Series

EXHIBIT A

The line keys on each model are fully programmable. You can set up keys to support either lines, such as directory numbers, or call features like speed dialing. You can also boost productivity by handling multiple calls for each directory number, using the multi-call per-line appearance feature. Tri-color LEDs on the line keys support this feature and make the phone simpler and easy to use.

Fixed function keys on all models give you one-touch access to service, messaging, directory, hold/resume, transfer, and conference features. A full-duplex speakerphone lets you set up clear multi-party conferences for flexible, productive collaboration.

The Cisco IP Phone 7800 Series sets a new standard in usability and delivers a context-sensitive user experience. It features a high-resolution 3.5" (396x162) greyscale display with white backlighting on the IP Phone 7821, 7841 and 7861, and a 3.2" (384 x106) display without backlighting on IP Phone 7811, for easy reading. Localized language support, including right-to-left onscreen text, meets the needs of global users.

The Cisco IP Phone 7800 Series is also more energy-efficient and eco-friendly, to support your green initiatives. Each phone supports Power-over-Ethernet (PoE) Class 1 and Cisco's EnergyWise™, and is Energy Star certified. A standard power-save option is available on the IP Phone 7821, 7841 and 7861 to reduce power consumption during off-hours, save money and maximize energy efficiency.

The IP Phone 7800 Series portfolio is ideal for any mid-sized to large enterprise company that wants to update its phone system from a traditional analog or digital-based system to an IP Communications system. It's also an excellent choice if you're seeking to expand your voice communications support with your current Cisco Unified Communications solution. Small businesses who have interest in the Cisco IP Phone 7800 Series, but have investment in or are considering third party hosted call control services, are also candidates for the IP Phone 7800 Series.

Features and benefits

Table 1 lists features and benefits of the Cisco° IP Phone 7800 Series.

Table 1.   Features and benefits

Features	Benefits
Hardware Features	
Ergonomic design	◦ The phone offers an easy-to-use interface and provides a traditional telephony-like user experience.
Graphical display	◦ White backlit, greyscale, 3.5" 396×162 pixel-based display on the IP Phone 7821, 7841 and 7861. ◦ Non-backlit, greyscale, 3.28" 384×106 pixel-based display on the IP Phone 7811. ◦ Provide scrollable access to calling features and text-based XML applications.
Handset	◦ The handset is a standard wideband-capable audio handset (connects through an RJ-9 port) for the IP Phone 7821, 7841 and 7861. ◦ The default handset is a standard narrowband-capable audio handset (connects through an RJ-9 port) for the IP Phone 7811, and wideband on handset is available with purchase of additional wideband handset. ◦ The handset is Hearing Aid-Compatible (HAC) and meets Federal Communications Commission (FCC) loudness requirements for the Americans with Disabilities Act (ADA). You can achieve Section 508 loudness requirements by using industry-standard inline handset amplifiers such as Walker Equipment W-10 or CE-100 amplifiers. The dial pad is also ADA-compliant. ◦ The narrowband handset (for the IP Phone 7811) produces a magnetic field that attracts small metallic objects such as pins and staples. To avoid possible injuries do not keep small metallic objects close to the handset.

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Features	Benefits
Headset	- The analog headset jack is a standard wideband-capable RJ-9 audio port for the IP Phone 7821, 7841, and 7861.
Backlit Indicator	- The phone supports backlit indicators for the audio path keys (handset, headset and speakerphone), select key, line keys, and message waiting. - Headset key is not available on the IP Phone 7811.
Volume control	- A volume-control toggle provides easy decibel-level adjustments of the handset, monitor speaker, and ringer.
Full duplex speakerphone	- Full-duplex speakerphone allows gives you flexibility in placing and receiving calls. For added security, the audible Dual Tone Multifrequency (DTMF) tones are masked when the speakerphone mode is used.
Bezel	- The IP Phone 7821, 7841 and 7861 include a default black bezel (replaceable), and an optional silver bezel is also available separately. - The IP Phone 7811 is available with a black bezel.
Dual-position foot stand	- The display is easy to view and the buttons and keys are easy to use. The two-position foot stand supports viewing angles of 30 degrees and 45 degrees; you can remove the foot stand for wall mounting, with mounting holes located on the base of the phone. (IP Phone 7821, 7841 and 7861) - Only 1 foot-stand position (45 degrees) is supported on the IP Phone 7811.
Wall-mountable	- The phone can be installed on a wall using optional wall-mount kit (available separately).
Electronic hook switch	- The hookswitch can be controlled electronically with a third party headset connected to the auxiliary port for the IP Phone 7821, 7841, and 7861.

Keys	- The phone has the following keys
	  - Line keys
	  - Soft-keys
	  - Two-way navigation and select keys
	  - Hold/Resume, Transfer and Conference keys
	  - Messaging, Service and Directory keys
	  - Standard key pads
	  - Volume control toggle key
	  - Speakerphone, headset and mute keys (Headset key is not available on the IP Phone 7811)

Ethernet cables	- The IP Phone 7811, 7821, 7841, and 7861
	  - Category 3/5/5e/6 for 10-Mbps cables with 4 pairs
	  - Category 5/5e/6 for 100-Mbps cables with 4 pairs
	- The IP Phone 7841
	  - Category 5/5e/6 for 1000-Mbps cables with 4 pairs

Power Features	
IEEE PoE class 1	- The phone supports IEEE 802.3af PoE (Class 1); power consumption does not exceed 3.84 watts.
AC Power Adapter	- Cisco power cube 3 (CP-PWR-CUBE-3=) and Cisco power adapter 3 (CP-PWR-ADPT-3) are used as standard Cisco IP Phone Power Supplies for non-PoE deployments.
Cisco power injector	- The IP Phone 7811, 7821 and 7861 are compatible with Cisco Unified IP Phone Power Injector (CP-PWR-INJ), and 7841 is compatible with Cisco Aironet Power Injector (AIR-PWRINJ5=).

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Features	Benefits
Call-Control Support	
Cisco Unified Communications Manager	○ 8.5.1 ○ 8.6.2 ○ 9.1.2 ○ 10.x and later
Cisco Business Edition 6000	○ 8.6.2 ○ 9.1.2 ○ 10.x and later
Cisco Hosted Collaboration Solution	○ 8.6.2 and later (using supported UCM versions above)
Cisco Unified Survivable Remote Site Telephony	○ 8.x and later

Licensing

The Cisco IP Phone 7811 and 7821 require a Basic User Connect License (UCL) in order to connect to Cisco Unified Communications Manager. The Cisco IP Phone 7841 and 7861 require an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

Product specifications

Table 2 lists the features and specifications of The Cisco® IP Phone 7800 Series.

Table 2.   Features and specifications

Features	Specifications
Signaling protocol support	○ Session Initiation Protocol (SIP)
Codec support	○ G.711a/μ, G.722, G.729a, iLBC
Key call features support	○ + Dialing (E.164) ○ Abbreviated dial ○ Adjustable ringing and volume levels ○ Adjustable display contrast ○ Agent greeting ○ Auto-answer ○ Auto-detection of headset (Not available on the IP Phone 7811) ○ Busy Lamp Field (BLF) (Not available on the IP Phone 7811) ○ Call back ○ Call forward ○ Call history ○ Call park ○ Call Pickup ○ Call timer ○ Call waiting ○ Caller ID

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Features	Specifications
	• cBarge
	• Corporate directory
	• Conference
	• Cross Cluster Extension Mobility (EMCC)
	• Dial from the list
	• Direct transfer
	• Do not disturb
	• Extension Mobility (EM)
	• Forced access codes and client matter codes
	• Group call pickup
	• Hold/resume
	• Immediate divert
	• Intercom (Not available on the IP Phone 7811)
	• Join (Not available on the IP Phone 7811)
	• Message-waiting indicator
	• Meet me conference
	• Mobility
	• Music on hold
	• Mute
	• Network profiles (automatic)
	• On- and off-network distinctive ringing
	• Personal directory
	• Privacy
	• Private Line Automated Ringdown (PLAR)
	• Redial
	• Ring tone per line appearance
	• Shared line
	• Silent monitoring and recording
	• Speed dial
	• Time and date display
	• Transfer
	• Voicemail
	• Whisper coaching
Language support	• Arabic (Arabic Area)
	• Bulgarian (Bulgaria)
	• Catalan (Spain)
	• Chinese (China) – GB 2312
	• Chinese (Hong Kong)
	• Chinese (Taiwan)
	• Croatian (Croatia)
	• Czech (Czech Republic)
	• Danish (Denmark)
	• Dutch (Netherlands)
	• English (United Kingdom)
	• Estonian (Estonia)

EXHIBIT A

Features	Specifications
	○ French (France)
	○ Finnish (Finland)
	○ German (Germany)
	○ Greek (Greece)
	○ Hebrew (Israel)
	○ Hungarian (Hungary)
	○ Italian (Italy)
	○ Japanese (Japan)
	○ Latvian (Latvia)
	○ Lithuanian (Lithuania)
	○ Korean (Korea Republic)
	○ Norwegian (Norway)
	○ Polish (Poland)
	○ Portuguese (Portugal)
	○ Portuguese (Brazil)
	○ Romanian (Romania)
	○ Russian (Russian Federation)
	○ Spanish (Columbia)
	○ Spanish (Spain)
	○ Slovak (Slovakia)
	○ Swedish (Sweden)
	○ Serbian (Republic of Serbia)
	○ Serbian (Republic of Montenegro)
	○ Slovenian (Slovenia)
	○ Thai (Thailand)
	○ Turkish (Turkey)
Multiple ring tones	○ The phone supports user-adjustable ring tones.
Directories	○ The phone identifies incoming messages and categorizes them for users on the screen. This makes it fast and easy to return calls using direct dial-back capability. The corporate directory integrates with the Lightweight Directory Access Protocol (LDAP) standard directory.
Quality-of-service (QoS) options	○ The phone supports CDP and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID.
Security	○ Certificates
	○ Image authentication
	○ Device authentication
	○ File authentication
	○ Signaling authentication
	○ Media encryption using Secure Real-Time Transfer Protocol (SRTP) using AES-128
	○ Signaling encryption using Transport Layer Security (TLS) Protocol using AES-128 or AES-256
	○ Encrypted configuration files
	○ 802.1X authentication
	○ Cryptography
Configuration options	○ The user can configure IP address assignment statically or through the DHCP client.
Physical dimensions	○ IP Phone 7811: 207 x 195 x 33mm (exclude foot stand)

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Features	Specifications
(H×W×D)	• IP Phone 7821: 207 x 206 x 28mm (exclude foot stand)
	• IP Phone 7841: 207 x 206 x 28mm (exclude foot stand)
	• IP Phone 7861: 207 x 265 x 28mm (exclude foot stand)
Weight	• IP Phone 7811: 806g
	• IP Phone 7821: 867g
	• IP Phone 7841: 868g
	• IP Phone 7861: 1053g
Display	• IP Phone 7821, 7841, 7861: 3.5" 396×162 pixels
	• IP Phone 7811: 3.28" 384×106 pixels
Ethernet switch	• The phone has a 10/100BASE-T (The Cisco° IP Phone 7811, 7821 and 7861) or a10/100/1000BASE-T (The Cisco° IP Phone 7841) Ethernet connection through two RJ-45 ports, one for the LAN connection and the other for a downstream Ethernet device connection like a PC.
Phone casing composition	• Polycarbonate Acrylonitrile Butadiene Styrene (ABS) textured plastic.
Power requirements	• The phone is an interoperable IEEE 802.3af PoE (Class 1 device); 48 VDC is required; it can be supplied locally at the desktop using an optional AC-to-DC power supply (CP-PWR-CUBE-3=). Use of the power supply also requires the use of one of the corresponding AC country cords.
Operational temperature	• 32 to 104°F (0 to 40°C)
Nonoperational temperature shock	• 14 to 140°F (-10 to 60°C)
Humidity	• Operating 10% to 90%, non-condensing
	• Non-operating 10% to 95%, non-condensing
Cosmetic	• Cisco cosmetic class A
Certification and compliance	• Regulatory Compliance
	• CE Markings per directives 2004/108/EC and 2006/95/EC
	• Safety
	• UL 60950 Second Edition
	• CAN/CSA-C22.2 No. 60950 Second Edition
	• EN 60950 Second Edition (including A11 and A12)
	• IEC 60950 Second Edition (including A11 and A12)
	• AS/NZS 60950
	• GB4943
	• EMC - Emissions
	• 47CFR Part 15 (CFR 47) Class B
	• AS/NZS CISPR22 Class B
	• CISPR22: 2005 w/Amendment 1: 2005 Class B
	• EN55022: 2006 w/Amendment 1: 2007 Class B
	• ICES003 Class B
	• VCCI Class B
	• EN61000-3-2
	• EN61000-3-3
	• KN22 Class B
	• EMC - Immunity

EXHIBIT A

Features	Specifications
	◦ EN55024
	◦ CISPR24
	◦ EN60601-1-2
	◦ KN24
	◦ Armadillo Light
	◦ Telecom
	◦ FCC Part 68 HAC
	◦ CS-03-HAC
	◦ AS/ACIF S004
	◦ AS/ACIF S040
	◦ NZ PTC 220
	◦ Industry Standards: TIA 810 and TIA 920
	◦ Industry Standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at

Ordering information

Table 3 gives ordering information for the phone and its accessories.

Table 3.   Ordering information

Product Number	Description
CP-7811-K9=	◦ Cisco IP Phone 7811
CP-7821-K9=	◦ Cisco IP Phone 7821
CP-7841-K9=	◦ Cisco IP Phone 7841
CP-7861-K9=	◦ Cisco IP Phone 7861
CP-7821-W-K9=	◦ Cisco IP Phone 7821, White
CP-7841-W-K9=	◦ Cisco IP Phone 7841, White
CP-7861-W-K9=	◦ Cisco IP Phone 7861, White
CP-DX-HS-NB=	◦ Spare Narrowband Handset for Cisco IP Phone 7811
CP-DX-HS=	◦ Spare Wideband Handset for Cisco IP Phone 7800 Series
CP-DX-W-HS=	◦ Spare White Wideband Handset for Cisco IP Phone 7800 Series
CP-7800-HS-CORD=	◦ Spare Handset Cord for Cisco IP Phone 7800 Series
CP-DX-W-CORD=	◦ Spare White Handset Cord for Cisco IP Phone 7800 Series
CP-7800-HS-HOOK=	◦ Spare Handset Hook for Cisco IP Phone 7800 Series, 20 Pieces
CP-7811-WMK=	◦ Spare Wallmount Kit for Cisco IP Phone 7811
CP-7800-WMK=	◦ Spare Wallmount Kit for Cisco IP Phone 7800 Series

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Product Number	Description
CP-7861-WMK=	○ Spare Wallmount Kit for Cisco IP Phone 7861
CP-7811-FS=	○ Spare Foot stand for Cisco IP Phone 7811
CP-7800-FS=	○ Spare Foot stand for Cisco IP Phone 7800 Series
CP-7861-FS=	○ Spare Foot stand for Cisco IP Phone 7861
CP-7821-B-BEZEL=	○ Spare Black Bezel for Cisco IP Phone 7821
CP-7821-S-BEZEL=	○ Spare Silver Bezel for Cisco IP Phone 7821
CP-7841-B-BEZEL=	○ Spare Black Bezel for Cisco IP Phone 7841
CP-7841-S-BEZEL=	○ Spare Silver Bezel for Cisco IP Phone 7841
CP-7861-B-BEZEL=	○ Spare Black Bezel for Cisco IP Phone 7861
CP-7861-S-BEZEL=	○ Spare Silver Bezel for Cisco IP Phone 7861
CP-PWR-CUBE-3	○ Cisco Power Cube 3
CP-PWR-CORD-AP=	○ Power Cord Asia Pacific
CP-PWR-CORD-AR=	○ Power Cord Argentina
CP-PWR-CORD-AU=	○ Power Cord Australia
CP-PWR-CORD-BZ=	○ Power cord for Brazil
CP-PWR-CORD-CE=	○ Power Cord European
CP-PWR-CORD-CN=	○ Power Cord China
CP-PWR-CORD-JP=	○ Power Cord Japan
CP-PWR-CORD-NA=	○ Power Cord North America
CP-PWR-CORD-SW=	○ Power Cord Switzerland
CP-PWR-CORD-UK=	○ Power Cord United Kingdom
CP-PWR-ADPT-3-AR=	○ Cisco Power Adapter 3 with Argentina Clip
CP-PWR-ADPT-3-AU=	○ Cisco Power Adapter 3 with Australia Clip
CP-PWR-ADPT-3-BZ=	○ Cisco Power Adapter 3 with Brazil Clip
CP-PWR-ADPT-3-CN=	○ Cisco Power Adapter 3 with China Clip
CP-PWR-ADPT-3-EU=	○ Cisco Power Adapter 3 with European Clip
CP-PWR-ADPT-3-IN=	○ Cisco Power Adapter 3 with India Clip

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Product Number	Description
CP-PWR-ADPT-3-KR=	○ Cisco Power Adapter 3 with Korea Clip
CP-PWR-ADPT-3-NA=	○ Cisco Power Adapter 3 with North America Clip
CP-PWR-ADPT-3-UK=	○ Cisco Power Adapter 3 with United Kingdom Clip

Warranty

The Cisco® IP Phone 7800 Series are covered by a Cisco standard 1-year replacement warranty.

Cisco Unified Communications Services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what's needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs. Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire

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hardware, software, services and complementary third-party equipment in easy, predictable payments. <u>Learn more</u>.

More information

For additional details on the Cisco® IP Phone 7800 Series, go to <u>https://www.cisco.com/go/ipphones/7800</u>.

EXHIBIT A

Cisco IP Phone 8800 Key Expansion Module

Quickly adapt to market changes. Increase productivity. Improve competitive advantage through speed and innovation. And deliver a rich-media experience across any workspace securely and with the best possible quality. Cisco® Unified Communications Solutions enable the collaboration that makes this possible (Figure 1).

Figure 1.   Cisco IP Phone 8800 Key Expansion Module
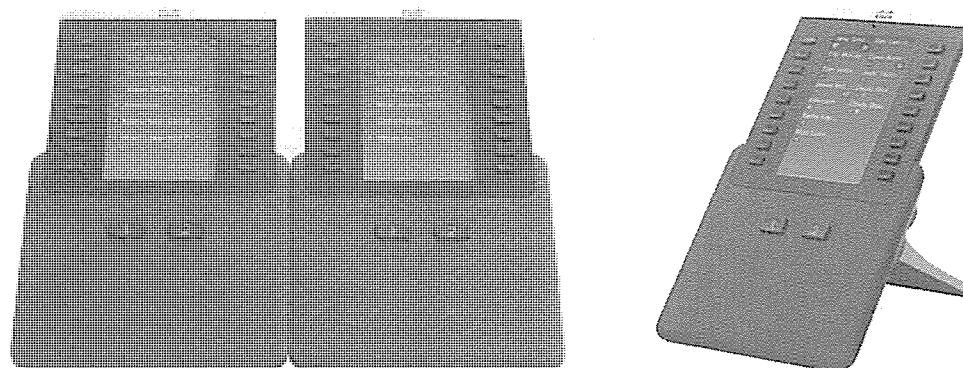
Product Overview

Call coverage is critical for administrative assistants and others who must monitor and manage the status of calls. It requires the ability to instantly determine the status of numerous lines beyond those of the Cisco IP Phone 8851, 8861, and 8865 models.

Note: The Cisco IP Phone 8851 models include the standard 8851 model and the 8851NR model, which is the nonradio 8851 model designed for military and other customers who need a key expansion module (KEM) but cannot place phones with Bluetooth or other radios on their premises. All attributes of the 8851 and 8851NR are identical except that the 8851 has no Bluetooth radio on its board.

The Cisco IP Phone 8800 Key Expansion Module extends the capabilities of Cisco IP Phone 8851, 8861, and 8865 models with additional buttons and a color LCD display. This key expansion module adds 18 physical keys with access to 18 additional keys, using the page keys, for a total of 36 additional keys. You can connect up to three 8800 KEMs to the IP Phone 8861 and 8865, and up to two 8800 KEMs to the IP Phone 8851.

The 8800 KEM comes with a foot stand and all necessary hardware to connect it directly to the base device in the traditional side-by-side fashion.

EXHIBIT A

Features and Benefits

The large LCD display of the Cisco IP Phone 8800 Key Expansion Module allows for quick and easy identification of associated buttons. Using the settings menu of the IP Phone 8851, 8861, and 8865 models, you can adjust the brightness of the individual KEM LCD according to your preference.

The primary function of the 8800 KEM is to provide additional keys for directory numbers, speed dial, or programmable feature keys to the IP Phone 8851, 8861, and 8865 models. These keys are illuminated, and when configured as directory numbers or shared-line keys they allow for easy identification of line status. The 8800 KEM is an ideal call-coverage tool. It provides features that are similar, but not intended to be directly comparable to those of traditional direct station selection/busy lamp field (DSS/BLF) modules; therefore, it is neither an operator nor an attendant console.

The two illuminated page buttons below the Cisco IP Phone 8800 KEM display allow you to shift between the first and second page of 18 buttons, providing access to all 36 keys.

Table 1 describes the features and benefits in more detail.

Table 1. Features and Benefits

Feature	Benefit
Illuminated Buttons	
Off (dark)	Line available
Green, steady	Line in use
Red, steady	Line in use by shared line
Amber, flashing	Line ringing
Illuminated Page Buttons	
Off (dark)	Page not in focus
Green, steady	Page in focus
Amber, flashing	Page not in focus, with one or more alerting or on-hold calls present on page
Hardware and Power-Saving Features	
Graphical display	The 4.3-inch graphical (TFT) color display provides 16-bit color depth and 480 x 272 effective pixel resolution, with backlight. The display also supports localization requiring double-byte Unicode encoding for fonts.
Articulation	You can articulate the display to match the same angle as the Cisco IP Phone 8851, 8861, and 8865 that it is connected to.
Directory-number and feature buttons	The module has 18 physical buttons (36 using page keys).
Page buttons	Use the two page buttons to access each page of 18 buttons and provide phone status.
Sleep or inactivity mode	When Cisco IP Phone 8851, 8861, and 8865 models are in power-saving sleep or inactivity mode, the Cisco IP Phone 8800 KEM is also in sleep or inactivity mode. Pressing any button on the key expansion module causes the display to awaken. The system administrator configures the inactivity period.

<u>EXHIBIT A</u>

Product Specifications

Table 2 describes the hardware product specifications of the Cisco IP Phone 8800 Key Expansion Module.

Table 2. Product Specifications

Feature	Specifications
Physical dimensions (H x W x D)	9.02 x 5.15 x 1.58 in. (229.14 x 130.78 x 40.2 mm)
Weight	1.08 lb (489g)
Power	48 VDC, 117 mA maximum
Operating temperature	32 to 104°F (0 to 40°C)
Relative humidity	10 to 95%
Storage temperature	12 to 140°F (-10 to 60°C)
Approvals and compliance	http://www.cisco.com/en/US/docs/voice_ip_comm/cuipph/all_models/regulatory_compliance/english/install/guide/iphrcsi3.html

System Requirements

Table 3 lists the system requirements for the 8800 KEM.

Table 3. System Requirements

Phone Firmware/Call Control Server	Release
Cisco IP Phone 8800 firmware	10.2(2) and later
Call-control compatibility	Cisco Unified Communications Manager Version 8.5(1) and later; and Cisco Unified Survivable Remote Site Telephony (SRST) 8.0 (with Cisco IOS® Software Release 15.1(1)T) and later

Power Requirements

The Cisco IP Phone 8800 Key Expansion Module doesn't have its own local power supply; it gets power from the attached phones. For more power-supply details, please refer to Table 4.

Table 4. Power-Supply Compatibility Table

Configuration	802.3af Power over Ethernet (PoE)	802.3at PoE	Cisco IP Phone Power Cube 4
8851 + KEM x 1	Yes	Yes	Yes
8851 + KEM x 2	No	No, (Exception - See Note Below)***	Yes
8861 + KEM x 1	No	Yes	Yes
8861 + KEM x 2	No	Yes*	Yes
8861 + KEM x 3	No	Yes*	Yes
8865 + KEM x 1	No	Yes	Yes
8865 + KEM x 2	No	Yes**	Yes
8865 + KEM x 3	No	Yes**	Yes

* **Note:** The fast-charging feature on the back USB does not work when **more than one** KEM is attached to a Cisco IP Phone 8861 using 802.3at PoE.

** **Note:** The fast-charging feature on the back USB doesn't work when **more than one** KEM is attached to a Cisco IP Phone 8861 unless Cisco Universal PoE (UPoE) is used.

*** **Note:** 8851 with KEM x 2 will work on 802.3at PoE only with v08 or later hardware. You can find the phone version information on the lower back of the phone located within the TAN and PID label. Version information is also located on the individual phone packaging.

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Ordering Information

To place an order, visit the Cisco Ordering Home Page and refer to Tables 5 and 6.

Table 5.   Ordering Information

Product Name	Part Number
Cisco IP Phone 8800 Key Expansion Module	CP-BEKEM=
Cisco Unified IP Phone Power Cube 4	CP-PWR-CUBE-4=
Cisco Unified IP Phone Power Country Cord	CP-PWR-CORD-xx=
Cisco IP Phone 8800 Wall Mount Kit for Single KEM*	CP-8800-BEKEM-WMK=

* Note: The Cisco IP Phone Wall-Mount Kit for a single KEM is a nonlocking wall-mount kit that supports the 8851 and 8861 audio phones only. This wall-mount kit does not support the 8865 video phone and a KEM because of the difference in the rear housing on the 8865.

Table 6.   Ordering Information - AC Country Power Cords

Country Cord	Part Number
Asia Pacific	CP-PWR-CORD-AP=
Argentina	CP-PWR-CORD-AR=
Australia	CP-PWR-CORD-AU=
European Community	CP-PWR-CORD-CE=
China	CP-PWR-CORD-CN=
Japan	CP-PWR-CORD-JP=
North America	CP-PWR-CORD-NA=
Switzerland	CP-PWR-CORD-SW=
United Kingdom	CP-PWR-CORD-UK=

Warranty

Cisco Unified IP Phones are covered by a Cisco standard 1-year replacement warranty.

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For More Information

For more information about the Cisco IP Phone 8800 Key Expansion Module, please visit http://www.cisco.com/go/ipphones/8800, or contact your local Cisco account representative.

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EXHIBIT A

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The bridge to possible

Data sheet
Cisco public

Cisco IP Phone 8851

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Contents

EXHIBIT A

The Cisco® IP Phone 8851 is a business-class collaboration endpoint that combines high-fidelity, reliable, secure, and scalable voice over IP communications with Cisco Intelligent Proximity for telephony integration for personal mobile devices to support small to large enterprise businesses.

With the Cisco IP Phone 8851, you can increase personal productivity through an engaging user experience that is both powerful and easy-to-use. The IP Phone 8851 combines an attractive new ergonomic design with wideband audio for crystal clear voice communications, "always-on" reliability, encrypted voice communications to enhance security, and access to a comprehensive suite of unified communication features from Cisco on-premises and hosted infrastructure platforms. It is also supported on third party hosted call control services.

In addition, Cisco Intelligent Proximity brings the worlds of desk and mobile together for you when you are using your mobile device at the desk for your work. You can move the audio path over to the Cisco IP Phone 8851 during active mobile calls to take advantage of its superior audio acoustics. An example would be to share a conversation with a colleague who you want to listen in. This capability gives you greater flexibility and a superior user experience when at your desk.

The IP Phone 8851 also comes standard with a USB port so you can charge your smartphone when at your desk, and stay connected when away from your desk.

The Cisco IP Phone 8851 offers five programmable line keys. You can configure keys to support either multiple directory numbers or calling features such as speed dial. You can also boost productivity by handling multiple calls for each directory number using the multicall-per-line feature. Fixed-function keys give you one-touch access to applications, messaging, directory, as well as often-used calling features such as hold/resume, transfer, and conference. A five-way navigation cluster helps you transition through menus more easily. Backlit acoustic keys provide flexibility for audio path selection and switching.

Additionally, Cisco has adopted circular design principles in its products by pioneering the use of post-consumer recycled plastic. The 8851 is one of the models that now reduces the use of natural resources while closing the loop with its own electronic waste. Learn more about what this means by visiting the Cisco's Circular Economy website.

<u>EXHIBIT A</u>

Other key features of the phone follow:

- The Cisco IP Phone 8851 offers a 5-in. high-resolution (800 x 480) widescreen VGA backlit color display. Localized language support, including right-to-left on-screen text, meets the needs of global users.

- The phone supports a built-in Gigabit Ethernet switch for your PC connection.

- Support for Cisco EnergyWise™ technology makes the Cisco IP Phone 8851 more energy-efficient and ecofriendly; the phone is qualified by the Energy Star organization.

- An optional wall-mount kit is orderable as a spare part for customers seeking this capability.

- Up to two optional IP Phone 8800 Key Expansion Modules with up to 56 additional line/feature keys are supported.

- Two color options (charcoal and white) are available.

Features and benefits

Table 1 lists features and benefits of the Cisco IP Phone 8851.

Table 1.   Features and benefits of Cisco IP Phone 8851

Features	Benefits
Hardware Features	
Ergonomic design	○ The phone offers an easy-to-use interface and provides a traditional telephony-like user experience.
Graphical display	○ The 800 × 480, 24-bit color, 5-in. WVGA display provides scrollable access to calling features and text-based XML applications.
Handset	○ The handset is a standard wideband-capable audio handset (connects through an RJ-9 port).
	○ The standard coiled cord has a custom end for concealed cable routing beneath the phone (cord length is approximately 21 in. [55 cm] coiled and up to 72 in. (183 cm) extended).
	○ The handset is Hearing Aid-Compatible (HAC) and meets Federal Communications Commission (FCC) loudness requirements for the Americans with Disabilities Act (ADA). You can achieve Section 508 loudness requirements by using industry-standard inline handset amplifiers such as Walker Equipment W-10 or CE-100 amplifiers. The dial pad is also ADA-compliant.
Speaker phone	○ A full-duplex speakerphone gives you flexibility in placing and receiving calls with hands free. For added security, the audible Dual Tone Multifrequency (DTMF) tones are masked when the speakerphone mode is used.
Analog headset	○ The analog headset jack is a standard wideband-capable RJ-9 audio port.
AUX port	○ You can use an auxiliary port to support electronic hookswitch control with a third-party headset connected to it.
USB	○ A side USB port enhances the usability of call handling by enabling wired or wireless headsets, as well as provides up to 500-mA power output at 5V or 2.5W for smartphone charging.
Ethernet switch	○ An internal 2-port Cisco Ethernet switch allows for a direct connection to a 10/100/1000BASE-T Ethernet network (IEEE 802.3i/802.3u/802.3ab) through a RJ-45 interface with single LAN connectivity for both the phone and a co-located PC.
	○ The system administrator can designate separate VLANs (IEEE 802.1Q) for the PC and phone, providing improved security and reliability of voice and data traffic.

EXHIBIT A

Features	Benefits
Bluetooth	• Bluetooth 3.0 Enhanced Data Rate (EDR) Class 1 technology (up to 66-ft [20m] range) is supported. • Hands-Free Profile (HFP) is supported for untethered headset connections and voice communications. • Phone Book Access Profile (PBAP) is supported for phone book object exchange between devices.

Keys	• The phone has the following keys:
	  • Line keys
	  • Soft keys
	  • Back and release keys
	  • Four-way navigation and select keys
	  • Hold/Resume, Transfer, and Conference keys
	  • Messaging, Application, and Directory keys
	  • Standard keypad
	  • Volume-control toggle key
	  • Speakerphone, headset, and mute keys

Backlit indicator	• The phone supports backlit indicators for the audio path keys (handset, headset, and speakerphone), select key, line keys, and message waiting.
Replaceable bezel	• The phone includes a black bezel; an optional silver bezel is also orderable separately.
Dual-position foot stand	• The display is easy-to-view and the buttons and keys are easy-to-use. The two-position foot stand supports viewing angles of 35 and 50 degrees; you can remove the foot stand for wall mounting, with mounting holes located on the base of the phone.
Wall-mountable	• You can install the phone on a wall using an optional wall-mount kit.
Key expansion module (KEM)	• The phone supports up to two KEMs to expand from 5 or 10 line buttons to 61 or 66 line buttons. You have the convenience of many speed dials or programmable features, or the necessity of following the activity of many lines.
Physical security	• The phone is compatible with the Kensington Security Slot (K-Slot) antitheft system.
Power Features	
IEEE Power over Ethernet (PoE)	• IEEE Power over Ethernet class 3 for hardware version prior to V08, class 4 for hardware version V08 and above. In PoE class 3 case, one KEM can be attached and powered up through PoE together with the host 8851 phone, in PoE class 4 case, two KEMs can be attached and powered up through PoE together with the host 8851 phone. • The phone is compatible with both IEEE 802.3af and 802.3at switch blades and supports both Cisco Discovery Protocol and Link Layer Discovery Protocol - Power over Ethernet (LLDP-PoE).
Cisco IP Phone Power Cube 4	• This optional power cube is used as an AC-to-DC (48V) power supply for non-PoE deployments. Use of the power cube 4 also requires the use of one of the corresponding AC country cords.
Call-Control Support	
Cisco Unified Communications Manager	• 8.5.1 (Non-secured mode Only) • 8.6.2 • 9.1.2 • 10.5.2 • 11.0 and later

EXHIBIT A

Features	Details
Cisco Unified Communications Manager Express (Unified CME)	○ 10.0 and later through fast track
Cisco Business Edition 6000 (BE 6000)	○ 8.6.2 ○ 9.1.2 ○ 10.5.2 ○ 11.0 and later
Cisco Hosted Collaboration Solution (HCS)	○ 8.6.2 and later (using supported UCM versions above)

Licensing

The Cisco IP Phone 8851 requires an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

Product sustainability

Refer to the CSR/Social Responsibility section for more information on Cisco's environmental sustainability policies and initiatives.

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
	Certification and compliance	Table 2. Features and specifications of Cisco IP Phone 8861
	Information on product takeback and resuse program	Cisco Takeback and Reuse Program
Power	Cisco EnergyWise	Key Features
	Energy Star	Key Features Energy Star website
	Power Features	Table 1. Features and benefits

EXHIBIT A

Sustainability Topic		Reference
Material	Product packaging weight and materials	Contact: environment@cisco.com
	Physical dimensions and Weight	Table 2. Features and specifications of Cisco IP Phone 8861
	Post-consumer recycled plastic	Circular design principles

Product specifications

Table 2 lists the features and specifications of the Cisco IP Phone 8851.

Table 2.   Features and specifications

Features	Specifications
Audio codec support	○ G.711 a-law and mu-law, G.722, G.729a, Internet Low Bitrate Codec (iLBC), and Internet Speech Audio Codec (iSAC)
Key call features support	○ + Dialing ○ Abbreviated dialing ○ Adjustable ring tones and volume levels ○ Adjustable display brightness ○ Agent greeting ○ Auto-answer ○ Auto-detection of headset ○ cBarge ○ Busy Lamp Field (BLF) ○ Busy Lamp Field (BLF) Pickup ○ Busy Lamp Field (BLF) speed dial ○ Callback ○ Call forward ○ Call forward notification ○ Call filter ○ Call history lists ○ Call park ○ Call pickup ○ Call timer ○ Call waiting ○ Call chaperone ○ Caller ID ○ Corporate directory ○ Conference, including traditional Join feature ○ Cross Cluster Extension Mobility (EMCC) ○ Direct transfer ○ Extension mobility ○ Fast-dial service ○ Forced access codes and client matter codes ○ Group call pickup

EXHIBIT A

Features	Specifications
	• Hold
	• Intercom
	• Immediate divert
	• Malicious-caller ID
	• Message-waiting indicator (MWI)
	• Meet-me conference
	• Mobility
	• Music on hold (MoH)
	• Mute
	• Network profiles (automatic)
	• On- and off-network distinctive ringing
	• Personal directory
	• PickUp
	• Predialing before sending
	• Privacy
	• Private Line Automated Ringdown (PLAR)
	• Redial
	• Ring tone per line appearance
	• Service Uniform Resource Locator (URL)
	• Shared line
	• Silent monitoring and recording
	• Speed dial
	• Time and date display
	• Transfer
	• Uniform Resource Identifier (URI) dialing
	• Visual voice mail
	• Voice mail
	• Whisper coaching
Electronic hookswitch	• You can control the hookswitch electronically with a third-party headset connected to either the USB port or auxiliary port, or directly paired with the phone through bluetooth.
Cisco Intelligent Proximity	• Audio path moving sends audio through the IP Phone 8851 for a mobile device-connected call.
	• Call history synchronization allows you to view placed and missed calls of your mobile device from the IP Phone 8851.
	• Contact synchronization allows you to synchronize the contact objects from your mobile device to your IP Phone 8851.
Quality-of-service (QoS) options	• The phone supports Cisco Discovery Protocol and 802.1Q/p standards, and can be configured with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID.

EXHIBIT A

Features	Specifications
Network features	• Session Initiation Protocol (SIP) for signaling
	• Session Description Protocol (SDP)
	• IPv4 and IPv6
	• User Datagram Protocol (UDP) (used only for Real-Time Transport Protocol [RTP] streams)
	• Dynamic Host Configuration Protocol (DHCP) client or static configuration
	• Gratuitous Address Resolution Protocol (GARP)
	• Domain Name System (DNS)
	• Trivial File Transfer Protocol (TFTP)
	• Secure Hypertext Transfer Protocol (HTTPS)
	• VLAN
	• Real-Time Transport Protocol (RTP)
	• Real-Time Control Protocol (RTCP)
	• Cisco Peer-to-Peer Distribution Protocol (PPDP)
	• Cisco Discovery Protocol
	• LLDP (including LLDP-MED)
	• Switch speed auto-negotiation
Security features	• Secure boot
	• Secure credential storage
	• Device authentication
	• Configuration file authentication and encryption
	• Image authentication
	• Random bit generation
	• Hardware cryptographic acceleration
	• Certificate Authority Proxy Function (CAPF)
	• Manufacturer-Installed Certificates (MIC)
	• Locally Significant Certificates (LSC)
	• Ethernet 802.1x supplicant options: Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) and Extensible Authentication Protocol-Transport Layer Security (EAP-TLS)
	• Signaling authentication and encryption using TLS
	• Media authentication and encryption using SRTP
	• HTTPS for client and server
	• Secure Shell (SSH) Protocol server
	• Secure Sockets Later (SSL)-based VPN client
Physical dimensions (H × W × D)	• 9.02 x 10.13 x 1.57 in. (229.1 x 257.34 x 40 mm) (excluding foot stand)
Weight (with handset)	• 2.62 lb (1.19 kg)
Phone-casing composition	• Polycarbonate acrylonitrile butadiene styrene (ABS) textured plastic; Cosmetic class A
Operational temperature	• 32 to 104°F (0 to 40°C)
Nonoperational temperature shock	• 14 to 140°F (-10 to 60°C)

EXHIBIT A

Features	Specifications
Humidity	○ Operating 10 to 90%, noncondensing ○ Non-operating 10 to 95%, noncondensing
Language support	○ Arabic (Arabic Area) ○ Bulgarian (Bulgaria) ○ Catalan (Spain) ○ Chinese (China) ○ Chinese (Hong Kong) ○ Chinese (Taiwan) ○ Croatian (Croatia) ○ Czech (Czech Republic) ○ Danish (Denmark) ○ Dutch (Netherlands) ○ English (United Kingdom) ○ Estonian (Estonia) ○ French (France) ○ French (Canada) ○ Finnish (Finland) ○ German (Germany) ○ Greek (Greece) ○ Hebrew (Israel) ○ Hungarian (Hungary) ○ Italian (Italy) ○ Japanese (Japan) ○ Latvian (Latvia) ○ Lithuanian (Lithuania) ○ Korean (Korea Republic) ○ Norwegian (Norway) ○ Polish (Poland) ○ Portuguese (Portugal) ○ Portuguese (Brazil) ○ Romanian (Romania) ○ Russian (Russian Federation) ○ Spanish (Columbia) ○ Spanish (Spain) ○ Slovak (Slovakia) ○ Swedish (Sweden) ○ Serbian (Republic of Serbia) ○ Serbian (Republic of Montenegro) ○ Slovenian (Slovenia) ○ Thai (Thailand) ○ Turkish (Turkey)

EXHIBIT A

Features	Specifications

Certification and compliance	• Regulatory compliance
	  ◦ CE Markings per directives 2004/108/EC and 2006/95/EC
	• Safety
	  ◦ UL 60950 Second Edition
	  ◦ CAN/CSA-C22.2 No. 60950 Second Edition
	  ◦ EN 60950 Second Edition (including A11 & A12)
	  ◦ IEC 60950 Second Edition (including A11 & A12)
	  ◦ AS/NZS 60950
	  ◦ GB4943
	• EMC – Emissions
	  ◦ 47CFR Part 15 (CFR 47) Class B
	  ◦ AS/NZS CISPR22 Class B
	  ◦ CISPR22: 2005 w/Amendment 1: 2005 Class B
	  ◦ EN55022: 2006 w/Amendment 1: 2007 Class B
	  ◦ ICES003 Class B
	  ◦ VCCI Class B
	  ◦ EN61000-3-2
	  ◦ EN61000-3-3
	  ◦ KN22 Class B
	• EMC – Immunity
	  ◦ EN55024
	  ◦ CISPR24
	  ◦ EN60601-1-2
	  ◦ KN24
	  ◦ Armadillo Light
	• Telecom
	  ◦ FCC Part 68 HAC
	  ◦ CS-03-HAC
	  ◦ AS/ACIF S004
	  ◦ AS/ACIF S040
	  ◦ NZ PTC 220
	  ◦ Industry Standards: TIA 810 and TIA 920
	  ◦ Industry Standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at
	  ◦ Korea (RRA Public Notification 2010-36, Nov 01, 2010)
	  ◦ Korea (RRA Announce 2011-2, Feb 28, 2011)
	• Radio
	  ◦ FCC Part 2.1093 (BT RF Exposure TR)
	  ◦ RSS-102 (BT RF Exposure TR)
	  ◦ RSS-210
	  ◦ EN 300.328
	  ◦ EN50385 (BT RF Exposure TR)
	  ◦ EN 301-489-1
	  ◦ EN 301-489-17
	  ◦ NCC LP0002
	  ◦ Korea (RRL No. 2006-128, RRL No. 2006-129)
	  ◦ Japan Bluetooth GFSK/EDR

EXHIBIT A

Ordering information

Table 3 gives ordering information for the phone and its accessories.

Table 3.   Ordering information

Product Number	Description
CP-8851-K9=	○ Cisco IP Phone 8851, Charcoal
CP-8851-W-K9=	○ Cisco IP Phone 8851, White
CP-DX-HS=	○ Spare Handset for Cisco IP Phone 7800, 8800, DX600 Series, Charcoal
CP-DX-CORD=	○ Spare Handset Cord for Cisco IP Phone 8800, DX600 Series, Charcoal
CP-DX-W-HS=	○ Spare Handset for Cisco IP Phone 7800, 8800, DX600 Series, White
CP-DX-W-CORD=	○ Spare Handset Cord for Cisco IP Phone 8800, DX600 Series, White
CP-8800-A-KEM=	○ Key Expansion Module for Cisco IP Phone 8800 Series
CP-8800-WMK=	○ Spare Wallmount Kit for Cisco IP Phone 8800 Series
CP-8800-A-KEM-WMK=	○ Spare Wallmount Kit for Cisco IP Phone 8800 Series with single KEM
CP-8800-FS=	○ Spare Foot stand for Cisco IP Phone 8800 Series
CP-8800-B-BEZEL=	○ Spare Black Bezel for Cisco IP Phone 8800 Series
CP-8800-S-BEZEL=	○ Spare Silver Bezel for Cisco IP Phone 8800 Series
CP-PWR-CUBE-4=	○ Cisco Power Cube 4
CP-PWR-CORD-AP=	○ Power Cord Asia Pacific
CP-PWR-CORD-AR=	○ Power Cord Argentina
CP-PWR-CORD-AU=	○ Power Cord Australia
CP-PWR-CORD-BZ=	○ Power cord for Brazil
CP-PWR-CORD-CE=	○ Power Cord European
CP-PWR-CORD-CN=	○ Power Cord China
CP-PWR-CORD-JP=	○ Power Cord Japan
CP-PWR-CORD-NA=	○ Power Cord North America
CP-PWR-CORD-SW=	○ Power Cord Switzerland
CP-PWR-CORD-UK=	○ Power Cord United Kingdom

EXHIBIT A

Warranty

The Cisco IP Phone 8851 phones are covered by a Cisco standard 1-year replacement warranty.

CSR/Social Responsibility

Information about Cisco's Environmental, Social and Governance (ESG) policies and initiatives can be found in Cisco's Corporate Social Responsibility (CSR) Report.

Cisco unified communications services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications Solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what's needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs. Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

More information

For additional details about the Cisco IP Phone 8800 Series, go to https://www.cisco.com/go/ipphones/8800.

EXHIBIT A

Cisco IP Phone 8865

Would you like to increase your personal productivity with an engaging experience that is powerful and easy-to-use? The business-class Cisco® IP Phone 8865 combines high-fidelity voice and entry to HD video communications with Cisco Intelligent Proximity for telephony integration with your personal mobile devices.

The IP Phone 8865 combines an attractive new ergonomic design with 720p HD video and wideband audio for crystal-clear voice communications, "always-on" reliability. Encrypted voice communications for enhanced security. And access to a comprehensive suite of unified communications features.

In addition, with Cisco Intelligent Proximity you can use your desk and mobile phones together when you are at your desk. During mobile calls you can move the audio path over to the 8865 for better acoustics. You then could share a conversation with a colleague who listens in. This capability gives you greater flexibility and a superior user experience when at your desk.

The 8865 comes standard with two USB ports so you can charge your personal mobile devices when at your desk and stay connected when away from your desk.

The IP Phone 8865 offers five programmable line keys. You can configure keys to support either multiple directory numbers or calling features such as speed dial. You can also boost productivity by handling multiple calls for each directory number using the multicall-per-line feature. Fixed-function keys give you one-touch access to applications, messaging, directory, as well as often-used calling features such as hold/resume, transfer, and conference. A five-way navigation cluster helps you transition through menus more easily. Backlit acoustic keys provide flexibility for audio path selection and switching.

Other key features of the phone include:

- The phone offers a 5-in. high-resolution (800 x 480) widescreen VGA backlit color display. Localized language support, including right-to-left on-screen text, meets the needs of global users.
- The phone offers a built-in Gigabit Ethernet switch for both network connection and your PC connection.
- The phone also supports campuses with 802.11a/b/g/n/ac wireless LAN (WLAN) enabled.
- An optional wall-mount kit is orderable as a spare part for customers who want this capability.

EXHIBIT A

Features and Benefits

Table 1 lists features and benefits of the Cisco IP Phone 8865.

Table 1.   Features and Benefits

Feature	Benefit
Hardware Features	
Ergonomic design	• The phone offers an easy-to-use interface and provides a traditional telephony-like user experience
Graphical display	• The 800 × 480, 24-bit color, 5-in. WVGA display provides scrollable access to calling features and text-based XML applications
Video	• 720p HD video (encode and decode) • H.264 and Cisco Application Visibility and Control (AVC)
Handset	• The handset is a standard wideband-capable audio handset (connects through an RJ-9 port) • The standard coiled cord has a custom end for concealed cable routing beneath the phone (cord length is approximately 21 in. [55 cm] coiled and up to 72 in. (183 cm) extended) • The handset is hearing aid-compatible (HAC) and meets Federal Communications Commission (FCC) loudness requirements for the Americans with Disabilities Act (ADA). You can achieve Section 508 loudness requirements by using industry-standard inline handset amplifiers such as Walker Equipment W-10 or CE-100 amplifiers. The dial pad is also ADA-compliant
Speakerphone	• The full-duplex speakerphone gives you flexibility in placing and receiving calls with hands free. For added security, the audible dual tone multifrequency (DTMF) tones are masked when the speakerphone mode is used.
Analog headset	• The analog headset jack is a standard wideband-capable RJ-9 audio port
AUX port	• You can use an auxiliary port to support electronic hookswitch control with a third-party headset connected to it
External audio ports	• The phone has a 3.5-mm stereo line in/out jack (for optional external headset, speakers, or headphones)
USB	• Two USB ports enhance the usability of call handling by enabling wired or wireless headsets, in addition to providing charging capability to mobile devices such as smartphones or tablets ◦ A side USB port provides up to 500mA power output at 5V or 2.5W ◦ A back USB (in yellow) port provides 500mA power output and is upgradable to support up to 2.1A power output at 5V or 10.5W
Ethernet switch	• An internal 2-port Cisco Ethernet switch allows for a direct connection to a 10/100/1000BASE-T Ethernet network (IEEE 802.3i/802.3u/802.3ab) through an RJ-45 interface with single LAN connectivity for both the phone and a co-located PC • The system administrator can designate separate VLANs (IEEE 802.1Q) for the PC and phone, providing improved security and reliability of voice and data traffic
Bluetooth	• The phone offers Bluetooth 4.1 LE, Enhanced Data Rate (EDR) Class 1 technology (up to 66-ft [20m] range) • Hands-Free Profile (HFP) is supported for untethered headset connections and voice communications • Phone Book Access Profile (PBAP) is supported for phone book object exchange between devices
Wi-Fi client	• As an alternative to wired Ethernet, the 8865 supports a Wi-Fi radio with integrated antenna enabling connectivity to a Wi-Fi access-point infrastructure, thereby saving on the labor costs of pulling Ethernet cables to every work location. Complete Wi-Fi specifications are included in Table 3 later in this document
Keys	• The phone has the following keys: ◦ Line keys ◦ Soft keys ◦ Back and release keys ◦ Four-way navigation and select keys ◦ Hold/Resume, Transfer, and Conference keys ◦ Messaging, Application, and Directory keys ◦ Standard keypad ◦ Volume-control toggle key ◦ Speakerphone, Headset, and Mute keys
Backlit indicator	• The phone supports backlit indicators for the audio path keys (Handset, Headset, and Speakerphone), select key, line keys, and message waiting
Replaceable bezel	• The phone includes a black bezel; an optional silver bezel is also orderable separately

EXHIBIT A

Features	Benefits
Dual-position foot stand	• The display is easy-to-view and the buttons and keys are easy-to-use. The two-position foot stand supports viewing angles of 35 and 50 degrees; you can remove the foot stand for wall mounting, with mounting holes located on the base of the phone
Wall-mountable	• You can install the phone on a wall using an optional wall-mount kit (orderable separately)
Key expansion module (KEM)	• The phone supports up to three KEMs to expand from 5- to 113-line buttons. You have the convenience of many speed dials or programmable features
Physical security	• The phone is compatible with the Kensington Security Slot (K-Slot) antitheft system
Power Features	
IEEE Power over Ethernet (PoE)	• IEEE Power over Ethernet class 4 is supported. The phone is compatible with IEEE 802.3af, 802.3at and UPOE switch blades and supports both Cisco Discovery Protocol and Link Layer Discovery Protocol - Power over Ethernet (LLDP-PoE)
Cisco IP Phone Power Cube 4	• This optional power cube is used as an AC-to-DC (48V) power supply for non-PoE deployments. Use of the power cube 4 also requires the use of one of the corresponding AC country cords
Call-Control Support	
Cisco Unified Communications Manager	• 8.5.1 (non-secured mode only) • 8.6.2 • 9.1.2 • 10.5.2 • 11.0 and later
Cisco Unified Communications Manager Express (Unified CME)	• Planned to be supported in 11.5
Cisco Business Edition 6000 (BE 6000)	• 8.6.2 • 9.1.2 • 10.5.2 • 11.0 and later
Cisco Hosted Collaboration Solution (HCS)	• 8.6.2 and later (using supported Cisco Unified UCM versions listed previously)

Licensing

The Cisco IP Phone 8865 requires an Enhanced User Connect License (UCL) in order to connect to Cisco Unified Communications Manager.

Product Specifications

Table 2 lists the features and specifications of the IP Phone 8865.

Table 2. Features and Specifications of Cisco IP Phone 8865

Features	Specifications
Audio codec support	• G.711 a-law and mu-law, G.722, G.729a, Internet Low Bitrate Codec (iLBC), and Internet Speech Audio Codec (iSAC)
Key call features support	• + Dialing • Abbreviated dialing • Adjustable ring tones and volume levels • Adjustable display brightness • Agent greeting • Application launch pad • Auto-answer • Auto-detection of headset • cBarge • Busy Lamp Field (BLF) • BLF Pickup • BLF speed dial

EXHIBIT A

Features	Specifications
	• Callback
	• Call forward
	• Call forward notification
	• Call filter
	• Call history lists
	• Call park
	• Call pickup
	• Call timer
	• Call waiting
	• Call chaperone
	• Caller ID
	• Corporate directory
	• Conference, including traditional Join feature
	• Cross Cluster Extension Mobility (EMCC)
	• Direct transfer
	• Extension mobility
	• Fast-dial service
	• Forced access codes and client matter codes
	• Group call pickup
	• Hold
	• Intercom
	• Immediate divert
	• Malicious-caller ID
	• Message-waiting indicator (MWI)
	• Meet-me conference
	• Mobility
	• Music on hold (MoH)
	• Mute
	• Network profiles (automatic)
	• On- and off-network distinctive ringing
	• Personal directory
	• PickUp
	• Predialing before sending
	• Privacy
	• Private Line Automated Ringdown (PLAR)
	• Redial
	• Ring tone per line appearance
	• Service URL
	• Shared line
	• Silent monitoring and recording
	• Speed dial
	• Time and date display
	• Transfer
	• Uniform Resource Identifier (URI) dialing
	• Visual Voicemail
	• Voicemail
	• Whisper coaching
Mobility and remote access	You can deploy the phones remotely with the following two options: • You can have your phone remotely registered to the on-premises network through a built-in VPN client if the administrator has provisioned this VPN feature • You also can directly connect to the on-premises network without VPN through Cisco Expressway if you are provided with log-in credentials. Contact your system administrator
Electronic hookswitch	• You can control the hookswitch electronically with a third-party headset connected to either the USB or auxiliary port, or directly paired with the phone through Bluetooth

EXHIBIT A

Features	Specifications
Cisco Intelligent Proximity	• Audio path moving sends audio through the phone for a mobile device-connected call
	• Call-history synchronization allows you to view placed and missed calls of your mobile device from the 8865
	• Contact synchronization allows you to synchronize the contact objects from your mobile device to your 8865
Quality-of-service (QoS) options	• The phone supports Cisco Discovery Protocol and 802.1Q/p standards, and you can configure it with an 801.1Q VLAN header containing the VLAN ID overrides configured by the Admin VLAN ID
Network features	• Session Initiation Protocol (SIP) for signaling
	• Session Description Protocol (SDP)
	• IPv4 and IPv6
	• User Datagram Protocol (UDP) (used only for Real-Time Transport Protocol [RTP] streams)
	• Dynamic Host Configuration Protocol (DHCP) client or static configuration
	• Gratuitous Address Resolution Protocol (GARP)
	• Domain Name System (DNS)
	• Trivial File Transfer Protocol (TFTP)
	• Secure HTTP (HTTPS)
	• VLAN
	• Real-Time Transport Protocol (RTP)
	• Real-Time Control Protocol (RTCP)
	• Cisco Peer-to-Peer Distribution Protocol (PPDP)
	• Cisco Discovery Protocol
	• LLDP (including LLDP Media Endpoint Discovery [LLDP-MED])
	• Switch speed auto-negotiation
Security features	• Secure boot
	• Secure credential storage
	• Device authentication
	• Configuration file authentication and encryption
	• Image authentication
	• Random bit generation
	• Hardware cryptographic acceleration
	• Certificate Authority Proxy Function (CAPF)
	• Manufacturer-Installed Certificates (MIC)
	• Locally Significant Certificates (LSC)
	• Ethernet 802.1x supplicant options: Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) and Extensible Authentication Protocol-Transport Layer Security (EAP-TLS)
	• Signaling authentication and encryption using TLS
	• Media authentication and encryption using SRTP
	• HTTPS for client and server
	• Secure Shell (SSH) Protocol server
	• Secure Sockets Layer (SSL)-based VPN client
Physical dimensions (H × W × D)	• 9.01 x 10.13 x 3.87 in. (228.78 x 257.34 x 98.39 mm) (excluding foot stand)
Weight	• 2.97 lb (1.35 kg)
Phone-casing composition	• Polycarbonate acrylonitrile butadiene styrene (ABS) textured plastic; Cosmetic class A
Operating temperature	• 32 to 104°F (0 to 40°C)
Nonoperating temperature shock	• 14 to 140°F (-10 to 60°C)
Humidity	• Operating 10 to 90%, noncondensing
	• Nonoperating 10 to 95%, noncondensing

EXHIBIT A

Features	Specifications
Language support	- Arabic (Arabic Area) - Bulgarian (Bulgaria) - Catalan (Spain) - Chinese (China) - Chinese (Hong Kong) - Chinese (Taiwan) - Croatian (Croatia) - Czech (Czech Republic) - Danish (Denmark) - Dutch (Netherlands) - English (United Kingdom) - Estonian (Estonia) - French (Canada) - French (France) - Finnish (Finland) - German (Germany) - Greek (Greece) - Hebrew (Israel) - Hungarian (Hungary) - Italian (Italy) - Japanese (Japan) - Latvian (Latvia) - Lithuanian (Lithuania) - Korean (Korea Republic) - Norwegian (Norway) - Polish (Poland) - Portuguese (Portugal) - Portuguese (Brazil) - Romanian (Romania) - Russian (Russian Federation) - Spanish (Columbia) - Spanish (Spain) - Slovak (Slovakia) - Swedish (Sweden) - Serbian (Republic of Serbia) - Serbian (Republic of Montenegro) - Slovenian (Slovenia) - Thai (Thailand) - Turkish (Turkey)
Certification and compliance	- Regulatory compliance - CE Markings per directives 2004/108/EC and 2006/95/EC - Safety - UL 60950 Second Edition - CAN/CSA-C22.2 No. 60950 Second Edition - EN 60950 Second Edition (including A11 and A12) - IEC 60950 Second Edition (including A11 and A12) - AS/NZS 60950 - GB4943 - EMC - Emissions 47CFR Part 15 (CFR 47) Class B - AS/NZS CISPR22 Class B - CISPR22: 2005 w/Amendment 1: 2005 Class B - EN55022: 2006 w/Amendment 1: 2007 Class B - ICES003 Class B - VCCI Class B - EN61000-3-2 - EN61000-3-3 - KN22 Class B

EXHIBIT A

Features	Specifications
	• EMC - Immunity 　• EN55024 　• CISPR24 　• EN60601-1-2 　• KN24 　• Armadillo Light • Telecom 　• FCC Part 68 HAC 　• CS-03-HAC 　• AS/ACIF S004 　• AS/ACIF S040 　• NZ PTC 220 　• Industry Standards: TIA 810 and TIA 920 　• Industry Standards: IEEE 802.3 Ethernet, IEEE 802.3af and 802.3at 　• Korea (RRA Public Notification 2010-36, Nov. 1, 2010) 　• Korea (RRA Announce 2011-2, Feb. 28, 2011) • Radio 　• FCC Part 15.247 (CFR 47) 　• FCC Part 2.1093 (BT RF Exposure TR) 　• RSS-102 (BT RF Exposure TR) 　• RSS-210 　• EN 300.328 　• EN50385 (BT RF Exposure TR) 　• EN 301-489-1 　• EN 301-489-17 　• EN 301-893 　• NCC LP0002 　• Korea (RRL No. 2006-128, RRL No. 2006-129) • Japan Bluetooth GFSK/EDR

Table 3 gives the Wi-Fi features and specifications of the Cisco IP Phone 8865.

Table 3.   Wi-Fi Features and Specifications

Feature	Specifications
Protocols	IEEE 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac
Frequency bands and operating channels	• 2.412-2.472 GHz (channels 1-13) • 5.180-5.240 GHz (channels 36-48) • 5.260-5.320 GHz (channels 52-64) • 5.500-5.700 GHz (channels 100-140) • 5.745-5.825 GHz (channels 149-161) IEEE 802.11d is used to identify available channels.
Nonoverlapping channels	• 2.4 GHz (20-MHz channels): Up to 3 channels • 5 GHz (20-MHz channels): Up to 24 channels • 5 GHz (40-MHz channels): Up to 9 channels • 5 GHz (80-MHz channels): Up to 4 channels
Operating modes	• Auto (default), preference to strongest RSSI for 2.4 or 5 GHz • 2.4 GHz only • 5 GHz only
Data rates	• 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps • 802.11b: 1, 2, 5.5, and 11 Mbps • 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps • 802.11n: HT MCS 0, MCS 1, MCS 2, MCS 3, MCS 4, MCS 5, MCS 6, and MCS 7 • 802.11ac: VHT MCS 0, MCS1, MCS 2, MCS 3, MCS 4, MCS 5, MCS 6, MCS 7, MCS 8, and MCS 9 (MCS 9 available with VHT40 and VHT80 only)

EXHIBIT A

Feature	Specifications		
2.4-GHz receiver sensitivity	IEEE 802.11b: ○ 1 Mbps: -98 dBm ○ 2 Mbps: -96 dBm ○ 5.5 Mbps: -93 dBm ○ 11 Mbps: -91 dBm	IEEE 802.11g: ○ 6 Mbps: -95 dBm ○ 9 Mbps: -94 dBm ○ 12 Mbps: -93 dBm ○ 18 Mbps: -90 dBm ○ 24 Mbps: -87 dBm ○ 36 Mbps: -84 dBm ○ 48 Mbps: -79 dBm ○ 54 Mbps: -77 dBm	IEEE 802.11n HT20: ○ MCS 0: -95 dBm ○ MCS 1: -92 dBm ○ MCS 2: -90 dBm ○ MCS 3: -87 dBm ○ MCS 4: -83 dBm ○ MCS 5: -78 dBm ○ MCS 6: -77 dBm ○ MCS 7: -75 dBm
5-GHz receiver sensitivity	IEEE 802.11a: ○ 6 Mbps: -94 dBm ○ 9 Mbps: -93 dBm ○ 12 Mbps: -92 dBm ○ 18 Mbps: -89 dBm ○ 24 Mbps: -86 dBm ○ 36 Mbps: -83 dBm ○ 48 Mbps: -78 dBm ○ 54 Mbps: -76 dBm	IEEE 802.11n HT20: ○ MCS 0: -94 dBm ○ MCS 1: -91 dBm ○ MCS 2: -89 dBm ○ MCS 3: -86 dBm ○ MCS 4: -82 dBm ○ MCS 5: -77 dBm ○ MCS 6: -76 dBm ○ MCS 7: -74 dBm	IEEE 802.11n HT40: ○ MCS 0: -91 dBm ○ MCS 1: -88 dBm ○ MCS 2: -86 dBm ○ MCS 3: -83 dBm ○ MCS 4: -79 dBm ○ MCS 5: -75 dBm ○ MCS 6: -73 dBm ○ MCS 7: -72 dBm
	IEEE 802.11ac VHT20: ○ MCS 0: -93 dBm ○ MCS 1: -90 dBm ○ MCS 2: -87 dBm ○ MCS 3: -84 dBm ○ MCS 4: -81 dBm ○ MCS 5: -76 dBm ○ MCS 6: -75 dBm ○ MCS 7: -74 dBm ○ MCS 8: -70 dBm	IEEE 802.11ac VHT40: ○ MCS 0: -90 dBm ○ MCS 1: -87 dBm ○ MCS 2: -85 dBm ○ MCS 3: -82 dBm ○ MCS 4: -79 dBm ○ MCS 5: -73 dBm ○ MCS 6: -72 dBm ○ MCS 7: -72 dBm ○ MCS 8: -67dBm ○ MCS 9: -66 dBm	IEEE 802.11ac VHT80: ○ MCS 0: -87 dBm ○ MCS 1: -83 dBm ○ MCS 2: -81 dBm ○ MCS 3: -78 dBm ○ MCS 4: -75 dBm ○ MCS 5: -73 dBm ○ MCS 6: -68 dBm ○ MCS 7: -68 dBm ○ MCS 8: -64 dBm ○ MCS 9: -62 dBm
Transmitter output power	2.4 GHz: ○ 802.11b: Up to 17 dBm ○ 802.11g: Up to 16 dBm ○ 802.11n HT20: Up to 13 dBm	5 GHz: ○ 802.11a: Up to 16 dBm ○ 802.11n HT20: Up to 13 dBm ○ 802.11n HT40: Up to 13 dBm ○ 802.11ac VHT20: Up to 12 dBm ○ 802.11ac VHT40: Up to 12 dBm ○ 802.11ac VHT80: Up to 12 dBm	
Antenna	○ 2.4 GHz: 2.08-dBi peak gain ○ 5 GHz: 1.88-dBi peak gain		

Access-point support	○ Cisco Wireless Access Points
	  ○ Minimum: 7.0.240.0
	  ○ Recommended: 7.4.121.0, 7.6.110.0, or later
	○ Cisco Aironet Access Points in Autonomous Mode
	  ○ Minimum: 12.4(21a)JY
	  ○ Recommended: 12.4(25d)JA2 or later
	○ Cisco Meraki® access points		

Wireless security	Authentication: ○ Wi-Fi Protected Access (WPA) Versions 1 and 2 Personal and Enterprise ○ EAP-FAST ○ Protected Extensible Authentication Protocol - Microsoft Challenge Handshake Authentication Protocol Version 2 (PEAP-MSCHAPv2)	Encryption: ○ 40- and 128-bit static Wired Equivalent Privacy (WEP) ○ Temporal Key Integrity Protocol (TKIP) and Message Integrity Check (MIC) ○ Advanced Encryption Standard (AES)	

EXHIBIT A

Feature	Specifications
Fast secure roaming	• 802.11r (FT) • Cisco Centralized Key Management (CKM)
QoS	• IEEE 802.11e and Wi-Fi Multimedia (WMM) • Traffic Specification (TSPEC) • Traffic Classification (TCLAS) • Enhanced Distributed Channel Access (EDCA) • QoS Basic Service Set (QBSS)
Radar detection	Dynamic frequency selection (DFS) and transmit power control (TPC) according to IEEE 802.11h

Product Specifications

Table 4 gives ordering information for the phone and its accessories.

Table 4.   Ordering Information

Product Number	Description
CP-8865-K9=	Cisco IP Phone 8865, Charcoal
CP-8865-W-K9=	Cisco IP Phone 8865, White
CP-DX-HS=	Spare Handset for Cisco IP Phone 7800, 8800, DX600 Series, Charcoal
CP-DX-CORD=	Spare Handset Cord for Cisco IP Phone 8800, DX600 Series, Charcoal
CP-8800-V-KEM =	Key Expansion Module for Cisco IP Phone 8800 Series, Charcoal
CP-8800-VIDEO-WMK=	Spare Wallmount Kit for Cisco IP Phone 8800 Video Series
CP-8800-FS=	Spare Foot stand for Cisco IP Phone 8800 Series
CP-8800-B-VID-BEZEL=	Spare Black Bezel for Cisco IP Phone 8800 Video Series
CP-8800-S-VID-BEZEL=	Spare Silver Bezel for Cisco IP Phone 8800 Video Series
CP-PWR-CUBE-4	Cisco Power Cube 4
CP-PWR-CORD-AP=	Power Cord Asia Pacific
CP-PWR-CORD-AR=	Power Cord Argentina
CP-PWR-CORD-AU=	Power Cord Australia
CP-PWR-CORD-BZ=	Power cord for Brazil
CP-PWR-CORD-CE=	Power Cord European
CP-PWR-CORD-CN=	Power Cord China
CP-PWR-CORD-JP=	Power Cord Japan
CP-PWR-CORD-NA=	Power Cord North America
CP-PWR-CORD-SW=	Power Cord Switzerland
CP-PWR-CORD-UK=	Power Cord United Kingdom

Warranty

The Cisco IP Phone 8865 phones are covered by a Cisco standard 1-year replacement warranty.

Cisco Unified Communications Services

Cisco and our certified partners can help you set up a secure, dependable Cisco Unified Communications Solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Our unique lifecycle approach to services defines what's needed at each phase of the solution lifecycle. Customized planning and design services help you create a solution that meets your business needs.

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Award-winning technical support helps you boost your operational efficiency. Remote management services simplify day-to-day operations. And optimization services let you modify and improve your network solution when business needs change.

Cisco Capital

Flexible Payment Solutions to Help You Achieve Your Objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

More Information

For additional details about the Cisco IP Phone 8800 Series, please visit: https://www.cisco.com/go/ipphones/8800.

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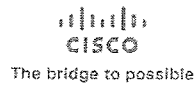
Cisco Unified Communications Manager Cloud (Cisco UCM Cloud)

March 2021

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EXHIBIT A

Get enterprise-grade cloud calling and team collaboration offered through a flexible subscription model. This solution provides your business with a smooth migration from on-premises deployments to the cloud at a pace that meets your business strategy.

Overview of Cisco UCM Cloud

The Cisco° Unified Communications Manager Cloud (Cisco UCM Cloud) is part of Cisco's Cloud Calling portfolio powered by Cisco's collaboration technology – Cisco Unified Communications Manager (Cisco UCM). The service offers voice, video, messaging, meeting, and mobility solutions with the features and benefits of Cisco IP phones, mobile devices, and desktop clients.

Cisco UCM Cloud is part of the Cisco Collaboration Flex Plan set of offers, which includes key Cisco commercial and administrative tools to facilitate the go-to-market and common subscription plans, including the Cisco Webex app and Webex° Meetings.

Cisco UCM Cloud is hosted and operated by Cisco in North America, Europe, the Asia Pacific region, and Japan.

Cisco UCM Cloud connectivity
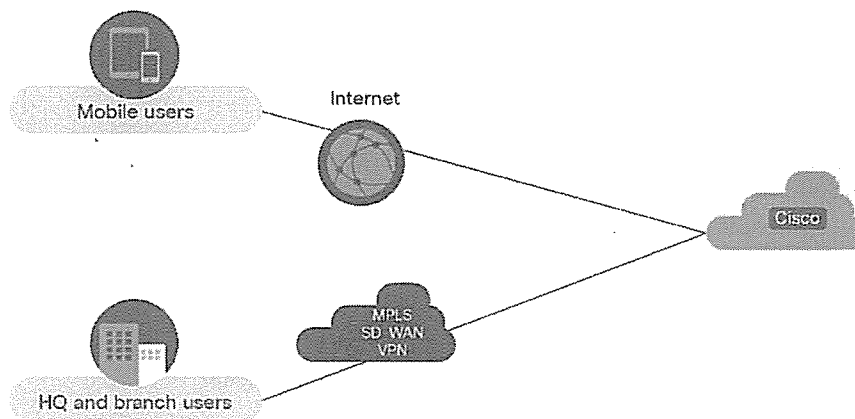
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Cisco UCM Cloud benefits

With Cisco UCM Cloud, customers enjoy:

- **No capital expenditures (CapEx).** No hardware, software, or data center is required—it is all handled by Cisco. Because you buy less equipment, you can use less power and enjoy the benefits of energy-efficient, green computing.

- **No lengthy deployment time.** There is no telephony equipment to install, so your collaboration service can be operational in a matter of weeks instead of months.

- **No additional staff requirement.** Limited expertise is required, resulting in lower support costs.

- **Predictable costs.** Cisco UCM Cloud is purchased as a Per-User Per-Month (PUPM) subscription.

- **No upgrades necessary.** Cisco handles any new features and upgrades without disrupting your business.

- **Less worries.** Cloud computing can transform the way you provide services, facilitating high agility, scalability, and profitability. You can rapidly respond to changes in the market without having to manage significant infrastructure.

Cisco UCM Cloud applications and services

Table 1 gives you information about Cisco UCM Cloud applications and services.

Table 1. UCM Cloud supported applications and services

Application / service	Description
Calling – voice and video	Cisco UCM is a core call-control application of Cisco UCM Cloud. It provides enterprise-class call control, session management, voice, video, messaging, mobility, and conferencing services in a way that is efficient, highly secure, scalable, and reliable.
Messaging – voicemail and integrated messaging	Cisco UCM allows users to access and manage messages from their email inbox, web browser, Cisco Jabber° client, Cisco endpoint, smartphone, or tablet. It supports voice commands, speech-to-text transcription, and video greetings.
Webex Meetings	Webex Meetings makes online meetings more effective with a powerful feature set for productive and efficient meetings. You can get more done, faster, and empower your workforce with online collaboration using Webex Meetings. Share documents, presentations, and applications with integrated audio and video anytime, on any mobile device or your own video device. It's simple to conduct regular meetings among geographically dispersed staff members. You can also hold engaging and creative sessions with external customers or internal teams. For more details, refer to <u>Webex Meetings</u> service.
Webex app	The Webex app is a business communications tool that combines important business capabilities in one simple interface to form a single experience. It is an app for continuous teamwork with video meetings, group messaging, file sharing, and white boarding. This is all done with the historical context of team and one-to-one interactions, including shared files and persistent messages. For more details, refer to <u>Webex</u> service.

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Application / service	Description
Instant messaging and presence	Instant messaging is an important communication option that provides personal and group chat capabilities so you can quickly connect with individuals and groups to conduct ongoing conversations. With a Jabber client, you can: • Click to begin an instant messaging (IM) session, initiate a phone or video call, and easily start a Webex Meeting session • Receive rich presence information to streamline workflows • Perform numerous functions, such as instant messaging, presence, click-to-call, voice, video, and visual voicemail
Mobility	Jabber and Webex provide a mobile experience that improves productivity, not only outside the office, but also in the office itself. Both UC client applications allow you to collaborate from anywhere across platforms, devices, and browsers.
Mobile and remote access, and over-the-top (OTT) access	Cisco UCM Cloud supports mobile and remote access (MRA) for user endpoints to securely connect to the service from outside a customer network without the need to establish a secure direct connection (e.g., VPN, etc.). Note: While Cisco UCM Cloud supports OTT access, its availability and usage must be evaluated on a country-by-country basis in order to ensure compliance with local laws and regulations.
Emergency call handling	Customers that require emergency call location identification can use the Cisco Emergency Responder compatible emergency call routing service. The emergency call routing service feature allows an administrator to define Emergency Location Identification Numbers (ELINs) at the device pool level, or device level, so that a device's location can be determined and identified at the public safety answering point (PSAP).

Collaboration phones and endpoints

Figure 1 shows a detailed list of all the endpoints supported by Cisco UCM Cloud.
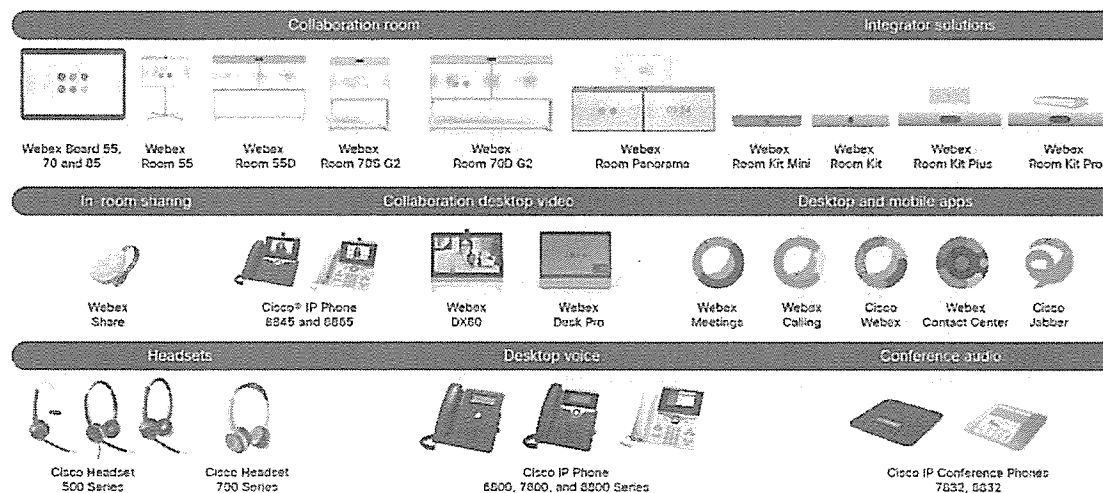
Figure 1.
Endpoints supported by Cisco UCM Cloud

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PSTN connectivity

Cisco UCM Cloud enables customers to connect their existing PSTN service to Cisco UCM Cloud using a local gateway or via a certified SIP trunk. PSTN can be partner-provided or customer-provided.

The Cloud Connected PSTN (CCP) program enables customers to quickly and effortlessly buy PSTN services from a list of authorized, pre-integrated CCP providers. With CCP, Cisco interconnects with select PSTN providers, enabling UCM Cloud customers to have economical and reliable PSTN directly from the cloud.

Using an existing PSTN service provider is also an option for UCM Cloud customers. Facilitated by the use of a local gateway, this option gives the customer the ability to buy UCM Cloud with PSTN service provided by virtually any carrier in the world. This also allows a customer that has an existing PSTN contract to migrate to UCM Cloud without having to buy out previous PSTN commitments.

Global availability

Cisco UCM Cloud offers carrier-grade reliability, availability, and security. The Cisco UCM Cloud platform is developed on a fault-tolerant architecture that is geo-redundant and is compliant with international data protection and privacy regulations. See Where is UCM Cloud Available for information about UCM Cloud availability.

Flex up on the cloud momentum

If your business needs a more intuitive way to work and a more predictable financial path to the cloud, talk to your Cisco representative about the Cisco Collaboration Flex Plan.

For additional information, visit cisco.com/go/collaborationflexplan.

Appendix

Cisco UCM Cloud calling features

Table 2 provides a subset of the calling features supported by Cisco UCM Cloud.

Table 2. Cisco UCM Cloud calling features

Feature	Description
Audio Calling	Make and receive audio calls to and from registered endpoints in the network (SIP only). Supported audio codecs: G.711a/μ, G.729a, etc.
Video Calling	Make and receive video calls to and from video-enabled registered endpoints within the same customer network. Supported video codecs: G.711, G.722, G.722.1, G.729, AAC-LD, Opus.
Direct Outward Dial (DOD)	Supports the ability for a registered endpoint to directly dial an outside number routed to the PSTN.
Direct-Inward-Dial (DID)	This feature enables callers from PSTN to dial directly into a registered endpoint using an E.164 number.
International Dialing	Make and receive international calls to and from any registered endpoint through the telephone network.

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Feature	Description
Call Preservation for Active Calls	Full call preservation for calls between registered endpoints on the customer's network in the event Cisco UCM Cloud becomes unreachable. No mid-call features will be available when the call is in "call preservation" mode. Any call involving media from Cisco UCM Cloud (like music-on-hold, announcements, etc.) will not be preserved if Cisco UCM Cloud is unreachable.
Barge	Barge allows a user to be added to a remotely active call that is on a shared line. The feature has a dependency on endpoint support for built-in-bridge.
Call Forward	Call Forward allows a user to configure an endpoint to forward calls to another phone. Following are some examples of the call forwarding types supported: ○ Call Forward All (CFA): Forwards all calls to a number ○ Call Forward Busy (CFB): Forwards calls when the line is in use ○ Call Forward No Answer (CFNA): Forwards calls when the phone is not answered after a configured duration is exceeded
Call Hold/Resume	Allows a user to place a call on hold by pressing the "hold" button on the endpoint. If Music-On-Hold (MOH) is configured, recorded media will be played while the remote user is on hold. Unicast MOH is only supported (no multi-cast support).
Call Park	Allows a user to place a call on hold so that can be retrieved by a different endpoint. An authorized configured endpoint can then dial the call park extension to retrieve the call.
Call Pickup	Allows a user to pick up (resume) a call that has been parked.
Group Call Pickup	Allows you to configure a set of users who have privileges to pick up "parked" calls.
Call Transfer	Redirect a connected call from your phone to another number.
Client Matter Codes (CMC)	Manage call access using authorization account codes.
Forced Authentication Codes (FAC)	Manage call access using a combination of authorization codes and authorization levels. The dialed FAC code must be equal to or greater than the authorization level that is specified for the route pattern for the call.
Do Not Disturb	Set the endpoint to not ring when called.
On-Hook Dialing	Dial a number while your endpoint is on hook (without hearing dial tone). Then go off hook by lifting the endpoint handset or by pressing the speakerphone button.
Off-Hook Dialing	You must first go off hook, and then dial a number to place a call.
Join Across Lines	Merge established calls on multiple lines to create a conference.
Fax/Modem over IP (Pass-through)	With fax pass-through support, modulated fax information is passed in-band over a voice speech path in an IP network. Customer premises gateways that support these protocols must be used.
Speed Dial	Speed dial entries can be configured and assigned to the speed dial buttons on the endpoint to quickly place calls.
Abbreviated Dial	Abbreviated dial settings are speed dial entries that are grouped together and associated with the abbreviated dialing button on the endpoint. When the abbreviated dial button is pressed, the endpoint displays the option to select an abbreviated entry to dial.
Auto Answer	Will cause the endpoint to automatically answer an incoming call without ringing or any user

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Feature	Description
	Interaction.
Calling Line ID	Displays the calling number for an incoming call during the alerting stage.
Calling Name ID	Displays the calling name associated with the calling number for an incoming call during the alerting stage.
Unassigned Directory Numbers	Allows a partner or customer to manage unassigned numbers. These are numbers that are no longer associated to an endpoint.
Directories	The directory feature allows a user to look up Cisco UCM Cloud-configured numbers on their endpoint.
Privacy	Enable or disable the capability of users with phones that share the same number to view call status and to barge into the call.
Extension Mobility	Enables users to temporarily access their endpoint settings, such as line appearances, services, and speed dials, from other endpoint within your system.
Toll Restriction	Ability to restrict endpoints from making long-distance or toll calls on a per-device basis.
Multiple Line Appearances	Allows an endpoint to be configured with multiple lines.
Calls per Line	Option to terminate multiple calls on the same number.
Hunt Groups	Configure a collection of telephone numbers to ring in a specific order based upon a ringing algorithm. Users can monitor their login status via a line key.
Shared/Bridged Line Appearances	Configure a single number across multiple endpoints. Calls to this number will ring all the endpoints that are configured with the shared number.
Location Awareness Service	Allows administrators to determine the physical location from which a phone connects to the company network. For wireless networks, administrators can view the wireless access point infrastructure and which mobile devices currently associate to those access points. For wired networks, administrators can view the Ethernet switch infrastructure and see which devices are currently connected to those switches.
Ad Hoc Conferencing	Create an audio conference call with up to two other parties without prior scheduling.
Single Number Reach (SNR)	Users can answer incoming calls on either their endpoint or mobile client.
Media Adaptation and Resilience	• Support for configuration options for User Datagram Protocol (UDP) port ranges and Differentiated-Services-Code-Point (DSCP) marking, enabling new strategies for better use of bandwidth across the network • Ability to configure the Quality-of-Service (QoS) setting through the Cisco Application Policy Infrastructure Controller - Enterprise Module Software-Defined Networking Controller (APIC-EM SDN) • Support for the variable-rate Opus audio codec for high quality and resiliency
Network Bandwidth Accounting	Call admission control.
Dialed Number Analyzer	This tool allows you to test a Cisco Unified Communications Manager dial plan configuration before deploying it. You can also use the tool to analyze dial plans after the dial plan is deployed.
Call Detail Records (CDR)	Access CDRs for all call usage-based data. Usage data can be accessed ad-hoc or on a

EXHIBIT A

Feature	Description
	scheduled basis: daily, weekly, or monthly.
Partner Troubleshooting Tool	Use this client-side application to troubleshoot and diagnose: • Device status • Device discovery • Cisco Computer Telephony Integration (CTI) applications • Call routing • Dial plan
IP Phone Support	Cisco IP 39xx, 68xx, 69xx, 78xx, 79xx, 88xx, 99xx, series endpoints. Third-party standard SIP endpoints.
Soft Phone Support	Cisco Jabber and the Cisco Webex client.
Video Endpoint Support	Cisco IX, TX, CTS, T, EX, DX, MX series endpoints.

Cisco UCM Cloud voice messaging features

Table 3 provides a sampling of the voice messaging features supported by the service.

Table 3. Cisco UCM Cloud voice messaging features

Feature	Description
Voice Messaging	Users can receive voice messages at their personal mailbox.
Voice Messages Access	Users can access new and saved voice messages using a touchtone or voice recognition conversation over the phone.
Multiple Personal Greetings	Record up to six personal greetings that can be configured to be played when a call is not answered.
After-Greeting Action	Call handlers can be configured to perform an action after the greeting: take messages, play a recorded announcement, or transfer the call to users.
Notifications	Users can be notified of incoming voice messages as soon as the message arrives in the user's mailbox. A notification message will be delivered to the configured phone number.
Distribution List	Voice messages can be sent to a group of voice message recipients.
Password and PIN Policy Options	Authentication rules govern user passwords, PINs, and account lockouts for all user accounts.
Call Restriction Tables	Call restriction tables can be used to help guard against toll fraud. Restriction tables can be used to control the phone numbers that can be used for transferring calls or message notifications.
Voice Message Aging Policies	Message aging policies ensure that the mailbox storing the customer's voice messages do not fill up.
Message Locator	Search for messages by another user, outside callers, or a specific number.
Message Sensitivity	Mark messages as regular or urgent. Configure if message notifications are sent when all new voice messages arrive, or limit notifications to only those marked as urgent.

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Feature	Description
Secure Messages	By setting message sensitivity as secure, users can control who can access a voice message and whether it can be redistributed to others.
Future Delivery	Deliver the message at the future date or time that you specify.
Return Receipt	Request a return receipt so that you are notified when the recipient opens the voice message you left them.
Live Recording	Record conversations while on a phone call. Recordings will be persisted in the user's mailbox store.
Live Reply	Users who are listening to messages by phone can reply to a message by calling the sender.
System Broadcast Messages	Recorded announcements can be sent to everyone in an organization.
IMAP Client Support	View voicemail messages from secure IMAP clients.
Message List on IP Phone	View voice message list on supported Cisco IP phone displays.

Cisco UCM Cloud instant messaging and presence

Table 4 provides a sampling of the instant messaging and presence features supported by the service.

Table 4.   Instant messaging and presence features

Feature	Description
Enterprise-Grade Instant Messaging	Secure, rich-text, one-on-one chat and group chat capabilities.
Group Chat Escalation	Add additional participants to a one-on-one chat session and convert to a group chat.
Standard and Custom Presence Status	Select a standard presence status or create a customized status for specific situations.
Do Not Disturb	Silence notifications to not be disturbed.
Privacy Policy	Privacy policies allow you to determine which users can see your availability status, and send you instant messages.
File Transfer	Directly perform a local file transfer within the context of one-on-one chat session.
Predictive Search	Look up contacts quickly. Predictive search offers you suggestions as you type in a search query and can index your Cisco Jabber contact list.
Desktop Share	Share the desktop during a one-on-one chat.
Integrated Voice and Video	Make and receive audio and video calls using the Jabber client. Mobile Remote Access phone control is not supported.
Visual Voice Message Access	View, play back, and delete voice messages from Jabber.
Message Archiving	Store IM records for future recovery and analysis to a customer on-premises database. The

<u>EXHIBIT A</u>

Feature	Description
	database is not provided, managed, or operated by Cisco.
Directory Integration	Source contacts from a customer's Lightweight Directory Access Protocol (LDAP) server.
Webex Integration	Cisco Webex calendar integration enables users to host or join Webex meetings from Jabber.
Multi-platform IM Client	Cisco Jabber is supported on Microsoft Windows, Mac OS X, Apple IOS, and Android platforms.

Mobile and remote access and Over-The-Top (OTT) access

Cisco UCM Cloud supports Mobile and Remote Access (MRA) for user endpoints to securely connect to the service from outside the customer network without having to establish a secure direct connection (e.g., VPN, etc.).

Note: While Cisco UCM Cloud supports OTT access, its availability and usage must be evaluated on a country by country basis in order to ensure compliance with local laws and regulations.

Table 5 provides a sampling of the mobile and remote access features supported by the service.

Table 5. MRA and OTT access features

Feature	Description
Mobile Voice Access	Voice calling is available when the user endpoint is not within the enterprise network.
Mobile Voice Message Access	Voice messaging capabilities are available when the user endpoint is not within the enterprise network.
Instant Messaging and Presence	Instant message chat capabilities and presence status are available when the user endpoint is not within the enterprise network.
Single Number Reach (SNR)	Users can answer incoming calls on their endpoint when not within the enterprise network.
Voice over Wi-Fi	Voice calling capabilities (make and receive) are available using supported endpoints over a Wi-Fi connection.
Call Preservation	SNR calls are anchored so that the call is preserved for a certain amount of time to allow it to be resumed from an IP desk endpoint in the event the Jabber client hangs up or exits.

Emergency call handling.

Table 6 provides a sampling of the emergency call handling features supported by the service.

Table 6.   Emergency call handling features

Feature	Description
Identification of Caller Location to PSAPs	Associate an ELIN to an endpoint. ELIN to location mapping is used to update the Automatic Location Information (ALI) database. When an endpoint makes an emergency call, the PSAP can determine the location based on the ELIN set in the call signaling. The partner must update the ALI database.
Emergency Call-back to ELINs	The ELIN-to-endpoint association is maintained for a specific duration, during which the PSAP can call back the endpoint that made the emergency call.
Emergency Call Alerting	Helps onsite security to identify and assist emergency callers immediately, and to direct fire, police, or ambulance services.

Administration interfaces

Table 7 provides a sampling of the administration features supported by the service.

Table 7.   Administration interface features

Feature	Description
Administration Portal	This secure web portal enables partners and customers to administer and configure system and end-user features.
Control Hub	Webex Control Hub is a cloud-based, intuitive, single-pane-of-glass management portal that provides reporting, analytics, and administrative capabilities for Webex services, including UCM Cloud.
Self-Care Portal	This secure web portal enables end users to administer their assigned services.
HTTPS for Secure Web Access	Partner- and customer-accessible administrative and self-care portals provide secure HTTPS access using TLS.
LDAP	Support for Lightweight Directory Access Protocol (LDAP) to synchronize with the Customer's LDAP directory.
	With this feature, end users are defined in the customer's directory and synchronized into the Unified Communications application.
	Currently supported LDAP directory repositories include:
	• Microsoft Active Directory (AD)
	• Microsoft Active Directory Application Mode (ADAM)
	• Active Directory Lightweight Directory Service (AD LDS)
	• Oracle Directory Server Enterprise Edition (DSEE)
	• OpenLDAP and other LDAPv3 type repositories
Single Sign-On	SAML-based Single Sign On (SSO) for accessible administrative and self-care portals. Single sign-on allows users to only authenticate once and be able to access multiple Cisco UCM Cloud portals without re-authentication.

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Security

Table 8 provides a sampling of the security features supported by the service.

Table 8.   Security features

Feature	Description
Security	• TLS 1.0, 1.1, or 1.2 support • SIP audio and video encryption support using secure RTP • Next-generation encryption support that includes Advanced Encryption Standard 256 (AES-256) Rivest-Shamir Adelman (RSA)- and Elliptic Curve Digital Signature Algorithm ECDSA-based cipher support for the Session Initiation Protocol/Secure Real-Time Transport Protocol (SIP/SRTP) interface • Minimum TLS version control that allows an organization to deploy stronger security and to comply with standards such as PCI DSS by preventing negotiation of a lower TLS version • Long-lived phone trust with ITL recovery certificate avoids device lock-out because of a trust break for scenarios such as host name change and other certificate regeneration • Support for secure connection between CTI applications (JTAPI/TSP) and CTIManager • Support for secure voicemail notification using https

Technical support services

Cisco offers technical support services covering the areas of problem resolution, customer success and adoption, and designated support management in four service tiers: Basic, Solution, Enhanced, and Premium. Basic Support is included with any Cisco Collaboration Flex Plan subscription at no additional cost for the duration of your subscription. For more information about Basic, Enhanced, and Premium Support, see the Software Support webpage. For more information about Solution Support, see the Solution Support webpage.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Table 9.   Cisco environmental sustainability

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

EXHIBIT A

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital° financing makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

Find a Cisco Cloud Collaboration partner from our online Partner Locator tool. Click on "Find a Partner." Once inside the "Collaboration Cloud Partner Locator," find "Cisco Offer Type" and select "UCM Cloud." Select your country in the "Countries that offer is available?" field. Click search and once the results display, scroll down to find available partners.

EXHIBIT B

Phone System Cellular Failover

During the review and evaluation of the proposals, Brunswick County Schools determined that the district could not purchase additional pots lines from Atlantic Telephone Membership Cooperative for this project since the organization is upgraded all existing POTS lines to digital. The failover request for the project had to not depend on digital connections to internet or between schools.

The top two scored vendors were asked to develop a new cellular failover plan for the proposal. Included as part of Exhibit B is the awarded plan for cellular failover capability. The submitted quote by the vendor was modified to represent the change in equipment necessary to implement this new scope of work. These changes nullify all previous failover proposals by the vendor.

EXHIBIT B

Cisco UCM Cloud: High Level Design

IntelePeer PSTN

MG21E

MX250

Main Office

Cisco/Meraki

Customer WAN

MX67

MG21E

Branch Locations

Primary SD WAN

Backup SD WAN

Customer Fiber WAN

IntelePeer SIP Trunk
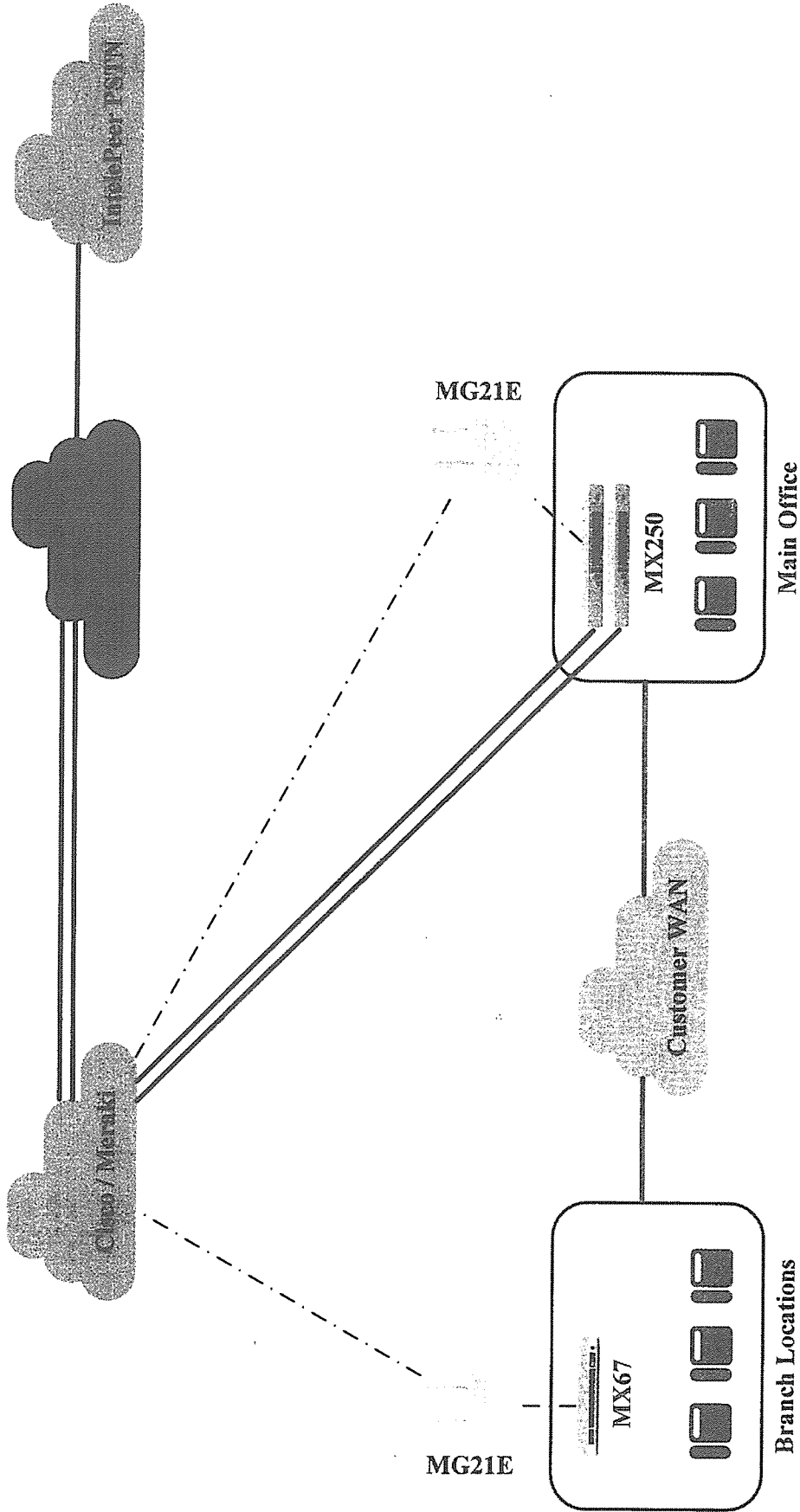
EXHIBIT B

Normal Scenario-1: Main Office Intra-Site Call Flow

MG21E

MX250

Main Office

MG21E

MX67

Branch Locations

IntelePeer PSTN

Cisco / Meraki

Customer WAN

Primary SD WAN

Backup SD WAN

Customer Fiber WAN

IntelePeer SIP Trunk

SIP Signaling

RTP Media
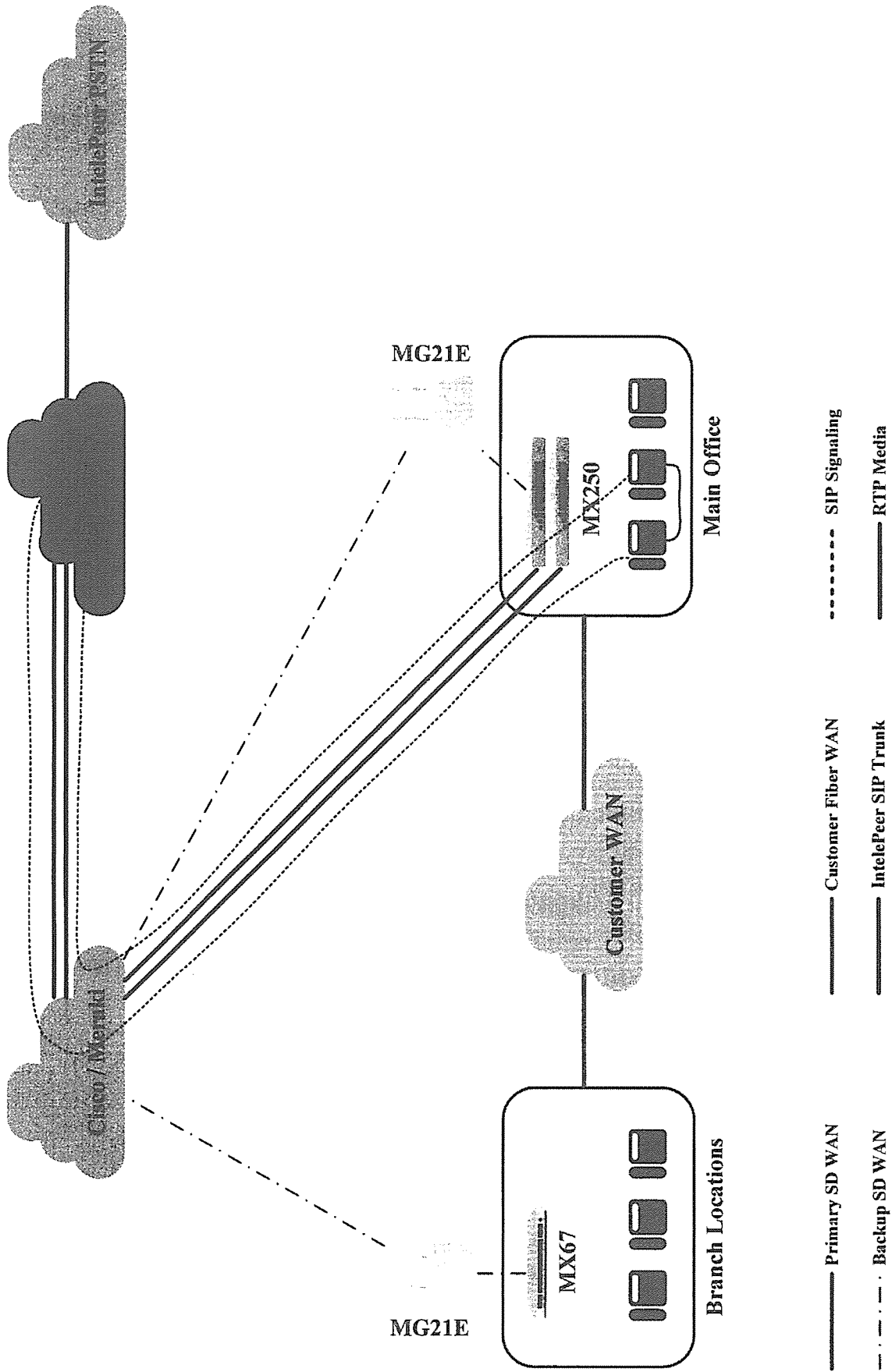
EXHIBIT B

Normal Scenario-2: Branch Office Intra-Site Call Flow

IntelePeer PSTN

MG21E

MX250

Main Office

Cisco / IntelePeer

Customer WAN

MX67

MG21E

Branch Locations

———— Customer Fiber WAN

———— IntelePeer SIP Trunk

·········· SIP Signaling

———— RTP Media

———— Primary SD WAN

— · — · Backup SD WAN
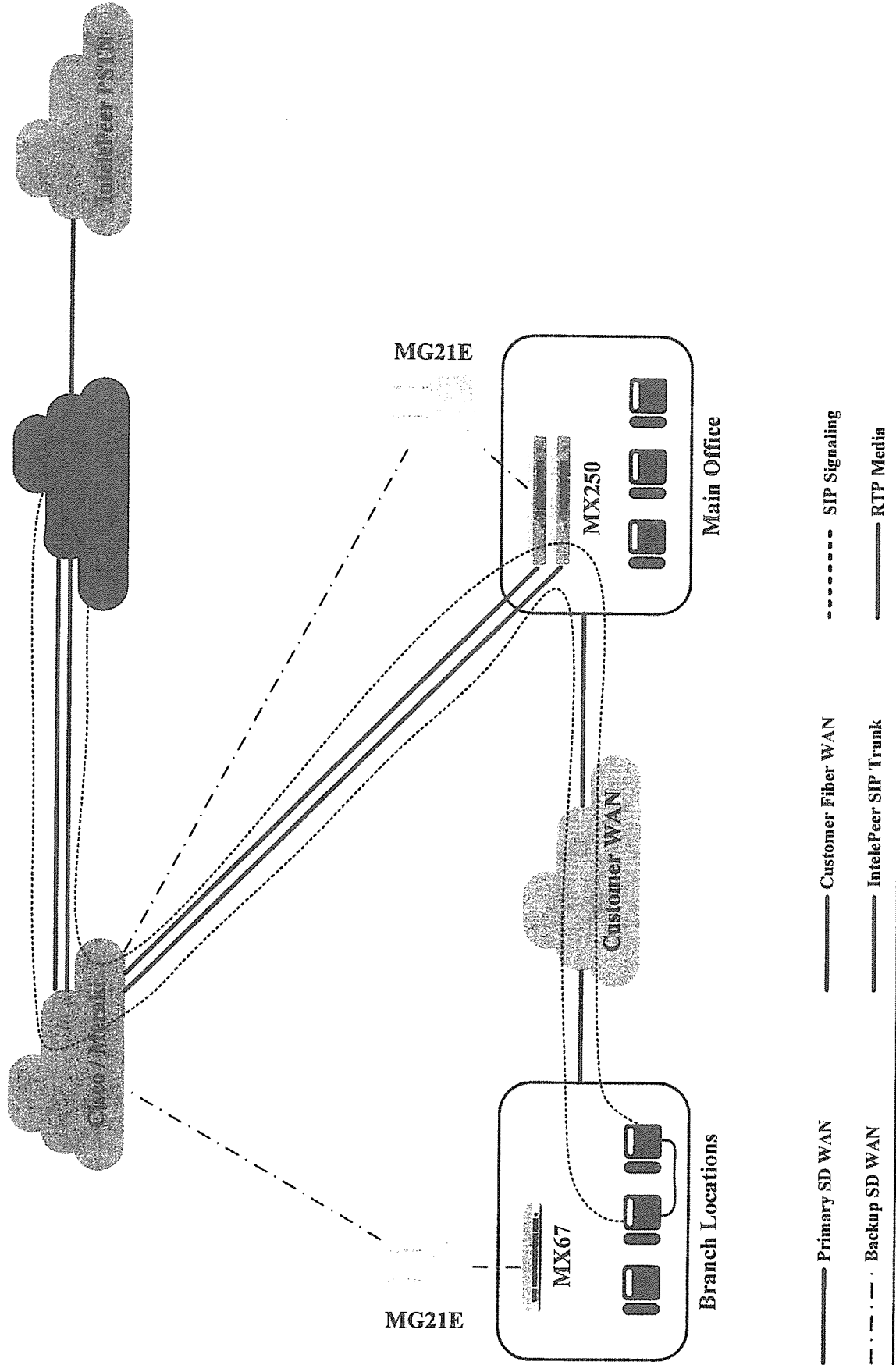
EXHIBIT 6

Normal Scenario-3: Main and Branch Office Inter-Site Call Flow
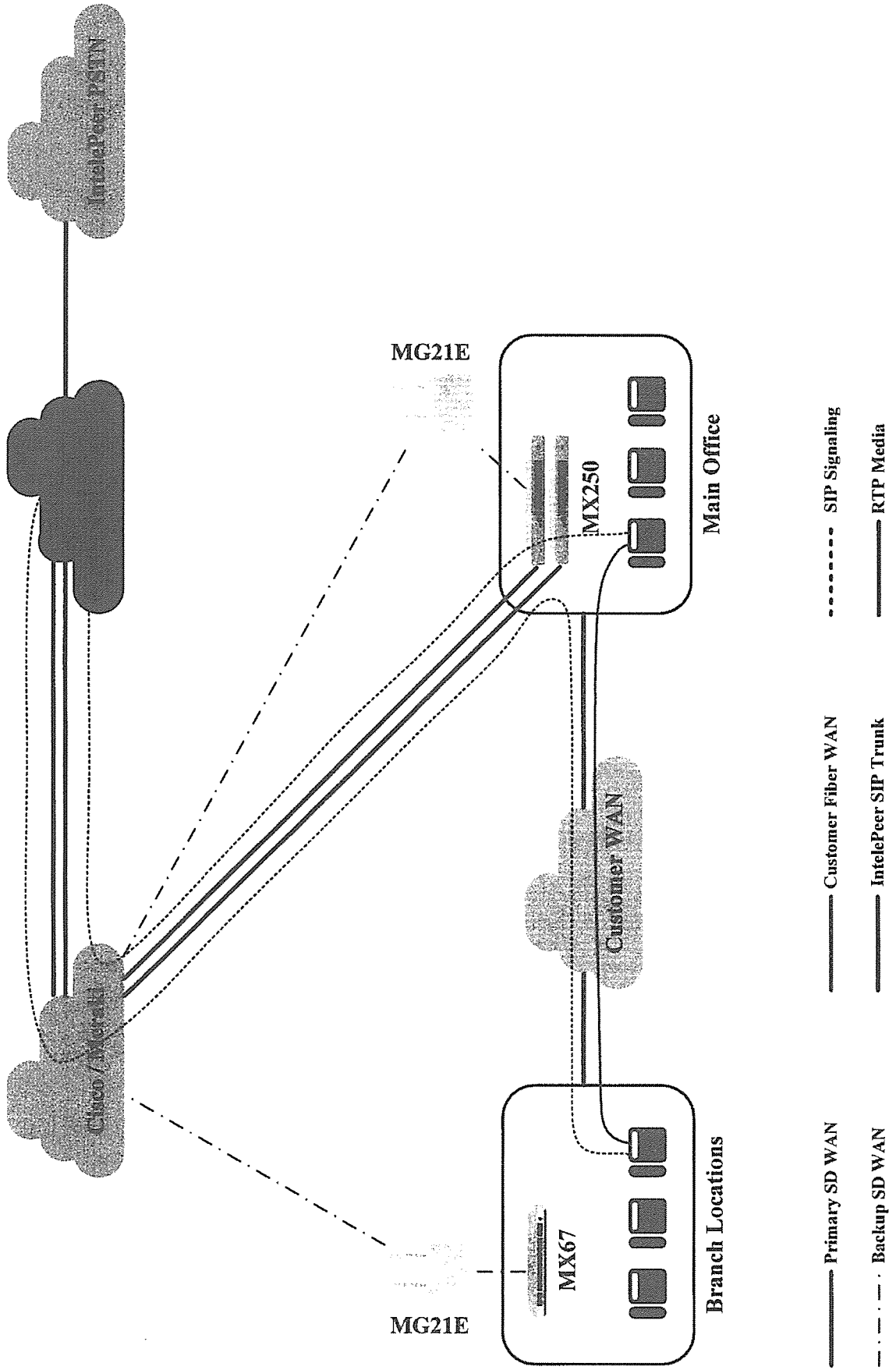
EXHIBIT 6

Normal Scenario-4: Main Office PSTN Call Flow

IntelePeer PSTN

MG21E

MX250

Main Office

Cisco / Webex

Customer WAN

MX67

MG21E

Branch Locations

———— Customer Fiber WAN

———— IntelePeer SIP Trunk

———— Primary SD WAN

— · — Backup SD WAN

········· SIP Signaling

———— RTP Media
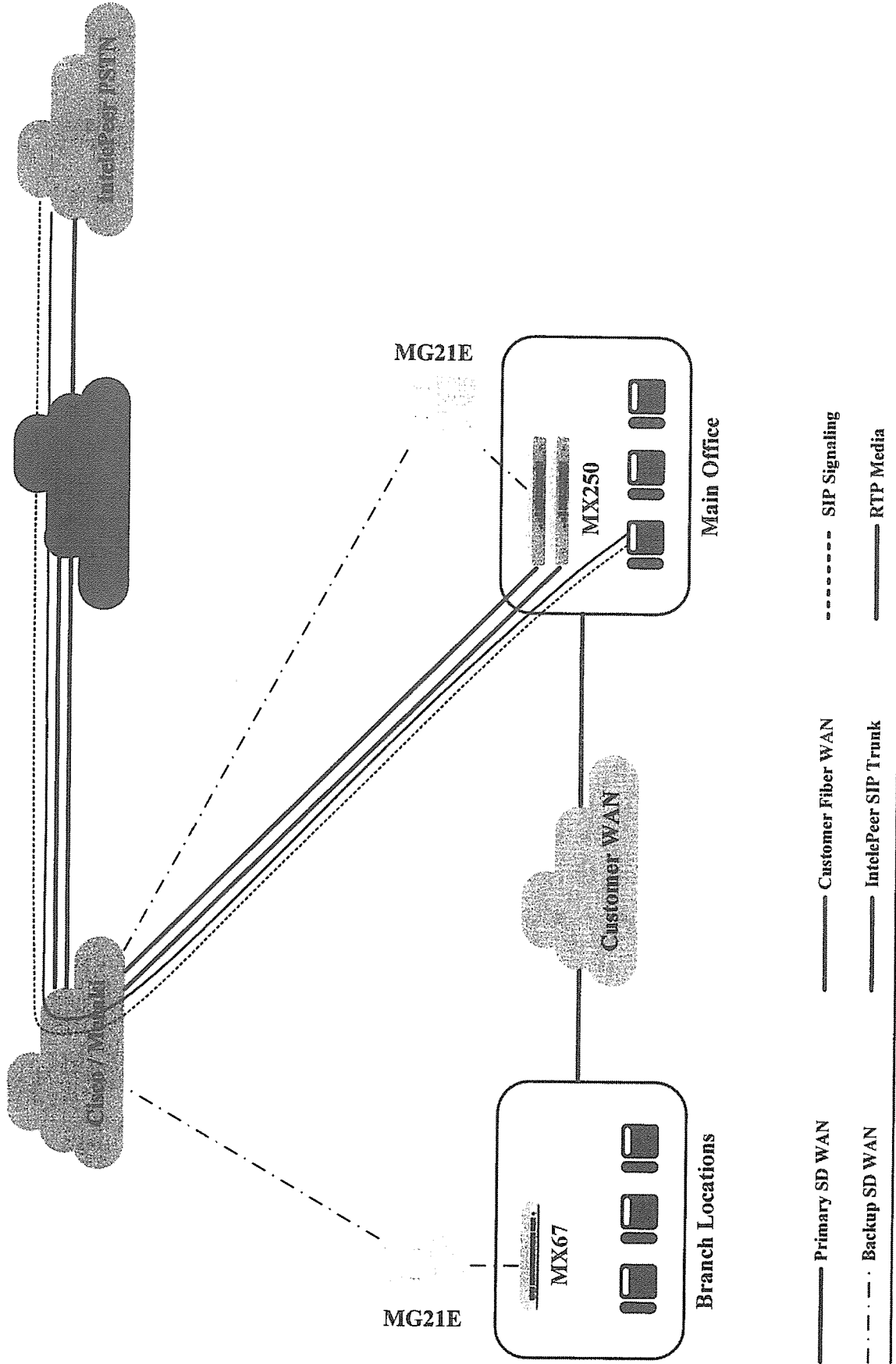
EXHIBIT 5

Normal Scenario-5: Branch Office PSTN Call Flow
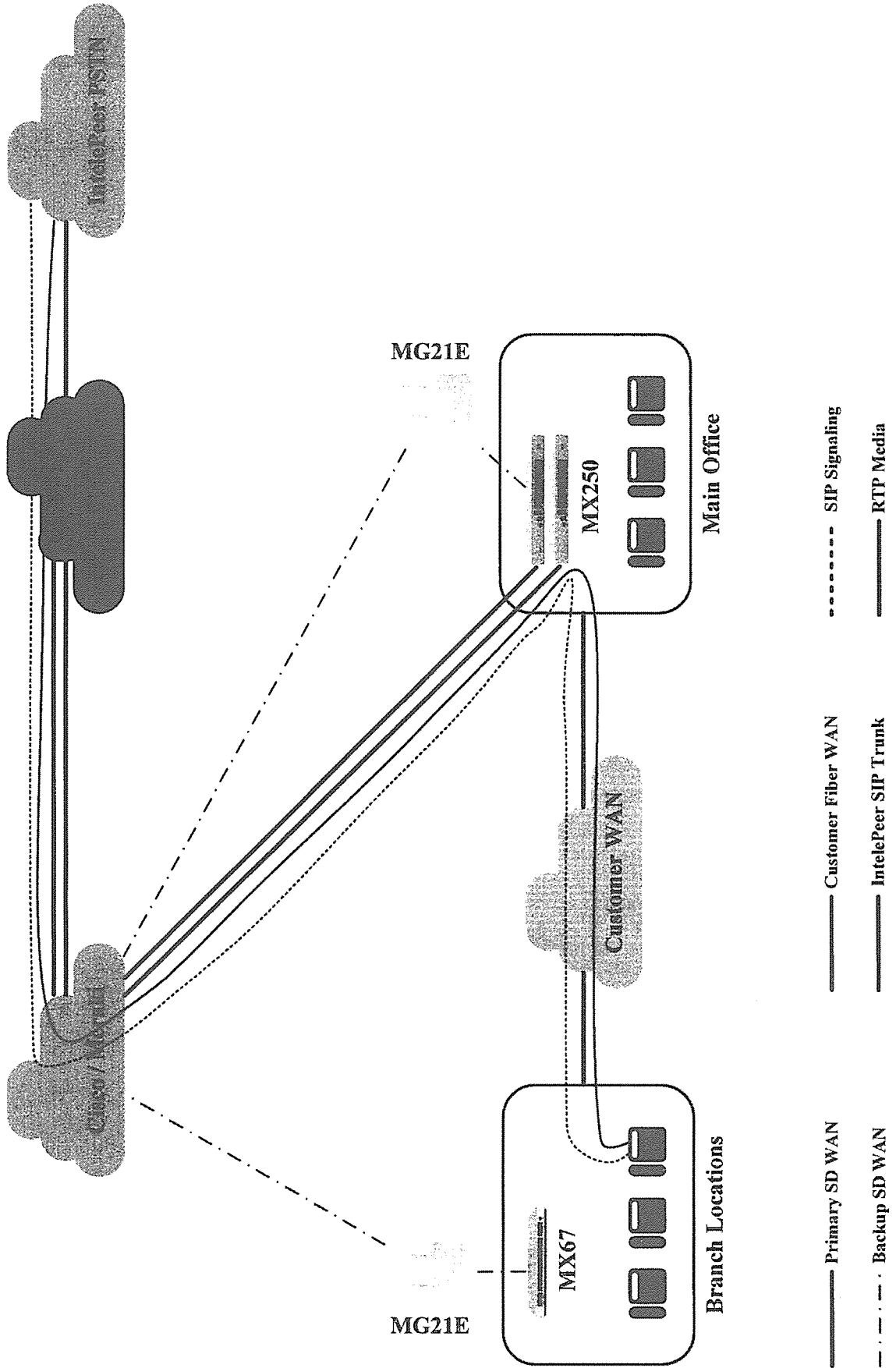
EXHIBIT 6

Failover Scenario-1: Main Office Intra-Site Call Flow

InletePeer PSTN

MG21E

MX250

Main Office

Customer WAN

MG21E

MX67

Branch Locations

——— Primary SD WAN

— · — · Backup SD WAN

——— Customer Fiber WAN

——— IntelePeer SIP Trunk

········ SIP Signaling

——— RTP Media
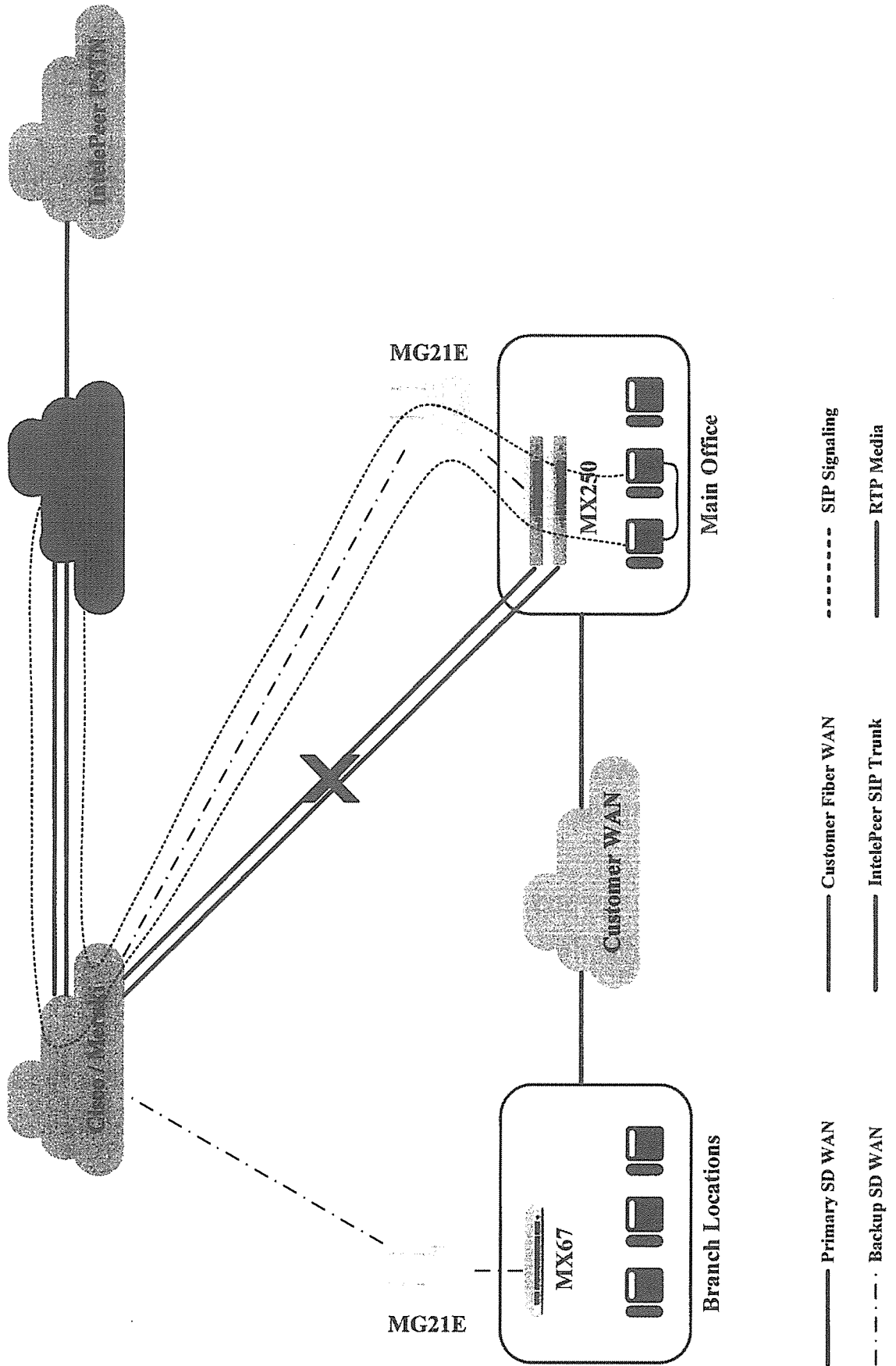
EXHIBIT B

Failover Scenario-2: Branch Office Intra-Site Call Flow

Main Office

MX250

MG21E

Customer WAN

Branch Locations

MX67

MG21E

IntelePeer PSTN

Customer Fiber WAN

IntelePeer SIP Trunk

SIP Signaling

RTP Media

Primary SD WAN

Backup SD WAN
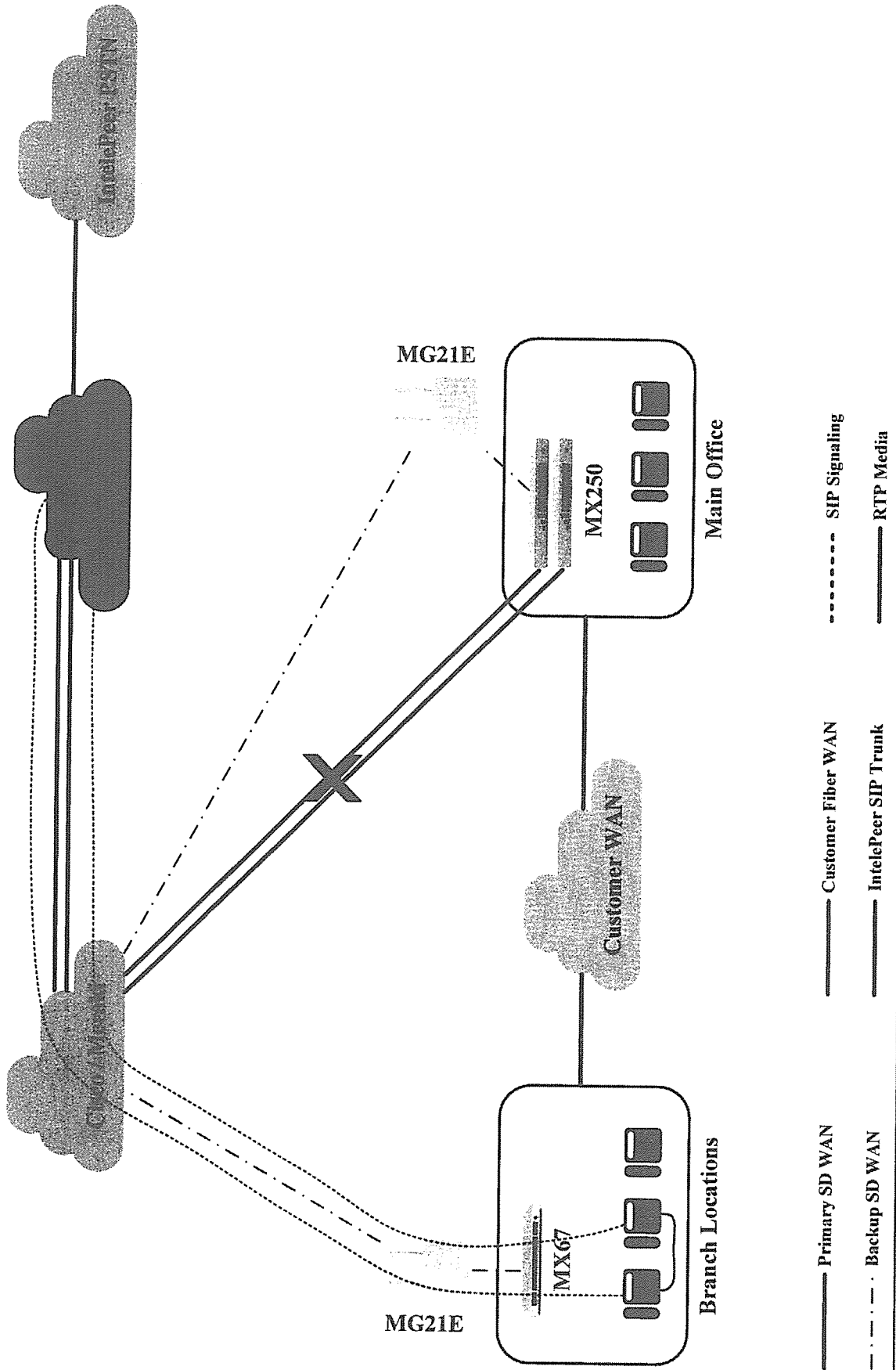
EXHIBIT 6

Failover Scenario-3: Main and Branch Office Inter-Site Call Flow

MG21E

MX250

Main Office

MG21E

MX67

Branch Locations

Customer WAN

——— Customer Fiber WAN

——— IntelePeer SIP Trunk

------- SIP Signaling

——— RTP Media

——— Primary SD WAN

— · — · Backup SD WAN
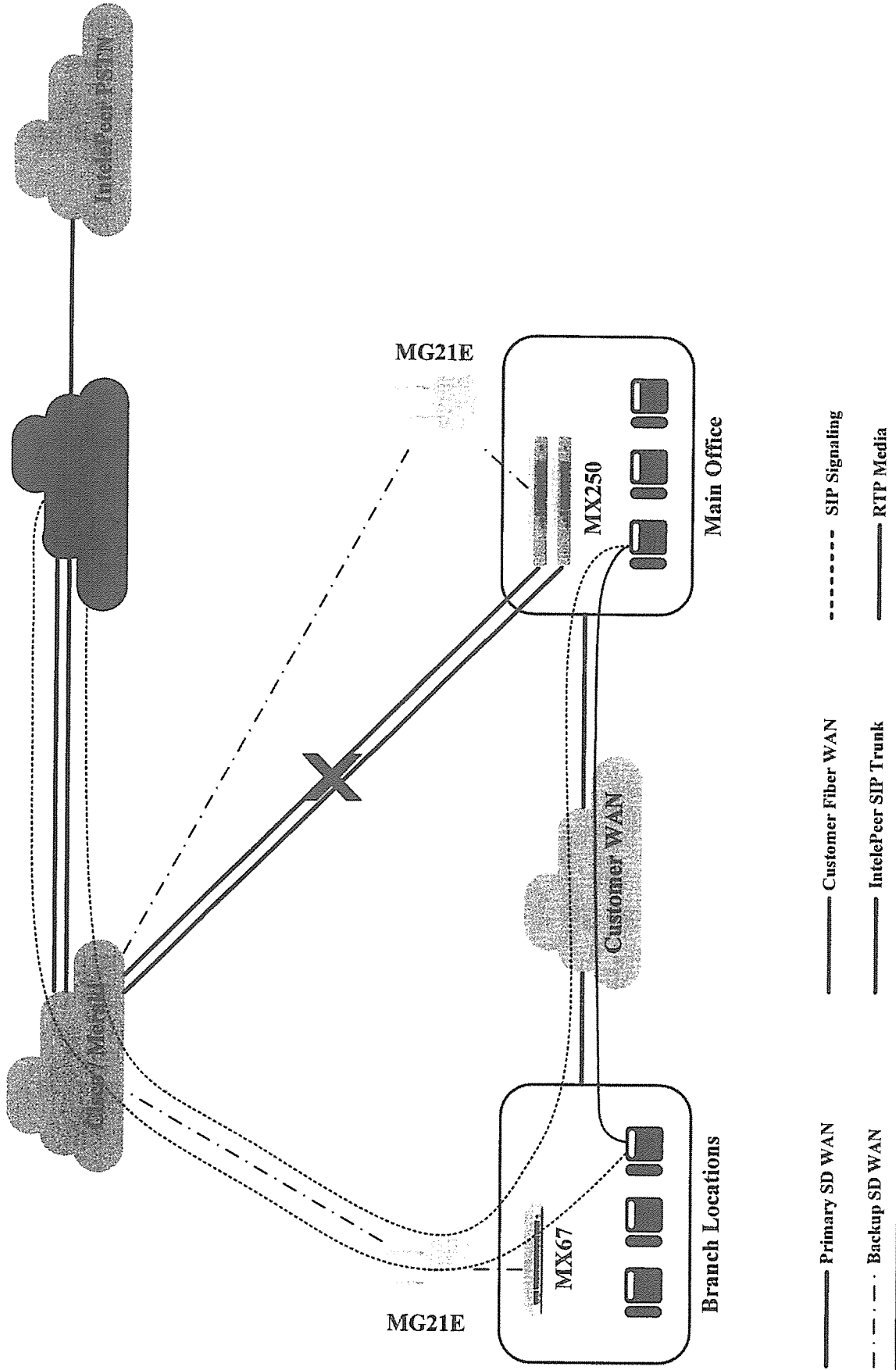
EXHIBIT 6

Failover Scenario-4: Main Office PSTN Call Flow

MG21E

MX250

Main Office

MG21E

MX67

Branch Locations

Internet / PSTN

Internet / PSTN

Customer WAN

———— Primary SD WAN
— · — Backup SD WAN
———— Customer Fiber WAN
———— IntelePeer SIP Trunk
········· SIP Signaling
———— RTP Media
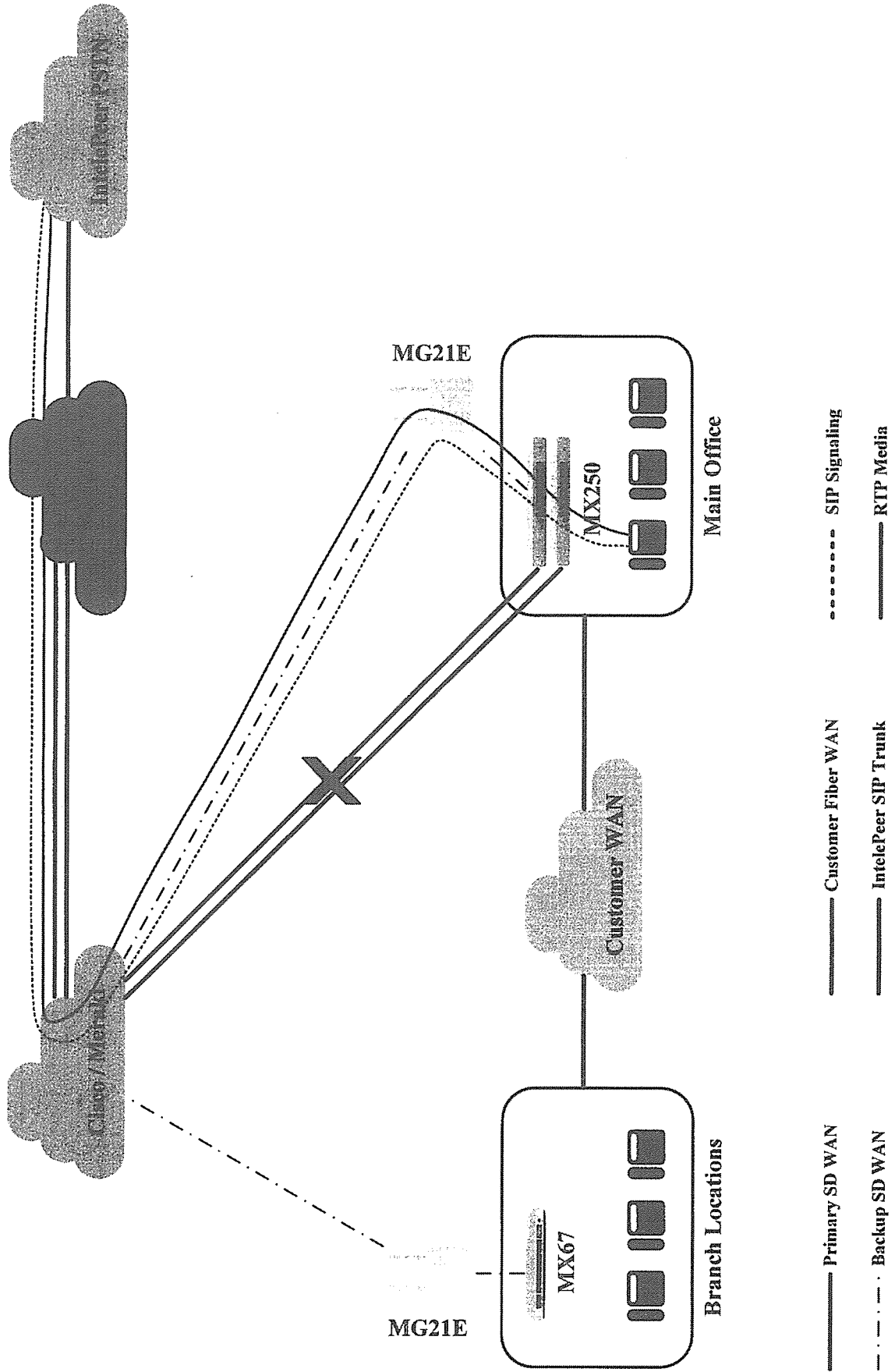
Failover Scenario-5: Branch Office PSTN Call Flow
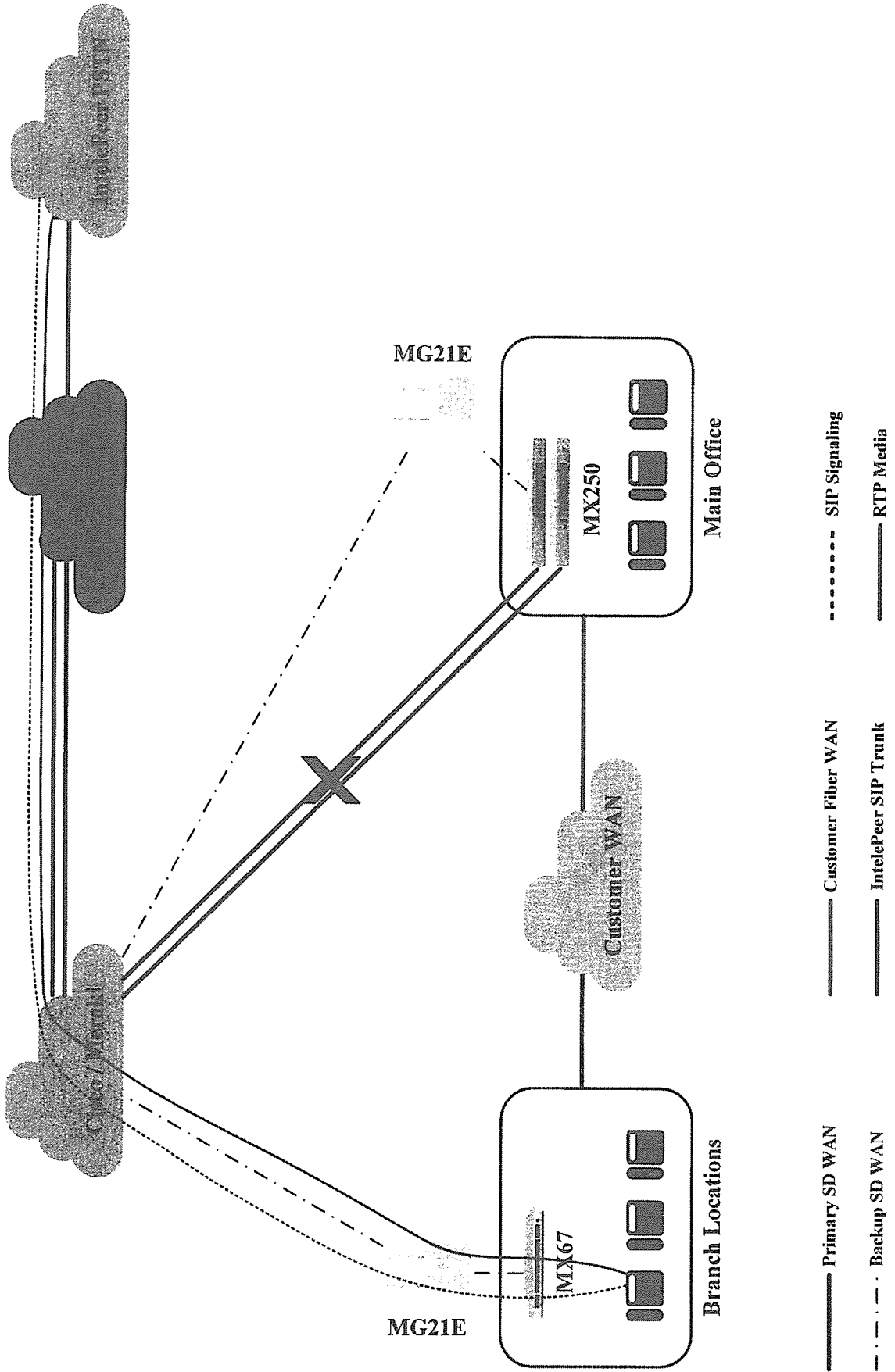
EXHIBIT B

Exhibit C

Sexual Offender Registry Check Certification Form

PLEASE SUBMIT THIS FORM TO YOUR SCHOOL SYSTEM'S REPRESENTATIVE

Project Name: <u>Phone System with Installation and Support</u> Contract: <u>153.VAR.21.TECH.163</u>

Check the appropriate box to indicate the type of check:
   <u>X </u>Initial   <u>   </u>Supplemental   <u>   </u>Annual
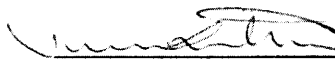
I, <u>Vinu Luthra</u> (insert name), <u>Chief Operating Officer</u> (insert title) of <u>DISYS Solutions, Inc.</u> (insert company name) hereby certify that I have performed all of the required sexual offender registry checks required under this Agreement for all Contractual Personnel (employees, agents, ownership personnel, or contractors) who may be used to deliver goods or provide services under this Agreement, including the North Carolina Sex Offender and Public Protection Registration Program, the North Carolina Sexually Violent Predator Registration Program, and the National Sex Offender Registry (Note: all of the required registry checks may be completed at no cost by accessing the United States Department of Justice Sex Offender Public Website at *http://www.nsopw.gov/*). I further certify that none of the individuals listed below appears on any of the above-named registries and that I will not assign any individual to deliver goods or perform services under this Agreement if said individual appears on any of the sex offender registries. I agree to maintain all records and documents associated with these registry checks, and that I will provide such records and documents to the school system upon request. I specifically acknowledge that the school system retains the right to audit these records to ensure compliance with this section at any time in the school system's sole discretion. I acknowledge that I am required to perform these checks and provide this certification form before any work is performed under the Agreement (initial check), any time additional Contractual Personnel may perform work under the Agreement (supplemental check), and at each anniversary date of the Agreement (annual check).

Contractual Personnel Names	Job Title
1. Kashif Zafar	Project Manager
2. Vaijanath Sonvane	Senior Voice Engineer
3. Vijay Yadav	Senior Voice Engineer
4.	
5.	
6.	
7.	

I attest that the forgoing information is true and accurate to the best of my knowledge.

<u>Vinu Luthra</u> (print name)

_____ June 3, 2021 __ (signature / date)

ACORD® CERTIFICATE OF LIABILITY INSURANCE

	DATE (MM/DD/YYYY)
	06/01/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	Lori VanBuskirk	
HRI Associates	PHONE (A/C, No, Ext): 703.435.3500		FAX (A/C, No): 703.481.0234
718 Pine Street	E-MAIL ADDRESS: certificates@hriassociates.com		
	INSURER(S) AFFORDING COVERAGE		NAIC #
Herndon VA 20170	INSURER A : Hartford Underwriters Insurance Company		30104
INSURED	INSURER B : Trumball Insurance Company		27120
DISYS Solutions, Inc.	INSURER C : Hartford Casualty Insurance Company		29424
44670 Cape Ct. Ste. 100	INSURER D : Hartford Fire Insurance Company		19682
	INSURER E :		
Ashburn VA 20147	INSURER F :		

COVERAGES   CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [X] OTHER: Contractual Liability			42 UUN BH0352	12/31/2020	12/31/2021	EACH OCCURRENCE	$ 1000000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300000
							MED EXP (Any one person)	$ 10000
							PERSONAL & ADV INJURY	$ 1000000
							GENERAL AGGREGATE	$ 2000000
							PRODUCTS - COMP/OP AGG	$ 2000000
							Contractual Liability	$ 1000000
B	AUTOMOBILE LIABILITY [X] ANY AUTO [X] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY [X] Leased Veh			42 UEN BH7265	12/31/2020	12/31/2021	COMBINED SINGLE LIMIT (Ea accident)	$ 1000000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
							Comp & Collision Ded.	$ 1000 Each
C	[X] UMBRELLA LIAB [X] OCCUR [X] EXCESS LIAB [ ] CLAIMS-MADE [X] DED [X] RETENTION $ 10,000			42 RHU BH0401	12/31/2020	12/31/2021	EACH OCCURRENCE	$ 10000000
							AGGREGATE	$ 10000000
								$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	42 WE AB0KYJ	12/31/2020	12/31/2021	[X] PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 1000000
							E.L. DISEASE - EA EMPLOYEE	$ 1000000
							E.L. DISEASE - POLICY LIMIT	$ 1000000
D	Cyber			42 TE 0326541	12/31/2020	12/31/2021	Limit	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Brunswick County Board of Education, is additional insured on the General Liability policy. 10 day notice of cancellation applies. See attached policy documents

CERTIFICATE HOLDER	CANCELLATION
 Brunswick County Board of Education 35 Referendum Drive Bolivia NC 28422	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE *Lori VanBuskirk*

ACORD 25 (2016/03)   The ACORD name and logo are registered marks of ACORD

DISYS Solutions Inc.
Policy #: 42 UUN BH0352
Effective 12/31/20-12/31/21

QUICK REFERENCE
COMMERCIAL GENERAL LIABILITY COVERAGE PART
OCCURRENCE

READ YOUR POLICY CAREFULLY

DECLARATIONS PAGES

Named Insured and Mailing Address
Policy Period
Description of Business and Location
Coverages and Limits of Insurance

Beginning on Page

SECTION I - COVERAGES

COMMON POLICY CONDITIONS

Cancellation
Changes
Examination of Your Books and Records
Inspections and Surveys
Premiums
Transfer of Your Rights and Duties under this Policy

ENDORSEMENTS

These form numbers are shown on the Coverage Part - Declarations Page or on the Common Policy Declarations Page.

Form HC 70 01 06 05

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COMMERCIAL GENERAL LIABILITY COVERAGE FORM

Various provisions in this policy restrict coverage. Read the entire policy carefully to determine rights, duties and what is and is not covered.

Throughout this policy the words "you" and "your" refer to the Named Insured shown in the Declarations, and any other person or organization qualifying as a Named Insured under this policy. The words "we", "us" and "our" refer to the stock insurance company member of The Hartford providing this insurance.

The word "insured" means any person or organization qualifying as such under Section II – Who Is An Insured.

Other words and phrases that appear in quotation marks have special meaning. Refer to Section V –Definitions.

SECTION I – COVERAGES

COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY

1. Insuring Agreement

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "bodily injury" or "property damage" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "bodily injury" or "property damage" to which this insurance does not apply. We may, at our discretion, investigate any "occurrence" and settle any claim or "suit" that may result. But:

(1) The amount we will pay for damages is limited as described in Section III – Limits Of Insurance; and

(2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements under Coverages A or B or medical expenses under Coverage C.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments – Coverages A and B.

b. This insurance applies to "bodily injury" and "property damage" only if:

(1) The "bodily injury" or "property damage" is caused by an "occurrence" that takes place in the "coverage territory";

(2) The "bodily injury" or "property damage" occurs during the policy period; and

(3) Prior to the policy period, no insured listed under Paragraph 1. of Section II – Who Is An Insured and no "employee" authorized by you to give or receive notice of an "occurrence" or claim, knew that the "bodily injury" or "property damage" had occurred, in whole or in part. If such a listed insured or authorized "employee" knew, prior to the policy period, that the "bodily injury" or "property damage" occurred, then any continuation, change or resumption of such "bodily injury" or "property damage" during or after the policy period will be deemed to have been known prior to the policy period.

c. "Bodily injury" or "property damage" will be deemed to have been known to have occurred at the earliest time when any insured listed under Paragraph 1. of Section II – Who Is An Insured or any "employee" authorized by you to give or receive notice of an "occurrence" or claim:

(1) Reports all, or any part, of the "bodily injury" or "property damage" to us or any other insurer;

(2) Receives a written or verbal demand or claim for damages because of the "bodily injury" or "property damage"; or

(3) Becomes aware by any other means that "bodily injury" or "property damage" has occurred or has begun to occur.

d. Damages because of "bodily injury" include damages claimed by any person or organization for care, loss of services or death resulting at any time from the "bodily injury".

e. **Incidental Medical Malpractice**

(1) "Bodily injury" arising out of the rendering of or failure to render professional health care services as a physician, dentist, nurse, emergency medical technician or paramedic shall be deemed to be caused by an "occurrence", but only if:

(a) The physician, dentist, nurse, emergency medical technician or paramedic is employed by you to provide such services; and

(b) You are not engaged in the business or occupation of providing such services.

(2) For the purpose of determining the limits of insurance for incidental medical malpractice, any act or omission together with all related acts or omissions in the furnishing of these services to any one person will be considered one "occurrence".

2. Exclusions

This insurance does not apply to:

a. Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

b. Contractual Liability

"Bodily injury" or "property damage" for which the insured is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages:

(1) That the insured would have in the absence of the contract or agreement; or

(2) Assumed in a contract or agreement that is an "insured contract", provided the "bodily injury" or "property damage" occurs subsequent to the execution of the contract or agreement. Solely for the purposes of liability assumed in an "insured contract", reasonable attorney fees and necessary litigation expenses incurred by or for a party other than an insured are deemed to be damages because of "bodily injury" or "property damage", provided:

(a) Liability to such party for, or for the cost of, that party's defense has also been assumed in the same "insured contract"; and

(b) Such attorney fees and litigation expenses are for defense of that party against a civil or alternative dispute resolution proceeding in which damages to which this insurance applies are alleged.

c. Liquor Liability

"Bodily injury" or "property damage" for which any insured may be held liable by reason of:

(1) Causing or contributing to the intoxication of any person;

(2) The furnishing of alcoholic beverages to a person under the legal drinking age or under the influence of alcohol; or

(3) Any statute, ordinance or regulation relating to the sale, gift, distribution or use of alcoholic beverages.

This exclusion applies only if you are in the business of manufacturing, distributing, selling, serving or furnishing alcoholic beverages.

d. Workers' Compensation And Similar Laws

Any obligation of the insured under a workers' compensation, disability benefits or unemployment compensation law or any similar law.

e. Employer's Liability

"Bodily injury" to:

(1) An "employee" of the insured arising out of and in the course of:

(a) Employment by the insured; or

(b) Performing duties related to the conduct of the insured's business; or

(2) The spouse, child, parent, brother or sister of that "employee" as a consequence of Paragraph (1) above.

This exclusion applies:

(1) Whether the insured may be liable as an employer or in any other capacity; and

(2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

This exclusion does not apply to liability assumed by the insured under an "insured contract".

f. Pollution

(1) "Bodily injury" or "property damage" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants":

(a) At or from any premises, site or location which is or was at any time owned or occupied by, or rented or loaned to, any insured. However, this subparagraph does not apply to:

(i) "Bodily injury" if sustained within a building and caused by smoke, fumes, vapor or soot produced by or originating from equipment that is used to heat, cool or dehumidify the building, or equipment that is used to heat water for personal use, by the building's occupants or their guests;

(ii) "Bodily injury" or "property damage" for which you may be held liable, if you are a contractor and the owner or lessee of such premises, site or location has been added to your policy as an additional insured with respect to your ongoing operations performed for that additional insured at that premises, site or location and such premises, site or location is not and never was owned or occupied by, or rented or loaned to, any insured, other than that additional insured; or

(iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire";

(b) At or from any premises, site or location which is or was at any time used by or for any insured or others for the handling, storage, disposal, processing or treatment of waste;

(c) Which are or were at any time transported, handled, stored, treated, disposed of, or processed as waste by or for:

(i) Any insured; or

(ii) Any person or organization for whom you may be legally responsible;

(d) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the "pollutants" are brought on or to the premises, site or location in connection with such operations by such insured, contractor or subcontractor. However, this subparagraph does not apply to:

(i) "Bodily injury" or "property damage" arising out of the escape of fuels, lubricants or other operating fluids which are needed to perform the normal electrical, hydraulic or mechanical functions necessary for the operation of "mobile equipment" or its parts, if such fuels, lubricants or other operating fluids escape from a vehicle part designed to hold, store or receive them. This exception does not apply if the "bodily injury" or "property damage" arises out of the intentional discharge, dispersal or release of the fuels, lubricants or other operating fluids, or if such fuels, lubricants or other operating fluids are brought on or to the premises, site or location with the intent that they be discharged, dispersed or released as part of the operations being performed by such insured, contractor or subcontractor;

(ii) "Bodily injury" or "property damage" sustained within a building and caused by the release of gases, fumes or vapors from materials brought into that building in connection with operations being performed by you or on your behalf by a contractor or subcontractor; or

(iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire"; or

(e) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the operations are to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants".

(2) Any loss, cost or expense arising out of any:

(a) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or

(b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

However, this paragraph does not apply to liability for damages because of "property damage" that the insured would have in the absence of such request, demand, order or statutory or regulatory requirement, or such claim or "suit" by or on behalf of a governmental authority.

g. Aircraft, Auto Or Watercraft

"Bodily injury" or "property damage" arising out of the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading".

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" involved the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft that is owned or operated by or rented or loaned to any insured.

This exclusion does not apply to:

(1) A watercraft while ashore on premises you own or rent;

(2) A watercraft you do not own that is:

(a) Less than 51 feet long; and

(b) Not being used to carry persons for a charge;

(3) Parking an "auto" on, or on the ways next to, premises you own or rent, provided the "auto" is not owned by or rented or loaned to you or the insured;

(4) Liability assumed under any "insured contract" for the ownership, maintenance or use of aircraft or watercraft;

(5) "Bodily injury" or "property damage" arising out of the operation of any of the equipment listed in Paragraph f.(2) or f.(3) of the definition of "mobile equipment"; or

(6) An aircraft that is not owned by any insured and is hired, chartered or loaned with a paid crew. However, this exception does not apply if the insured has any other insurance for such "bodily injury" or "property damage", whether the other insurance is primary, excess, contingent or on any other basis.

h. Mobile Equipment

"Bodily injury" or "property damage" arising out of:

(1) The transportation of "mobile equipment" by an "auto" owned or operated by or rented or loaned to any insured; or

(2) The use of "mobile equipment" in, or while in practice for, or while being prepared for, any prearranged racing, speed, demolition, or stunting activity.

i. War

"Bodily injury" or "property damage", however caused, arising, directly or indirectly, out of:

(1) War, including undeclared or civil war;

(2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or

(3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

j. Damage To Property

"Property damage" to:

(1) Property you own, rent, or occupy, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement, enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;

(2) Premises you sell, give away or abandon, if the "property damage" arises out of any part of those premises;

(3) Property loaned to you;

(4) Personal property in the care, custody or control of the insured;

(5) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the "property damage" arises out of those operations; or

(6) That particular part of any property that must be restored, repaired or replaced because "your work" was incorrectly performed on it.

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" (other than damage by fire) to premises, including the contents of such premises, rented to you for a period of 7 or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in Section III – Limits Of Insurance.

Paragraph (2) of this exclusion does not apply if the premises are "your work" and were never occupied, rented or held for rental by you.

Paragraphs (3) and (4) of this exclusion do not apply to "property damage" arising from the use of elevators.

Paragraphs (3), (4), (5) and (6) of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraphs (3) and (4) of this exclusion do not apply to "property damage" to borrowed equipment while not being used to perform operations at the job site.

Paragraph (6) of this exclusion does not apply to "property damage" included in the "products-completed operations hazard".

k. Damage To Your Product

"Property damage" to "your product" arising out of it or any part of it.

l. Damage To Your Work

"Property damage" to "your work" arising out of it or any part of it and included in the "products-completed operations hazard".

This exclusion does not apply if the damaged work or the work out of which the damage arises was performed on your behalf by a subcontractor.

m. Damage To Impaired Property Or Property Not Physically Injured

"Property damage" to "impaired property" or property that has not been physically injured, arising out of:

(1) A defect, deficiency, inadequacy or dangerous condition in "your product" or "your work"; or

(2) A delay or failure by you or anyone acting on your behalf to perform a contract or agreement in accordance with its terms.

This exclusion does not apply to the loss of use of other property arising out of sudden and accidental physical injury to "your product" or "your work" after it has been put to its intended use.

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n. Recall Of Products, Work Or Impaired Property

Damages claimed for any loss, cost or expense incurred by you or others for the loss of use, withdrawal, recall, inspection, repair, replacement, adjustment, removal or disposal of:

(1) "Your product";

(2) "Your work"; or

(3) "Impaired property";

if such product, work, or property is withdrawn or recalled from the market or from use by any person or organization because of a known or suspected defect, deficiency, inadequacy or dangerous condition in it.

o. Personal And Advertising Injury

"Bodily Injury" arising out of "personal and advertising Injury".

p. Electronic Data

Damages arising out of the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data.

As used in this exclusion, electronic data means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

q. Employment-Related Practices

"Bodily injury" to:

(1) A person arising out of any "employment-related practices"; or

(2) The spouse, child, parent, brother or sister of that person as a consequence of "bodily injury" to that person at whom any "employment-related practices" are directed.

This exclusion applies:

(1) Whether the insured may be liable as an employer or in any other capacity; and

(2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

r. Asbestos

(1) "Bodily injury" or "property damage" arising out of the "asbestos hazard".

(2) Any damages, judgments, settlements, loss, costs or expenses that:

(a) May be awarded or incurred by reason of any claim or suit alleging actual or threatened injury or damage of any nature or

kind to persons or property which would not have occurred in whole or in part but for the "asbestos hazard";

(b) Arise out of any request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, encapsulate, contain, treat, detoxify or neutralize or in any way respond to or assess the effects of an "asbestos hazard"; or

(c) Arise out of any claim or suit for damages because of testing for, monitoring, cleaning up, removing, encapsulating, containing, treating, detoxifying or neutralizing or In any way responding to or assessing the effects of an "asbestos hazard".

Damage To Premises Rented To You – Exception For Damage By Fire, Lightning Or Explosion

Exclusions c. through h. and j. through n. do not apply to damage by fire, lightning or explosion to premises while rented to you or temporarily occupied by you with permission of the owner. A separate limit of insurance applies to this coverage as described in Section III – Limits Of Insurance.

COVERAGE B PERSONAL AND ADVERTISING INJURY LIABILITY

1. Insuring Agreement

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "personal and advertising injury" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "personal and advertising injury" to which this insurance does not apply. We may, at our discretion, investigate any offense and settle any claim or "suit" that may result. But:

(1) The amount we will pay for damages is limited as described in Section III – Limits Of Insurance; and

(2) Our right and duty to defend end when we have used up the applicable limit of insurance in the payment of judgments or settlements under Coverages A or B or medical expenses under Coverage C.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments – Coverages A and B.

b. This insurance applies to "personal and advertising Injury" caused by an offense arising out of your business but only if the offense was committed in the "coverage territory" during the policy period.

2. Exclusions

This insurance does not apply to:

a. Knowing Violation Of Rights Of Another

"Personal and advertising injury" arising out of an offense committed by, at the direction or with the consent or acquiescence of the insured with the expectation of inflicting "personal and advertising injury".

b. Material Published With Knowledge Of Falsity

"Personal and advertising injury" arising out of oral, written or electronic publication of material, if done by or at the direction of the insured with knowledge of its falsity.

c. Material Published Prior To Policy Period

"Personal and advertising injury" arising out of oral, written or electronic publication of material whose first publication took place before the beginning of the policy period.

d. Criminal Acts

"Personal and advertising injury" arising out of a criminal act committed by or at the direction of the insured.

e. Contractual Liability

"Personal and advertising injury" for which the insured has assumed liability in a contract or agreement. This exclusion does not apply to liability for damages that the insured would have in the absence of the contract or agreement.

f. Breach Of Contract

"Personal and advertising injury" arising out of a breach of contract, except an implied contract to use another's "advertising idea" in your "advertisement".

g. Quality Or Performance Of Goods – Failure To Conform To Statements

"Personal and advertising injury" arising out of the failure of goods, products or services to conform with any statement of quality or performance made in your "advertisement".

h. Wrong Description Of Prices

"Personal and advertising injury" arising out of the wrong description of the price of goods, products or services.

i. Infringement Of Intellectual Property Rights

"Personal and advertising injury" arising out of any violation of any intellectual property rights such as copyright, patent, trademark, trade name, trade secret, service mark or other designation of origin or authenticity.

However, this exclusion does not apply to infringement, in your "advertisement", of:

(1) Copyright;

(2) Slogan, unless the slogan is also a trademark, trade name, service mark or other designation of origin or authenticity; or

(3) Title of any literary or artistic work.

j. Insureds In Media And Internet Type Businesses

"Personal and advertising injury" committed by an insured whose business is:

(1) Advertising, broadcasting, publishing or telecasting;

(2) Designing or determining content of web sites for others; or

(3) An Internet search, access, content or service provider.

However, this exclusion does not apply to Paragraphs 17.a., b. and c. of "personal and advertising injury" under the Definitions Section.

For the purposes of this exclusion, placing an "advertisement" for or linking to others on your web site, by itself, is not considered the business of advertising, broadcasting, publishing or telecasting.

k. Electronic Chatrooms Or Bulletin Boards

"Personal and advertising injury" arising out of an electronic chatroom or bulletin board the insured hosts, owns, or over which the insured exercises control.

l. Unauthorized Use Of Another's Name Or Product

"Personal and advertising injury" arising out of the unauthorized use of another's name or product in your e-mail address, domain name or metatags, or any other similar tactics to mislead another's potential customers.

m. Pollution

"Personal and advertising injury" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants" at any time.

n. Pollution-Related

Any loss, cost or expense arising out of any:

(1) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or

(2) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

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o. War

"Personal and advertising injury", however caused, arising, directly or indirectly, out of:

(1) War, including undeclared or civil war;

(2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or

(3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

p. Internet Advertisements And Content Of Others

"Personal and advertising injury" arising out of:

(1) An "advertisement" for others on your web site;

(2) Placing a link to a web site of others on your web site;

(3) Content, including information, sounds, text, graphics, or images from a web site of others displayed within a frame or border on your web site; or

(4) Computer code, software or programming used to enable:

(a) Your web site; or

(b) The presentation or functionality of an "advertisement" or other content on your web site.

q. Right Of Privacy Created By Statute

"Personal and advertising injury" arising out of the violation of a person's right of privacy created by any state or federal act.

However, this exclusion does not apply to liability for damages that the insured would have in the absence of such state or federal act.

r. Violation Of Anti-Trust law

"Personal and advertising injury" arising out of a violation of any anti-trust law.

s. Securities

"Personal and advertising injury" arising out of the fluctuation in price or value of any stocks, bonds or other securities.

t. Discrimination Or Humiliation

"Personal and advertising injury" arising out of discrimination or humiliation committed by or at the direction of any "executive officer", director, stockholder, partner or member of the insured.

u. Employment-Related Practices

"Personal and advertising injury" to:

(1) A person arising out of any "employment-related practices"; or

(2) The spouse, child, parent, brother or sister of that person as a consequence of "personal and advertising injury" to that person at whom any "employment-related practices" are directed.

This exclusion applies:

(1) Whether the insured may be liable as an employer or in any other capacity; and

(2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

v. Asbestos

(1) "Personal and advertising injury" arising out of the "asbestos hazard".

(2) Any damages, judgments, settlements, loss, costs or expenses that:

(a) May be awarded or incurred by reason of any claim or suit alleging actual or threatened injury or damage of any nature or kind to persons or property which would not have occurred in whole or in part but for the "asbestos hazard";

(b) Arise out of any request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, encapsulate, contain, treat, detoxify or neutralize or in any way respond to or assess the effects of an "asbestos hazard"; or

(c) Arise out of any claim or suit for damages because of testing for, monitoring, cleaning up, removing, encapsulating, containing, treating, detoxifying or neutralizing or in any way responding to or assessing the effects of an "asbestos hazard".

COVERAGE C MEDICAL PAYMENTS

1. Insuring Agreement

a. We will pay medical expenses as described below for "bodily injury" caused by an accident:

(1) On premises you own or rent;

(2) On ways next to premises you own or rent; or

(3) Because of your operations;

provided that:

(1) The accident takes place in the "coverage territory" and during the policy period;

(2) The expenses are incurred and reported to us within three years of the date of the accident; and

(3) The injured person submits to examination, at our expense, by physicians of our choice as often as we reasonably require.

b. We will make these payments regardless of fault. These payments will not exceed the applicable limit of insurance. We will pay reasonable expenses for:

(1) First aid administered at the time of an accident;

(2) Necessary medical, surgical, x-ray and dental services, including prosthetic devices; and

(3) Necessary ambulance, hospital, professional nursing and funeral services.

2. **Exclusions**

We will not pay expenses for "bodily injury":

a. **Any Insured**

To any insured, except "volunteer workers".

b. **Hired Person**

To a person hired to do work for or on behalf of any insured or a tenant of any insured.

c. **Injury On Normally Occupied Premises**

To a person injured on that part of premises you own or rent that the person normally occupies.

d. **Workers Compensation And Similar Laws**

To a person, whether or not an "employee" of any insured, if benefits for the "bodily injury" are payable or must be provided under a workers' compensation or disability benefits law or a similar law.

e. **Athletics Activities**

To a person injured while practicing, instructing or participating in any physical exercises or games, sports, or athletic contests.

f. **Products-Completed Operations Hazard**

Included within the "products-completed operations hazard".

g. **Coverage A Exclusions**

Excluded under Coverage A.

SUPPLEMENTARY PAYMENTS – COVERAGES A AND B

1. We will pay, with respect to any claim we investigate or settle, or any "suit" against an insured we defend:

a. All expenses we incur.

b. Up to $1,000 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

c. The cost of appeal bonds or bonds to release attachments, but only for bond amounts within the applicable limit of insurance. We do not have to furnish these bonds.

d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to $500 a day because of time off from work.

e. All costs taxed against the insured in the "suit".

f. Prejudgment interest awarded against the insured on that part of the judgment we pay. If we make an offer to pay the applicable limit of insurance, we will not pay any prejudgment interest based on that period of time after the offer.

g. All interest on the full amount of any judgment that accrues after entry of the judgment and before we have paid, offered to pay, or deposited in court the part of the judgment that is within the applicable limit of insurance.

These payments will not reduce the limits of insurance.

2. If we defend an insured against a "suit" and an indemnitee of the insured is also named as a party to the "suit", we will defend that indemnitee if all of the following conditions are met:

a. The "suit" against the indemnitee seeks damages for which the insured has assumed the liability of the indemnitee in a contract or agreement that is an "insured contract";

b. This insurance applies to such liability assumed by the insured;

c. The obligation to defend, or the cost of the defense of, that indemnitee, has also been assumed by the insured in the same "insured contract";

d. The allegations in the "suit" and the information we know about the "occurrence" are such that no conflict appears to exist between the interests of the insured and the interests of the indemnitee;

e. The indemnitee and the insured ask us to conduct and control the defense of that indemnitee against such "suit" and agree that we can assign the same counsel to defend the insured and the indemnitee; and

f. The indemnitee:

(1) Agrees in writing to:

(a) Cooperate with us in the investigation, settlement or defense of the "suit";

(b) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the "suit";

(c) Notify any other insurer whose coverage is available to the indemnitee; and

(d) Cooperate with us with respect to coordinating other applicable insurance available to the indemnitee; and

(2) Provides us with written authorization to:

(a) Obtain records and other information related to the "suit"; and

(b) Conduct and control the defense of the indemnitee in such "suit".

So long as the above conditions are met, attorneys' fees incurred by us in the defense of that indemnitee,

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necessary litigation expenses incurred by us and necessary litigation expenses incurred by the indemnitee at our request will be paid as Supplementary Payments. Notwithstanding the provisions of Paragraph **2.b.(2)** of Section **I –** Coverage **A –** Bodily Injury And Property Damage Liability, such payments will not be deemed to be damages for "bodily injury" and "property damage" and will not reduce the limits of insurance.

Our obligation to defend an insured's indemnitee and to pay for attorneys' fees and necessary litigation expenses as Supplementary Payments ends when:

a. We have used up the applicable limit of insurance in the payment of judgments or settlements; or

b. The conditions set forth above, or the terms of the agreement described in Paragraph **f.** above, are no longer met.

SECTION II – WHO IS AN INSURED

1. If you are designated in the Declarations as:

   a. An individual, you and your spouse are insureds, but only with respect to the conduct of a business of which you are the sole owner.

   b. A partnership or joint venture, you are an insured. Your members, your partners, and their spouses are also insureds, but only with respect to the conduct of your business.

   c. A limited liability company, you are an insured. Your members are also insureds, but only with respect to the conduct of your business. Your managers are insureds, but only with respect to their duties as your managers.

   d. An organization other than a partnership, joint venture or limited liability company, you are an insured. Your "executive officers" and directors are insureds, but only with respect to their duties as your officers or directors. Your stockholders are also insureds, but only with respect to their liability as stockholders.

   e. A trust, you are an insured. Your trustees are also insureds, but only with respect to their duties as trustees.

2. Each of the following is also an insured:

   a. **Employees and Volunteer workers**

      Your "volunteer workers" only while performing duties related to the conduct of your business, or your "employees", other than either your "executive officers" (if you are an organization other than a partnership, joint venture or limited liability company) or your managers (if you are a limited liability company), but only for acts within the scope of their employment by you or while performing duties related to the conduct of your business.

However, none of these "employees" or "volunteer workers" are insureds for:

(1) "Bodily injury" or "personal and advertising injury":

   (a) To you, to your partners or members (if you are a partnership or joint venture), to your members (if you are a limited liability company), to a co-"employee" while in the course of his or her employment or performing duties related to the conduct of your business, or to your other "volunteer workers" while performing duties related to the conduct of your business;

   (b) To the spouse, child, parent, brother or sister of that co-"employee" or that "volunteer worker" as a consequence of Paragraph **(1)(a)** above;

   (c) For which there is any obligation to share damages with or repay someone else who must pay damages because of the injury described in Paragraphs **(1)(a)** or **(b)** above; or

   (d) Arising out of his or her providing or failing to provide professional health care services.

   If you are not in the business of providing professional health care services, Paragraph **(d)** does not apply to any nurse, emergency medical technician or paramedic employed by you to provide such services.

(2) "Property damage" to property:

   (a) Owned, occupied or used by,

   (b) Rented to, in the care, custody or control of, or over which physical control is being exercised for any purpose by

   you, any of your "employees", "volunteer workers", any partner or member (if you are a partnership or joint venture), or any member (if you are a limited liability company).

b. **Real Estate Manager**

   Any person (other than your "employee" or "volunteer worker"), or any organization while acting as your real estate manager.

c. **Temporary Custodians of Your Property**

   Any person or organization having proper temporary custody of your property if you die, but only:

   (1) With respect to liability arising out of the maintenance or use of that property; and

   (2) Until your legal representative has been appointed.

d. **Legal Representative If You Die**

   Your legal representative if you die, but only with respect to duties as such. That representative will

have all your rights and duties under this Coverage Part.

e. Unnamed Subsidiary

Any subsidiary, and subsidiary thereof, of yours which is a legally incorporated entity of which you own a financial interest of more than 50% of the voting stock on the effective date of the Coverage Part.

The insurance afforded herein for any subsidiary not named in this Coverage Part as a named insured does not apply to injury or damage with respect to which an insured under this Coverage Part is also an insured under another policy or would be an insured under such policy but for its termination or the exhaustion of its limits of insurance.

3. Newly Acquired or Formed Organization

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain financial interest of more than 50% of the voting stock, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:

a. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;

b. Coverage A does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and

c. Coverage B does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.

4. Mobile Equipment

With respect to "mobile equipment" registered in your name under any motor vehicle registration law, any person is an insured while driving such equipment along a public highway with your permission. Any other person or organization responsible for the conduct of such person is also an insured, but only with respect to liability arising out of the operation of the equipment, and only if no other insurance of any kind is available to that person or organization for this liability. However, no person or organization is an insured with respect to:

a. "Bodily injury" to a co-"employee" of the person driving the equipment; or

b. "Property damage" to property owned by, rented to, in the charge of or occupied by you or the employer of any person who is an insured under this provision.

5. Nonowned Watercraft

With respect to watercraft you do not own that is less than 51 feet long and is not being used to carry persons for a charge, any person is an insured while operating such watercraft with your permission. Any other person or organization responsible for the conduct of such person is also an insured, but only with respect to liability arising out of the operation of the watercraft, and only if no other insurance of any kind is available to that person or organization for this liability.

However, no person or organization is an insured with respect to:

a. "Bodily injury" to a co-"employee" of the person operating the watercraft; or

b. "Property damage" to property owned by, rented to, in the charge of or occupied by you or the employer of any person who is an insured under this provision.

6. Additional Insureds When Required By Written Contract, Written Agreement Or Permit

The following person(s) or organization(s) are an additional insured when you have agreed, in a written contract, written agreement or because of a permit issued by a state or political subdivision, that such person or organization be added as an additional insured on your policy, provided the injury or damage occurs subsequent to the execution of the contract or agreement.

A person or organization is an additional insured under this provision only for that period of time required by the contract or agreement.

However, no such person or organization is an insured under this provision if such person or organization is included as an insured by an endorsement issued by us and made a part of this Coverage Part.

a. Vendors

Any person(s) or organization(s) (referred to below as vendor), but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business and only if this Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

(1) The insurance afforded the vendor is subject to the following additional exclusions:

This insurance does not apply to:

(a) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;

(b) Any express warranty unauthorized by you;

(c) Any physical or chemical change in the product made intentionally by the vendor;

(d) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;

(e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;

(f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;

(g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

(h) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(i) The exceptions contained in Sub-paragraphs (d) or (f); or

(ii) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

(2) This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

b. Lessors of Equipment

(1) Any person or organization from whom you lease equipment; but only with respect to their liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person or organization.

(2) With respect to the insurance afforded to these additional insureds this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

c. Lessors of Land or Premises

Any person or organization from whom you lease land or premises, but only with respect to liability arising out of the ownership, maintenance or use of that part of the land or premises leased to you.

With respect to the insurance afforded these additional insureds the following additional exclusions apply:

This insurance does not apply to:

1. Any "occurrence" which takes place after you cease to lease that land; or

2. Structural alterations, new construction or demolition operations performed by or on behalf of such person or organization.

d. Architects, Engineers or Surveyors

Any architect, engineer, or surveyor, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

(1) In connection with your premises; or

(2) In the performance of your ongoing operations performed by you or on your behalf.

With respect to the insurance afforded these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services by or for you, including:

1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

2. Supervisory, inspection, architectural or engineering activities.

e. Permits Issued By State Or Political Subdivisions

Any state or political subdivision, but only with respect to operations performed by you or on your behalf for which the state or political subdivision has issued a permit.

With respect to the insurance afforded these additional insureds, this insurance does not apply to:

(1) "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the state or municipality; or

(2) "Bodily injury" or "property damage" included within the "products-completed operations hazard".

f. Any Other Party

Any other person or organization who is not an insured under Paragraphs a. through e. above, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

(1) In the performance of your ongoing operations;

(2) In connection with your premises owned by or rented to you; or

(3) In connection with "your work" and included within the "products-completed operations hazard", but only if

(a) The written contract or agreement requires you to provide such coverage to such additional insured; and

(b) This Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

With respect to the insurance afforded to these additional insureds, this insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

(1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

(2) Supervisory, inspection, architectural or engineering activities.

The limits of insurance that apply to additional insureds under this provision is described in Section III – Limits Of Insurance.

How this insurance applies when other insurance is available to the additional insured is described in the Other Insurance Condition in Section IV – Commercial General Liability Conditions.

No person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

SECTION III – LIMITS OF INSURANCE

1. The Most We will Pay

The Limits of Insurance shown in the Declarations and the rules below fix the most we will pay regardless of the number of:

a. Insureds;

b. Claims made or "suits" brought; or

c. Persons or organizations making claims or bringing "suits".

2. General Aggregate Limit

The General Aggregate Limit is the most we will pay for the sum of:

a. Medical expenses under Coverage C;

b. Damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and

c. Damages under Coverage B.

3. Products-Completed Operations Aggregate Limit

The Products-Completed Operations Aggregate Limit is the most we will pay under Coverage A for damages because of "bodily injury" and "property damage" included in the "products-completed operations hazard".

4. Personal and Advertising Injury Limit

Subject to 2. above, the Personal and Advertising Injury Limit is the most we will pay under Coverage B for the sum of all damages because of all "personal and advertising injury" sustained by any one person or organization.

5. Each Occurrence Limit

Subject to 2. or 3. above, whichever applies, the Each Occurrence Limit is the most we will pay for the sum of:

a. Damages under Coverage A; and

b. Medical expenses under Coverage C

because of all "bodily injury" and "property damage" arising out of any one "occurrence".

6. Damage To Premises Rented To You Limit

Subject to 5. above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, lightning or explosion, while rented to you or temporarily occupied by you with permission of the owner.

In the case of damage by fire, lightning or explosion, the Damage to Premises Rented To You Limit applies to all damage proximately caused by the same event, whether such damage results from fire, lightning or explosion or any combination of these.

7. Medical Expense Limit

Subject to 5. above, the Medical Expense Limit is the most we will pay under Coverage C for all medical expenses because of "bodily injury" sustained by any one person.

8. How Limits Apply To Additional Insureds

If you have agreed in a written contract or written agreement that another person or organization be

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added as an additional insured on your policy, the most we will pay on behalf of such additional insured is the lesser of:

a. The limits of insurance specified in the written contract or written agreement; or

b. The Limits of Insurance shown in the Declarations.

Such amount shall be a part of and not in addition to Limits of Insurance shown in the Declarations and described in this Section.

The Limits of Insurance of this Coverage Part apply separately to each consecutive annual period and to any remaining period of less than 12 months, starting with the beginning of the policy period shown in the Declarations, unless the policy period is extended after issuance for an additional period of less than 12 months. In that case, the additional period will be deemed part of the last preceding period for purposes of determining the Limits of Insurance.

SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS

1. Bankruptcy

Bankruptcy or insolvency of the insured or of the insured's estate will not relieve us of our obligations under this Coverage Part.

2. Duties In The Event Of Occurrence, Offense, Claim Or Suit

a. Notice Of Occurrence Or Offense

You or any additional insured must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, notice should include:

(1) How, when and where the "occurrence" or offense took place;

(2) The names and addresses of any injured persons and witnesses; and

(3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. Notice Of Claim

If a claim is made or "suit" is brought against any insured, you or any additional insured must:

(1) Immediately record the specifics of the claim or "suit" and the date received; and

(2) Notify us as soon as practicable.

You or any additional insured must see to it that we receive written notice of the claim or "suit" as soon as practicable.

c. Assistance And Cooperation Of The Insured

You and any other involved insured must:

(1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit";

(2) Authorize us to obtain records and other information;

(3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and

(4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of injury or damage to which this insurance may also apply.

d. Obligations At The Insureds Own Cost

No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense, other than for first aid, without our consent.

e. Additional Insureds Other Insurance

If we cover a claim or "suit" under this Coverage Part that may also be covered by other insurance available to an additional insured, such additional insured must submit such claim or "suit" to the other insurer for defense and indemnity.

However, this provision does not apply to the extent that you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance.

f. Knowledge Of An Occurrence, Offense, Claim Or Suit

Paragraphs a. and b. apply to you or to any additional insured only when such "occurrence", offense, claim or "suit" is known to:

(1) You or any additional insured that is an individual;

(2) Any partner, if you or an additional insured is a partnership;

(3) Any manager, if you or an additional insured is a limited liability company;

(4) Any "executive officer" or insurance manager, if you or an additional insured is a corporation;

(5) Any trustee, if you or an additional insured is a trust; or

(6) Any elected or appointed official, if you or an additional insured is a political subdivision or public entity.

This duty applies separately to you and any additional insured.

3. Legal Action Against Us

No person or organization has a right under this Coverage Part:

a. To join us as a party or otherwise bring us into a "suit" asking for damages from an insured; or

b. To sue us on this Coverage Part unless all of its terms have been fully complied with.

A person or organization may sue us to recover on an agreed settlement or on a final judgment against an insured; but we will not be liable for damages that are not payable under the terms of this Coverage Part or

that are in excess of the applicable limit of insurance. An agreed settlement means a settlement and release of liability signed by us, the insured and the claimant or the claimant's legal representative.

4. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under Coverages A or B of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when **b.** below applies. If other insurance is also primary, we will share with all that other insurance by the method described in **c.** below.

b. Excess Insurance

This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis:

(1) Your Work

That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";

(2) Premises Rented To You

That is fire, lightning or explosion insurance for premises rented to you or temporarily occupied by you with permission of the owner;

(3) Tenant Liability

That is insurance purchased by you to cover your liability as a tenant for "property damage" to premises rented to you or temporarily occupied by you with permission of the owner;

(4) Aircraft, Auto Or Watercraft

If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion g. of Section I – Coverage A – Bodily Injury And Property Damage Liability;

(5) Property Damage to Borrowed Equipment Or Use Of Elevators

If the loss arises out of "property damage" to borrowed equipment or the use of elevators to the extent not subject to Exclusion j. of Section I - Coverage A - Bodily Injury And Property Damage Liability;

(6) When You Are Added As An Additional Insured To Other Insurance

Any other insurance available to you covering liability for damages arising out of the premises or operations, or products and completed operations, for which you have been added as an additional insured by that insurance; or

(7) When You Add Others As An Additional Insured To This Insurance

Any other insurance available to an additional insured.

However, the following provisions apply to other insurance available to any person or organization who is an additional insured under this coverage part.

(a) Primary Insurance When Required By Contract

This insurance is primary if you have agreed in a written contract or written agreement that this insurance be primary. If other insurance is also primary, we will share with all that other insurance by the method described in **c.** below.

(b) Primary And Non-Contributory To Other Insurance When Required By Contract

If you have agreed in a written contract, written agreement, or permit that this insurance is primary and non-contributory with the additional insured's own insurance, this insurance is primary and we will not seek contribution from that other insurance.

Paragraphs (a) and (b) do not apply to other insurance to which the additional insured has been added as an additional insured.

When this insurance is excess, we will have no duty under Coverages A or B to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

(1) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and

(2) The total of all deductible and self-insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

c. Method Of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

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If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

5. Premium Audit

a. We will compute all premiums for this Coverage Part in accordance with our rules and rates.

b. Premium shown in this Coverage Part as advance premium is a deposit premium only. At the close of each audit period we will compute the earned premium for that period and send notice to the first Named Insured. The due date for audit and retrospective premiums is the date shown as the due date on the bill. If the sum of the advance and audit premiums paid for the policy period is greater than the earned premium, we will return the excess to the first Named Insured.

c. The first Named Insured must keep records of the information we need for premium computation, and send us copies at such times as we may request.

6. Representations

a. **When You Accept This Policy**

By accepting this policy, you agree:

(1) The statements in the Declarations are accurate and complete;

(2) Those statements are based upon representations you made to us; and

(3) We have issued this policy in reliance upon your representations.

b. **Unintentional Failure To Disclose Hazards**

If unintentionally you should fail to disclose all hazards relating to the conduct of your business that exist at the inception date of this Coverage Part, we shall not deny coverage under this Coverage Part because of such failure.

7. Separation Of Insureds

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned in this Coverage Part to the first Named Insured, this insurance applies:

a. As if each Named Insured were the only Named Insured; and

b. Separately to each insured against whom claim is made or "suit" is brought.

8. Transfer Of Rights Of Recovery Against Others To Us

a. **Transfer of Rights Of Recovery**

If the insured has rights to recover all or part of any payment, including Supplementary Payments, we have made under this Coverage Part, those rights are transferred to us. The insured must do nothing after loss to impair them. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

b. **Waiver Of Rights Of Recovery (Waiver Of Subrogation)**

If the insured has waived any rights of recovery against any person or organization for all or part of any payment, including Supplementary Payments, we have made under this Coverage Part, we also waive that right, provided the insured waived their rights of recovery against such person or organization in a contract, agreement or permit that was executed prior to the injury or damage.

9. When We Do Not Renew

If we decide not to renew this Coverage Part, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the nonrenewal not less than 30 days before the expiration date.

If notice is mailed, proof of mailing will be sufficient proof of notice.

SECTION V – DEFINITIONS

1. "Advertisement" means the widespread public dissemination of information or images that has the purpose of inducing the sale of goods, products or services through:

a. **(1)** Radio;

(2) Television;

(3) Billboard;

(4) Magazine;

(5) Newspaper; or

b. Any other publication that is given widespread public distribution.

However, "advertisement" does not include:

a. The design, printed material, information or images contained in, on or upon the packaging or labeling of any goods or products; or

b. An interactive conversation between or among persons through a computer network.

2. "Advertising idea" means any idea for an "advertisement".

3. "Asbestos hazard" means an exposure or threat of exposure to the actual or alleged properties of asbestos and includes the mere presence of asbestos in any form.

4. "Auto" means a land motor vehicle, trailer or semitrailer designed for travel on public roads, including any attached machinery or equipment. But "auto" does not include "mobile equipment".

5. "Bodily injury" means physical:

a. Injury;

b. Sickness; or

c. Disease

sustained by a person and, if arising out of the above, mental anguish or death at any time.

6. "Coverage territory" means:

   a. The United States of America (including its territories and possessions), Puerto Rico and Canada;

   b. International waters or airspace, but only if the injury or damage occurs in the course of travel or transportation between any places included in a. above; or

   c. All other parts of the world if the injury or damage arises out of:

     (1) Goods or products made or sold by you in the territory described in a. above;

     (2) The activities of a person whose home is in the territory described in a. above, but is away for a short time on your business; or

     (3) "Personal and advertising injury" offenses that take place through the Internet or similar electronic means of communication

provided the insured's responsibility to pay damages is determined in the United States of America (including its territories and possessions), Puerto Rico or Canada, in a "suit" on the merits according to the substantive law in such territory or in a settlement we agree to.

7. "Employee" includes a "leased worker". "Employee" does not include a "temporary worker".

8. "Employment-Related Practices" means:

   a. Refusal to employ a person;

   b. Termination of a person's employment; or

   c. Employment-related practices, policies, acts or omissions, such as coercion, demotion, evaluation, reassignment, discipline, defamation, harassment, humiliation or discrimination directed at a person.

9. "Executive officer" means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document.

10. "Hostile fire" means one which becomes uncontrollable or breaks out from where it was intended to be.

11. "Impaired property" means tangible property, other than "your product" or "your work", that cannot be used or is less useful because:

   a. It incorporates "your product" or "your work" that is known or thought to be defective, deficient, inadequate or dangerous; or

   b. You have failed to fulfill the terms of a contract or agreement;

if such property can be restored to use by:

   a. The repair, replacement, adjustment or removal of "your product" or "your work"; or

   b. Your fulfilling the terms of the contract or agreement.

12. "Insured contract" means:

   a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning or explosion to premises while rented to you or temporarily occupied by you with permission of the owner is subject to the Damage to Premises Rented To You Limit described in Section III – Limits of Insurance;

   b. A sidetrack agreement;

   c. Any easement or license agreement, including an easement or license agreement in connection with construction or demolition operations on or within 50 feet of a railroad;

   d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;

   e. An elevator maintenance agreement;

   f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury" or "property damage" to a third person or organization, provided the "bodily injury" or "property damage" is caused, in whole or in part, by you or by those acting on your behalf. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. includes that part of any contract or agreement that indemnifies a railroad for "bodily injury" or "property damage" arising out of construction or demolition operations, within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road-beds, tunnel, underpass or crossing.

However, Paragraph f. does not include that part of any contract or agreement:

   (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:

     (a) Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

     (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage; or

   (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

13. "Leased worker" means a person leased to you by a labor leasing firm under an agreement between you and the labor leasing firm, to perform duties related to the conduct of your business. "Leased worker" does not include a "temporary worker".

14. "Loading or unloading" means the handling of property:

   a. After it is moved from the place where it is accepted for movement into or onto an aircraft, watercraft or "auto";

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b. While it is in or on an aircraft, watercraft or "auto"; or

c. While it is being moved from an aircraft, watercraft or "auto" to the place where it is finally delivered;

but "loading or unloading" does not include the movement of property by means of a mechanical device, other than a hand truck, that is not attached to the aircraft, watercraft or "auto".

15. "Mobile equipment" means any of the following types of land vehicles, including any attached machinery or equipment:

a. Bulldozers, farm machinery, forklifts and other vehicles designed for use principally off public roads;

b. Vehicles maintained for use solely on or next to premises you own or rent;

c. Vehicles that travel on crawler treads;

d. Vehicles, whether self-propelled or not, maintained primarily to provide mobility to permanently mounted:

(1) Power cranes, shovels, loaders, diggers or drills; or

(2) Road construction or resurfacing equipment such as graders, scrapers or rollers;

e. Vehicles not described in a., b., c. or d. above that are not self-propelled and are maintained primarily to provide mobility to permanently attached equipment of the following types:

(1) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment; or

(2) Cherry pickers and similar devices used to raise or lower workers;

f. Vehicles not described in a., b., c. or d. above maintained primarily for purposes other than the transportation of persons or cargo.

However, self-propelled vehicles with the following types of permanently attached equipment are not "mobile equipment" but will be considered "autos":

(1) Equipment, of at least 1,000 pounds gross vehicle weight, designed primarily for:

(a) Snow removal;

(b) Road maintenance, but not construction or resurfacing; or

(c) Street cleaning;

(2) Cherry pickers and similar devices mounted on automobile or truck chassis and used to raise or lower workers; and

(3) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment.

16. "Occurrence" means an accident, including continuous or repeated exposure to substantially the same general harmful conditions.

17. "Personal and advertising injury" means injury, including consequential "bodily injury", arising out of one or more of the following offenses:

a. False arrest, detention or imprisonment;

b. Malicious prosecution;

c. The wrongful eviction from, wrongful entry into, or invasion of the right of private occupancy of a room, dwelling or premises that a person occupies, committed by or on behalf of its owner, landlord or lessor;

d. Oral, written or electronic publication of material that slanders or libels a person or organization or disparages a person's or organization's goods, products or services;

e. Oral, written or electronic publication of material that violates a person's right of privacy;

f. Copying, in your "advertisement", a person's or organization's "advertising idea" or style of "advertisement";

g. Infringement of copyright, slogan, or title of any literary or artistic work, in your "advertisement"; or

h. Discrimination or humiliation that results in injury to the feelings or reputation of a natural person.

18. "Pollutants" mean any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

19. "Products-completed operations hazard":

a. Includes all "bodily injury" and "property damage" occurring away from premises you own or rent and arising out of "your product" or "your work" except:

(1) Products that are still in your physical possession; or

(2) Work that has not yet been completed or abandoned. However, "your work" will be deemed completed at the earliest of the following times:

(a) When all of the work called for in your contract has been completed.

(b) When all of the work to be done at the job site has been completed if your contract calls for work at more than one job site.

(c) When that part of the work done at a job site has been put to its intended use by any person or organization other than another contractor or subcontractor working on the same project.

Work that may need service, maintenance, correction, repair or replacement, but which is otherwise complete, will be treated as completed.

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b. Does not include "bodily injury" or "property damage" arising out of:

(1) The transportation of property, unless the injury or damage arises out of a condition in or on a vehicle not owned or operated by you, and that condition was created by the "loading or unloading" of that vehicle by any Insured;

(2) The existence of tools, uninstalled equipment or abandoned or unused materials; or

(3) Products or operations for which the classification, listed in the Declarations or in a policy schedule, states that products-completed operations are subject to the General Aggregate Limit.

20. "Property damage" means:

a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or

b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it.

As used in this definition, computerized or electronically stored data, programs or software are not tangible property. Electronic data means information, facts or programs:

a. Stored as or on;

b. Created or used on; or

c. Transmitted to or from;

computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

21. "Suit" means a civil proceeding in which damages because of "bodily injury", "property damage" or "personal and advertising injury" to which this insurance applies are alleged. "Suit" includes:

a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent; or

b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent.

22. "Temporary worker" means a person who is furnished to you to substitute for a permanent "employee" on leave or to meet seasonal or short-term workload conditions.

23. "Volunteer worker" means a person who

a. Is not your "employee";

b. Donates his or her work;

c. Acts at the direction of and within the scope of duties determined by you; and

d. Is not paid a fee, salary or other compensation by you or anyone else for their work performed for you.

24. "Your product":

a. Means:

(1) Any goods or products, other than real property, manufactured, sold, handled, distributed or disposed of by:

(a) You;

(b) Others trading under your name; or

(c) A person or organization whose business or assets you have acquired; and

(2) Containers (other than vehicles), materials, parts or equipment furnished in connection with such goods or products.

b. Includes

(1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your product"; and

(2) The providing of or failure to provide warnings or instructions.

c. Does not include vending machines or other property rented to or located for the use of others but not sold.

25. "Your work":

a. Means:

(1) Work or operations performed by you or on your behalf; and

(2) Materials, parts or equipment furnished in connection with such work or operations.

b. Includes

(1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your work", and

(2) The providing of or failure to provide warnings or instructions.

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DISYS Solutions Inc.
Policy #: 42 UEN BH7265
Effective 12/31/20-12/31/21

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

COMMERCIAL AUTOMOBILE BROAD FORM ENDORSEMENT - VIRGINIA

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

1. BROAD FORM INSURED

A. Employees as Insureds

Paragraph A.1. - WHO IS INSURED of SECTION II- LIABILITY COVERAGE Is amended to add:

d. Any "employee" of yours while using a covered "auto" you don't own, hire or borrow In your business or your personal affairs.

X **B. Primary and Non-Contributory if Required by Contract**

Only with respect to insurance provided to an additional Insured In 1.B. - Additional Insured If Required by Contract, the following provisions apply:

(3) Primary Insurance When Required By Contract

This insurance is primary if you have agreed in a written contract or written agreement that this insurance be primary. If other insurance is also primary, we will share with all that other insurance by the method described in Other Insurance 5.d.

(4) Primary And Non-Contributory To Other Insurance When Required By Contract

If you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance, this insurance is primary and we will not seek contribution from that other insurance.

Paragraphs (3) and (4) do not apply to other insurance to which the additional insured has been added as an additional insured.

When this insurance is excess, we will have no duty to defend the insured against any "suit" if any other Insurer has a duty to defend the Insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the Insured's rights against all those other insurers.

When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

(1) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and

(2) The total of all deductible and self-insured amounts under all that other insurance.

We will share the remaining loss, if any, by the method described in Other Insurance 5.d.

2. PHYSICAL DAMAGE - ADDITIONAL TEMPORARY TRANSPORTATION EXPENSE COVERAGE

Paragraph A.4.a. of SECTION III - PHYSICAL DAMAGE COVERAGE is amended to provide a limit of $50 per day and a maximum limit of $1,000.

3. HIRED AUTO - COVERAGE TERRITORY

Paragraph b.(5)(a) of GENERAL CONDITIONS 7. - POLICY PERIOD, COVERAGE TERRITORY of SECTION IV - BUSINESS AUTO CONDITIONS Is replaced by the following:

(a) A covered "auto" is leased, hired, rented or borrowed for a period of 180 days or less; and

4. LOAN/LEASE GAP COVERAGE

Under SECTION III - PHYSICAL DAMAGE COVERAGE, In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

A. The amount paid under the Physical Damage Coverage Section of the policy; and

B. Any:

(1) Overdue lease/loan payments at the time of the "loss";

(2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage. (3)Security deposits not returned by the lessor;

(3) Costs for extended warranties, Credit Life Insurance, Health, Accident or Disability Insurance purchased with the loan or lease; and

(4) Carry-over balances from previous loans or leases.

5. GLASS REPAIR - WAIVER OF DEDUCTIBLE

Under Paragraph D. - DEDUCTIBLE - of SECTION III - PHYSICAL DAMAGE COVERAGE, the following is added:

No deductible applies to glass damage if the glass is repaired rather than replaced.

6. AIRBAG COVERAGE

Under Paragraph B. EXCLUSIONS - of SECTION III - PHYSICAL DAMAGE COVERAGE, the following is added:

The exclusion relating to mechanical breakdown does not apply to the accidental discharge of an airbag.

7. TWO OR MORE DEDUCTIBLES

Under Paragraph D. - DEDUCTIBLE - of SECTION III - PHYSICAL DAMAGE COVERAGE, the following is added:

If another Hartford Financial Services Group, Inc. company policy or coverage form that is not an automobile policy or coverage form applies to the same "accident", the following applies:

(1) If the deductible under this Business Auto Coverage Form is the smaller (or smallest) deductible, it will be waived;

(2) If the deductible under this Business Auto Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

X 8. WAIVER OF SUBROGATION

TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US - of SECTION IV - BUSINESS AUTO CONDITIONS is amended by adding the following:

We waive any right of recovery we may have against any person or organization with whom you have a written contract that requires such waiver because of payments we make for damages under this Coverage Form.

9. HYBRID, ELECTRIC, OR NATURAL GAS VEHICLE PAYMENT COVERAGE

In the event of a total loss to a "non-hybrid" auto for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, then such Physical Damage Coverages are amended as follows:

a. If the auto is replaced with a "hybrid" auto or an auto powered solely by electricity or natural gas, we will pay an additional 10%, to a maximum of $2,500, of the "non-hybrid" auto's actual cash value or replacement cost, whichever is less,

b. The auto must be replaced and a copy of a bill of sale or new lease agreement received by us within 60 calendar days of the date of "loss,"

c. Regardless of the number of autos deemed a total loss, the most we will pay under this Hybrid, Electric, or Natural Gas Vehicle Payment Coverage provision for any one "loss" is $10,000.

For the purposes of the coverage provision,

a. A "non-hybrid" auto is defined as an auto that uses only an internal combustion engine to move the auto but does not include autos powered solely by electricity or natural gas.

b. A "hybrid" auto is defined as an auto with an internal combustion engine and one or more electric motors; and that uses the internal combustion engine and one or more electric motors to move the auto, or the internal combustion engine to charge one or more electric motors, which move the auto.

10. VEHICLE WRAP COVERAGE

In the event of a total loss to an "auto" for which Comprehensive, Specified Causes of Loss, or Collision coverages are provided under this Coverage Form, then such Physical Damage Coverages are amended to add the following:

In addition to the actual cash value of the "auto", we will pay up to $1,000 for vinyl vehicle wraps which are displayed on the covered "auto" at the time of total loss. Regardless of the number of autos deemed a total loss, the most we will pay under this Vehicle Wrap Coverage provision for any one "loss" is $5,000. For purposes of this coverage provision, signs or other graphics painted or magnetically affixed to the vehicle are not considered vehicle wraps.

HA 99 24 09 17

Blanket Waiver of Subrogation
VA, GA, TX, FL

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WORKERS' COMPENSATION BROAD FORM ENDORSEMENT
EXTENDED OPTIONS

Policy Number: 42 WE AB0KYJ   **Endorsement Number:**
Effective Date: 12/31/20   Effective hour is the same as stated on the Information Page of the policy.
Named Insured and Address: DISYS SOLUTIONS INC
44670 CAPE CT STE 100
ASHBURN VA 20147

Section I of this endorsement expands coverage provided under WC 00 00 00.
Section II of this endorsement provides additional coverage usually only provided by endorsement.
Section III of this endorsement is a Schedule of Covered States.
You may use the index to locate these coverage features quickly:

INDEX

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SECTION I

PARTS ONE and TWO

1. **WE WILL ALSO PAY**

   D. **We Will Also Pay** of Part One (WORKERS' COMPENSATION INSURANCE); and

   E. **We Will Also Pay** of Part Two (EMPLOYERS' LIABILITY INSURANCE) is replaced by the following:

   We Will Also Pay

   We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding, or suit we defend:

   1. reasonable expenses incurred at our request, **INCLUDING** loss of earnings;

   2. premiums for bonds to release attachments and for appeal bonds in bond amounts up to the limit of our liability under this insurance;

   3. litigation costs taxed against you;

   4. interest on a judgment as required by law until we offer the amount due under this law; and

   5. expenses we incur.

PART THREE

2. **How This Insurance Applies**

   Paragraph 4. of A. **How This Insurance Applies** of Part 3 (Other States Insurance) is replaced by the following:

   4. If you have work on the effective date of this policy in any state not listed in Item 3.A. of

the Information Page, coverage will not be afforded for that state unless we are notified within **sixty** days.

PART SIX

3. **Transfer Of Your Rights and Duties**

   C. **Transfer Of Your Rights and Duties** of Part 6 (Conditions) is replaced by the following:

   Your rights or duties under this policy may not be transferred without our written consent.

   If you die and we receive notice within **sixty** days after your death, we will cover your legal representative as insured.

4. **Cancellation**

   Paragraph **2.** of **D. Cancellation** of Part 6 (Conditions) is replaced by the following:

   2. We may cancel this policy. We must mail or deliver to you not less than **15** days advance written notice stating when the cancellation is to take effect. Mailing that notice to you at your mailing address shown in Item 1 of the Information Page will be sufficient to prove notice.

5. **Liberalization**

   If we adopt a change in this form that would broaden the coverage of this form without extra charge, the broader coverage will apply to this policy. It will apply when the change becomes effective in your state.

SECTION II

VOLUNTARY COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE

6. **Voluntary Compensation Insurance**

   A. **How This Insurance Applies**

   This insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

   1. The bodily injury must be sustained by any officer or employee not subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page.

   2. The bodily injury must arise out of and in the course of employment or incidental to work in a state shown in Item 3.A. of the Information Page.

   3. The bodily injury must occur in the United States of America, its territories or possessions, or Canada, and may occur elsewhere if the employee is a United States or Canadian citizen, or otherwise legal resident, and legally employed, in the United States or Canada and temporarily away from those places.

4. Bodily injury by accident must occur during the policy period.

5. Bodily injury by disease must be caused or aggravated by the conditions of the officer's or employee's employment. The officer's or employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.

B. We Will Pay

We will pay an amount equal to the benefits that would be required of you as if you and your employees were subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page. We will pay those amounts to the persons who would be entitled to them under the law.

C. Exclusion

This insurance does not cover:

1. any obligation imposed by workers' compensation or occupational disease law or any similar law.

2. bodily injury intentionally caused or aggravated by you.

3. officers or employees who have elected not to be subject to the state workers' compensation law.

4. partners or sole proprietors not covered under the Standard Sole Proprietors, Partners, Officers and Others Coverage Endorsement.

D. Before We Pay

Before we pay benefits to the persons entitled to them, they must:

1. Release you and us, in writing, of all responsibility for the injury or death.

2. Transfer to us their right to recover from others who may be responsible for the injury or death.

3. Cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits of this insurance fail to do those things, our duty to pay ends at once. If they claim damages from you or from us for the injury or death, our duty to pay ends at once.

E. Recovery From Others

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we paid. We will pay the balance to the persons entitled to it. If the persons entitled to the benefits of this insurance make a recovery from others, they must reimburse us for the benefits we paid them.

F. Employers' Liability Insurance

Part Two (Employers' Liability Insurance) applies to bodily injury covered by this endorsement as though the State of Employment was shown in Item 3.A. of the Information Page.

This provision 6. does not apply in New Jersey or Wisconsin.

EMPLOYERS' LIABILITY STOP GAP COVERAGE

7. **Employers' Liability Stop Gap Coverage**

A. This coverage only applies in Montana, North Dakota, Ohio, Washington, West Virginia and Wyoming.

B. Part One (Workers' Compensation Insurance) does not apply to work in states shown in Paragraph A above.

C. Part Two (Employers' Liability Insurance) applies in the states, shown in Paragraph A., as though they were shown in Item 3.A. of the Information Page.

D. Part Two, Section C. **Exclusions** is changed by adding these exclusions.

This insurance does not cover;

5. bodily injury intentionally caused or aggravated by you or in Ohio bodily injury resulting from an act which is determined by an Ohio court of law to have been committed by you with the belief than an injury is substantially certain to occur. However, the cost of defending such claims or suits in Ohio is covered.

13. bodily injury sustained by any member of the flying crew of any aircraft.

14. any claim for bodily injury with respect to which you are deprived of any defense or defenses or are otherwise subject to penalty because of default in premium under the provisions of the workers' compensation law or laws of a state shown in Paragraph A.

E. This insurance applies to damages for which you are liable under West Virginia Code Annot. S 23-4-2.

EXTENDED OPTIONS

1. Employers' Liability Insurance

Item 3.B. of the Information Page is replaced by the following:

B. Employers' Liability Insurance:

1. **Part Two** of the policy applies to work in each state listed in Item 3.A.

The Limits of Liability under Part Two are the higher of:

Bodily Injury
by Accident **$500,000 Each Accident**

Bodily Injury
by Disease **$500,000 Policy Limit**

Bodily Injury
by Disease **$500,000 Each Employee**

OR

2. The amount shown in the Information Page.

This provision 1 of **EXTENDED OPTIONS** does not apply in New York because the Limits Of Our Liability are unlimited.

In this provision the limits are changed from **$500,000** to **$1,000,000** in California.

2. Unintentional Failure to Disclose Hazards

If you unintentionally should fail to disclose all existing hazards at the inception date of your policy, we shall not deny coverage under this policy because of such failure.

3. Waiver of Our Right To Recover From Others

A. We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against any person or organization for whom you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the agreement.

B. This provision 3. does not apply in the states of Pennsylvania and Utah.

4. Foreign Voluntary Compensation and Employers' Liability Reimbursement

A. How This Reimbursement Applies

This reimbursement provision applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must be sustained by an officer or employee.

2. The bodily injury must occur in the course of employment necessary or incidental to work in a country not listed in Exclusion C.1. of this provision.

3. Bodily injury by accident must occur during the policy period.

4. Bodily injury by disease must be caused or aggravated by the conditions of your employment. The officer or employee's last exposure to those conditions of your employment must occur during the policy period.

B. We Will Reimburse

We will reimburse you for all amounts paid by you whether such amounts are:

1. voluntary payments for the benefits that would be required of you if you and your officers or employees were subject to any workers' compensation law of the state of hire of the individual employee.

2. sums to which Part Two (Employers' Liability Insurance) would apply if the Country of Employment were shown in Item 3.A. of the Information Page.

C. Exclusions

This insurance does not cover:

1. any occurrences in the United States, Canada, and any country or jurisdiction which is the subject of trade or economic sanctions imposed by the laws or regulations of the United States of America in effect as of the inception date of this policy.

2. any obligation imposed by a workers' compensation or occupational disease law, or similar law.

3. bodily injury intentionally caused or aggravated by you.

4. liability for any consequence, whether direct or indirect, of war, invasion, act of Foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power. No endorsement now or subsequently attached to this policy shall be construed as overriding or waiving this limitation unless specific reference is made thereto.

D. Before We Pay

Before we reimburse you for the benefits to the persons entitled to them, you must have them:

1. release you and us, in writing, of all responsibility for the injury or death,

2. transfer to us their right to recover from others who may be responsible for their injury or death,

3. cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits paid fail to do these things, our duty to reimburse ends at once. If they claim damages from us for the injury or death, our duty to reimburse ends at once.

E. Recovery From Others

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we reimbursed. We will pay the balance to the persons entitled to it. If persons entitled to the benefits make a recovery from others, they must repay us for the amounts that we have reimbursed you.

F. Reimbursement for Actual Loss Sustained

This endorsement provides only for reimbursement for the loss you actually sustain. In order for you to recover loss or expenses under this reimbursement you must:

1. actually sustain and pay the loss or expense in money after trial, or

2. secure our consent for the payment of the loss or expense.

G. Repatriation

Our reimbursement includes the additional expenses of repatriation to the United States of America necessarily incurred as a direct result of bodily injury.

Our reimbursement shall be limited as follows:

1. to the amount by which such expenses exceed the normal cost of returning the officer or employee if in good health, or

2. in the event of death, to the amount by which such expenses exceed the normal cost of returning the officer or employee if alive and in good health.

In no event shall our reimbursement exceed the bodily injury by accident limit shown in Item 3.B. of the Information Page as respects any one such officer or employee whether dead or alive.

H. Endemic Disease

The word "disease" includes any endemic diseases.

The coverage applies as if endemic diseases were included in the provisions of the workers' compensation law.

5. Longshore and Harbor Workers' Compensation Act Coverage

General Section C. Workers' Compensation Law is replaced by the following:

C. Workers' Compensation Law

Workers' Compensation Law means the workers or workers' compensation law and occupational disease law of each state or territory named in Item 3.A. of the Information Page and the Longshore and Harbor Workers' Compensation Act (33 USC Sections 901-950). It includes any amendments to those laws that are in effect during the policy period. It does not include any other federal workers or workers' compensation law, other federal occupational disease law or the provisions of any law that provide nonoccupational disability benefits.

Part Two (Employers' Liability Insurance), C. Exclusions, exclusion 8, does not apply to work subject to the Longshore and Harbor Workers' Compensation Act.

This coverage does not apply to work subject to the Defense Base Act, the Outer Continental Shelf Lands Act, or the Nonappropriated Fund Instrumentalities Act.

SECTION III

1. SCHEDULE OF COVERED STATES

   A. This endorsement only applies in the states listed in this Schedule of Covered States.

   C. Schedule of Covered States:

VA, GA TX, FL

B. If a state, shown in Item 3.A. of the Information Page, approves this endorsement after the effective date of this policy, this endorsement will apply to this policy. The coverage will apply in the new state on the effective date of the state approval.

Countersigned by _____

                                                         Authorized Representative

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WORKERS' COMPENSATION BROAD FORM ENDORSEMENT
EXTENDED OPTIONS

Policy Number: 42 WE AB0KYJ **Endorsement Number:**
Effective Date: 12/31/2020 Effective hour is the same as stated on the Information Page of the policy.
Named Insured and Address: DISYS SOLUTIONS INC
44670 CAPE CT STE 100
ASHBURN VA 20147

Section I of this endorsement expands coverage provided under WC 00 00 00.
Section II of this endorsement provides additional coverage usually only provided by endorsement.
Section III of this endorsement is a Schedule of Covered States.
You may use the index to locate these coverage features quickly:

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SECTION I

PARTS ONE and TWO

1. WE WILL ALSO PAY

D. **We Will Also Pay** of **Part One** (WORKERS' COMPENSATION INSURANCE); and

E. **We Will Also Pay** of **Part Two** (EMPLOYERS' LIABILITY INSURANCE) is replaced by the following:

We Will Also Pay

We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding, or suit we defend:

1. reasonable expenses incurred at our request, **INCLUDING** loss of earnings;

2. premiums for bonds to release attachments and for appeal bonds in bond amounts up to the limit of our liability under this insurance;

3. litigation costs taxed against you;

4. interest on a judgment as required by law until we offer the amount due under this law; and

5. expenses we incur.

PART THREE

2. How This Insurance Applies

Paragraph **4.** of **A. How This Insurance Applies** of **Part 3** (Other States Insurance) is replaced by the following:

4. If you have work on the effective date of this policy in any state not listed in Item 3.A. of the Information Page, coverage will not be afforded for that state unless we are notified within **sixty** days.

PART SIX

3. Transfer Of Your Rights and Duties

C. **Transfer Of Your Rights and Duties** of **Part 6** (Conditions) is replaced by the following:

Your rights or duties under this policy may not be transferred without our written consent.

If you die and we receive notice within **sixty** days after your death, we will cover your legal representative as insured.

4. Liberalization

If we adopt a change in this form that would broaden the coverage of this form without extra charge, the broader coverage will apply to this policy. It will apply when the change becomes effective in your state.

SECTION II

VOLUNTARY COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE

5. Voluntary Compensation Insurance

A. How This Insurance Applies

This insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must be sustained by any officer or employee not subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page.

2. The bodily injury must arise out of and in the course of employment or incidental to work in a state shown in Item 3.A. of the Information Page.

3. The bodily injury must occur in the United States of America, its territories or possessions, or Canada, and may occur elsewhere if the employee is a United States or Canadian citizen, or otherwise legal resident, and legally employed, in the United States or Canada and temporarily away from those places.

4. Bodily injury by accident must occur during the policy period.

5. Bodily injury by disease must be caused or aggravated by the conditions of the

officer's or employee's employment. The officer's or employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.

B. We Will Pay

We will pay an amount equal to the benefits that would be required of you as if you and your employees were subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page. We will pay those amounts to the persons who would be entitled to them under the law.

C. Exclusion

This insurance does not cover:

1. any obligation imposed by workers' compensation or occupational disease law or any similar law.

2. bodily injury intentionally caused or aggravated by you.

3. officers or employees who have elected not to be subject to the state workers' compensation law.

4. partners or sole proprietors not covered under the Standard Sole Proprietors, Partners, Officers and Others Coverage Endorsement.

D. Before We Pay

Before we pay benefits to the persons entitled to them, they must:

1. Release you and us, in writing, of all responsibility for the injury or death.

2. Transfer to us their right to recover from others who may be responsible for the injury or death.

3. Cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits of this insurance fail to do those things, our duty to pay ends at once. If they claim damages from you or from us for the injury or death, our duty to pay ends at once.

E. Recovery From Others

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we paid. We will pay the balance to the persons entitled to it.

If the persons entitled to the benefits of this insurance make a recovery from others, they must reimburse us for the benefits we paid them.

F. Employers' Liability Insurance

Part Two (Employers' Liability Insurance) applies to bodily injury covered by this endorsement as though the State of Employment was shown in Item 3.A. of the Information Page.

This provision 5. does not apply in New Jersey or Wisconsin.

EMPLOYERS' LIABILITY STOP GAP COVERAGE

6. **Employers' Liability Stop Gap Coverage**

A. This coverage only applies in Montana, North Dakota, Ohio, Washington, West Virginia and Wyoming.

B. Part One (Workers' Compensation Insurance) does not apply to work in states shown in Paragraph A above.

C. Part Two (Employers' Liability Insurance) applies in the states, shown in Paragraph A., as though they were shown in Item 3.A. of the Information Page.

D. Part Two, Section C. **Exclusions** is changed by adding these exclusions.

This insurance does not cover;

5. bodily injury intentionally caused or aggravated by you or in Ohio bodily injury resulting from an act which is determined by an Ohio court of law to have been committed by you with the belief than an injury is substantially certain to occur. However, the cost of defending such claims or suits in Ohio is covered.

13. bodily injury sustained by any member of the flying crew of any aircraft.

14. any claim for bodily injury with respect to which you are deprived of any defense or defenses or are otherwise subject to penalty because of default in premium under the provisions of the workers' compensation law or laws of a state shown in Paragraph A.

E. This insurance applies to damages for which you are liable under West Virginia Code Annot. S 23-4-2.

EXTENDED OPTIONS

1. Employers' Liability Insurance

Item **3.B.** of the **Information Page** is replaced by the following:

B. Employers' Liability Insurance:

1. **Part Two** of the policy applies to work in each state listed in Item 3.A.

    The Limits of Liability under Part Two are the higher of:

    Bodily Injury by Accident $500,000   Each Accident

    Bodily Injury by Disease $500,000   Policy Limit

    Bodily Injury by Disease $500,000   Each Employee

    OR

2. The amount shown in the Information Page.

This provision 1 of **EXTENDED OPTIONS** does not apply in New York because the Limits Of Our Liability are unlimited.

In this provision the limits are changed from **$500,000** to **$1,000,000** in California.

2. Unintentional Failure to Disclose Hazards

If you unintentionally should fail to disclose all existing hazards at the inception date of your policy, we shall not deny coverage under this policy because of such failure.

3. Waiver of Our Right To Recover From Others

A. We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against any person or organization for whom you perform work under a written contract that requires you to obtain this agreement from us.

   This agreement shall not operate directly or indirectly to benefit anyone not named in the agreement.

B. This provision 3. does not apply in the states of Pennsylvania and Utah.

4. Foreign Voluntary Compensation and Employers' Liability Reimbursement

A. How This Reimbursement Applies

This reimbursement provision applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must be sustained by an officer or employee.

2. The bodily injury must occur in the course of employment necessary or incidental to work in a country not listed in Exclusion C.1. of this provision.

3. Bodily injury by accident must occur during the policy period.

4. Bodily injury by disease must be caused or aggravated by the conditions of your employment. The officer or employee's last exposure to those conditions of your employment must occur during the policy period.

B. We Will Reimburse

We will reimburse you for all amounts paid by you whether such amounts are:

1. voluntary payments for the benefits that would be required of you if you and your officers or employees were subject to any workers' compensation law of the state of hire of the individual employee.

2. sums to which Part Two (Employers' Liability Insurance) would apply if the Country of Employment were shown in Item 3.A. of the Information Page.

C. Exclusions

This insurance does not cover:

1. any occurrences in the United States, Canada, and any country or jurisdiction which is the subject of trade or economic sanctions imposed by the laws or regulations of the United States of America in effect as of the inception date of this policy.

2. any obligation imposed by a workers' compensation or occupational disease law, or similar law.

3. bodily injury intentionally caused or aggravated by you.

4. liability for any consequence, whether direct or indirect, of war, invasion, act of Foreign enemy, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power. No endorsement now or subsequently attached to this policy shall be construed as overriding or waiving this limitation unless specific reference is made thereto.

D. Before We Pay

Before we reimburse you for the benefits to the persons entitled to them, you must have them:

1. release you and us, in writing, of all responsibility for the injury or death,

2. transfer to us their right to recover from others who may be responsible for their injury or death,

3. cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits paid fail to do these things, our duty to reimburse ends at once. If they claim damages from us for the injury or death, our duty to reimburse ends at once.

E. Recovery From Others

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we reimbursed. We will pay the balance to the persons entitled to it. If persons entitled to the benefits make a recovery from others, they must repay us for the amounts that we have reimbursed you.

F. Reimbursement for Actual Loss Sustained

This endorsement provides only for reimbursement for the loss you actually sustain. In order for you to recover loss or expenses under this reimbursement you must:

1. actually sustain and pay the loss or expense in money after trial, or

2. secure our consent for the payment of the loss or expense.

G. Repatriation

Our reimbursement includes the additional expenses of repatriation to the United States of America necessarily incurred as a direct result of bodily injury.

Our reimbursement shall be limited as follows:

1. to the amount by which such expenses exceed the normal cost of returning the officer or employee if in good health, or

2. in the event of death, to the amount by which such expenses exceed the normal cost of returning the officer or employee if alive and in good health.

In no event shall our reimbursement exceed the bodily injury by accident limit shown in Item 3.B. of the Information Page as respects any one such officer or employee whether dead or alive.

H. Endemic Disease

The word "disease" includes any endemic diseases.

The coverage applies as if endemic diseases were included in the provisions of the workers' compensation law.

5. **Longshore and Harbor Workers' Compensation Act Coverage**

General Section C. Workers' Compensation Law is replaced by the following:

C. Workers' Compensation Law

Workers' Compensation Law means the workers or workers' compensation law and occupational disease law of each state or territory named in Item 3.A. of the Information Page and the Longshore and Harbor Workers' Compensation Act (33 USC Sections 901-950). It includes any amendments to those laws that are in effect during the policy period. It does not include any other federal workers or workers' compensation law, other federal occupational disease law or the provisions of any law that provide nonoccupational disability benefits.

Part Two (Employers' Liability Insurance), C. Exclusions, exclusion 8, does not apply to work subject to the Longshore and Harbor Workers' Compensation Act.

This coverage does not apply to work subject to the Defense Base Act, the Outer Continental Shelf Lands Act, or the Nonappropriated Fund Instrumentalities Act.
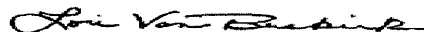
SECTION III

1. **SCHEDULE OF COVERED STATES**

   A. This endorsement only applies in the states listed in this Schedule of Covered States.

   C. Schedule of Covered States:

MD, DC

B. If a state, shown in Item 3.A. of the Information Page, approves this endorsement after the effective date of this policy, this endorsement will apply to this policy. The coverage will apply in the new state on the effective date of the state approval

Countersigned by _____

Authorized Representative

Blanket Waiver of Subrogation - NC

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WORKERS' COMPENSATION BROAD FORM ENDORSEMENT EXTENDED OPTIONS

Policy Number: 42 WE AB0KYJ   **Endorsement Number:**
Effective Date: 12/31/2020   Effective hour is the same as stated on the Information Page of the policy.
Named Insured and Address: DISYS SOLUTIONS INC
44670 CAPE CT STE 100
ASHBURN VA 20147

Section I of this endorsement expands coverage provided under WC 00 00 00.
Section II of this endorsement provides additional coverage usually only provided by endorsement.
Section III of this endorsement is a Schedule of Covered States.
You may use the index to locate these coverage features quickly:

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Form WC 99 03 13 B Printed in U.S.A. (Ed. 8/00)

Policy Expiration Date: 12/31/19

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SECTION I

PARTS ONE and TWO

1. WE WILL ALSO PAY

D. We Will Also Pay of **Part One** (WORKERS' COMPENSATION INSURANCE); and

E. We Will Also Pay of **Part Two** (EMPLOYERS' LIABILITY INSURANCE) is replaced by the following:

We Will Also Pay

We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding, or suit we defend:

1. reasonable expenses incurred at our request, **INCLUDING** loss of earnings;

2. premiums for bonds to release attachments and for appeal bonds in bond amounts up to the limit of our liability under this insurance;

3. litigation costs taxed against you;

4. interest on a judgment as required by law until we offer the amount due under this law; and

5. expenses we incur.

PART THREE

2. How This Insurance Applies

Paragraph **4.** of **A. How This Insurance Applies** of **Part 3** (Other States Insurance) is replaced by the following:

4. If you have work on the effective date of this policy in any state not listed in Item 3.A. of the Information Page, coverage will not be afforded for that state unless we are notified within **sixty** days.

PART SIX

3. Transfer Of Your Rights and Duties

C. Transfer Of Your Rights and Duties of **Part 6** (Conditions) is replaced by the following:

Your rights or duties under this policy may not be transferred without our written consent.

If you die and we receive notice within **sixty** days after your death, we will cover your legal representative as insured.

4. Liberalization

If we adopt a change in this form that would broaden the coverage of this form without extra charge, the broader coverage will apply to this policy. It will apply when the change becomes effective in your state.

SECTION II

VOLUNTARY COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE

5. Voluntary Compensation Insurance

A. How This Insurance Applies

This insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must be sustained by any officer or employee not subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page.

2. The bodily injury must arise out of and in the course of employment or incidental to work in a state shown in Item 3.A. of the Information Page.

3. The bodily injury must occur in the United States of America, its territories or possessions, or Canada, and may occur elsewhere if the employee is a United States or Canadian citizen, or otherwise legal resident, and legally employed, in the United States or Canada and temporarily away from those places.

4. Bodily injury by accident must occur during the policy period.

5. Bodily injury by disease must be caused or aggravated by the conditions of the

officer's or employee's employment. The officer's or employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.

B. **We Will Pay**

We will pay an amount equal to the benefits that would be required of you as if you and your employees were subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page. We will pay those amounts to the persons who would be entitled to them under the law.

C. **Exclusion**

This insurance does not cover:

1. any obligation imposed by workers' compensation or occupational disease law or any similar law.

2. bodily injury intentionally caused or aggravated by you.

3. Officers or employees who have elected not to be subject to the state workers' compensation law.

4. partners or sole proprietors not covered under the Standard Sole Proprietors, Partners, Officers and Others Coverage Endorsement.

D. **Before We Pay**

Before we pay benefits to the persons entitled to them, they must:

1. Release you and us, in writing, of all responsibility for the injury or death.

2. Transfer to us their right to recover from others who may be responsible for the injury or death.

3. Cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits of this insurance fail to do those things, our duty to pay ends at once. If they claim damages from you or from us for the injury or death, our duty to pay ends at once.

E. **Recovery From Others**

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we paid. We will

pay the balance to the persons entitled to it. If the persons entitled to the benefits of this insurance make a recovery from others, they must reimburse us for the benefits we paid them.

F. **Employers' Liability Insurance**

Part Two (Employers' Liability Insurance) applies to bodily injury covered by this endorsement as though the State of Employment was shown in Item 3.A. of the Information Page.

This provision 5. does not apply in New Jersey or Wisconsin.

EMPLOYERS' LIABILITY STOP GAP COVERAGE

6. **Employers' Liability Stop Gap Coverage**

A. This coverage only applies in Montana, North Dakota, Ohio, Washington, West Virginia and Wyoming.

B. Part One (Workers' Compensation Insurance) does not apply to work in states shown in Paragraph A above.

C. Part Two (Employers' Liability Insurance) applies in the states, shown in Paragraph A., as though they were shown in Item 3.A. of the Information Page.

D. Part Two, Section C. **Exclusions** is changed by adding these exclusions.

This insurance does not cover;

5. bodily injury intentionally caused or aggravated by you or in Ohio bodily injury resulting from an act which is determined by an Ohio court of law to have been committed by you with the belief than an injury is substantially certain to occur. However, the cost of defending such claims or suits in Ohio is covered.

13. bodily injury sustained by any member of the flying crew of any aircraft.

14. any claim for bodily injury with respect to which you are deprived of any defense or defenses or are otherwise subject to penalty because of default in premium under the provisions of the workers' compensation law or laws of a state shown in Paragraph A.

E. This insurance applies to damages for which you are liable under West Virginia Code Annot. S 23-4-2.

EXTENDED OPTIONS

1. Employers' Liability Insurance

Item 3.B. of the **Information Page** is replaced by the following:

B. Employers' Liability Insurance:

1. **Part Two** of the policy applies to work in each state listed in Item 3.A.

The Limits of Liability under Part Two are the higher of:

Bodily Injury by Accident	$500,000	Each Accident
Bodily Injury by Disease	$500,000	Policy Limit
Bodily Injury by Disease	$500,000	Each Employee

OR

2. The amount shown in the Information Page.

This provision 1 of **EXTENDED OPTIONS** does not apply in New York because the Limits Of Our Liability are unlimited.

In this provision the limits are changed from **$500,000** to **$1,000,000** in California.

2. Unintentional Failure to Disclose Hazards

If you unintentionally should fail to disclose all existing hazards at the inception date of your policy, we shall not deny coverage under this policy because of such failure.

3. Waiver of Our Right To Recover From Others

A. We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against any person or organization for whom you perform work under a written contract that requires you to obtain this agreement from us.

This agreement shall not operate directly or indirectly to benefit anyone not named in the agreement.

B. This provision 3. Does not apply in the states of Pennsylvania and Utah.

4. Longshore and Harbor Workers' Compensation Act Coverage

General Section C. Workers' Compensation Law is replaced by the following:

C. Workers' Compensation Law

Workers' Compensation Law means the workers or workers' compensation law and occupational disease law of each state or territory named in Item 3.A. of the Information Page and the Longshore and Harbor Workers' Compensation Act (33 USC Sections 901-950). It includes any amendments to those laws that are in effect during the policy period. It does not include any other federal workers or workers' compensation law, other federal occupational disease law or the provisions of any law that provide nonoccupational disability benefits.

Part Two (Employers' Liability Insurance), C. Exclusions, exclusion 8, does not apply to work subject to the Longshore and Harbor Workers' Compensation Act.

This coverage does not apply to work subject to the Defense Base Act, the Outer Continental Shelf Lands Act, or the Nonappropriated Fund Instrumentalities Act.
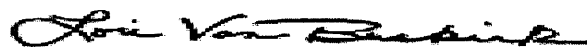
SECTION III

1. **SCHEDULE OF COVERED STATES**

   A. This endorsement only applies in the states listed in this Schedule of Covered States.

   C. Schedule of Covered States:

NC

B. If a state, shown in Item 3.A. of the Information Page, approves this endorsement after the effective date of this policy, this endorsement will apply to this policy. The coverage will apply in the new state on the effective date of the state approval.

Countersigned by _____

Authorized Representative

Blanket of Waiver of Subrogation
SC

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WORKERS' COMPENSATION BROAD FORM ENDORSEMENT

Policy Number: 42 WE AB0KYJ   **Endorsement Number:**
Effective Date: 12/31/2020   Effective hour is the same as stated on the Information Page of the policy.
Named Insured and Address: DISYS SOLUTIONS INC
                               44670 CAPE CT STE 100
                               ASHBURN VA 20147

Section I of this endorsement expands coverage provided under WC 00 00 00.
Section II of this endorsement provides additional coverage usually only provided by endorsement.
Section III of this endorsement is a Schedule of Covered States.
You may use the index to locate these coverage features quickly:

INDEX

Form WC 99 03 00 B Printed in U.S.A. (Ed. 8/00)

Policy Expiration Date: 12/31/19

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SECTION I

PARTS ONE and TWO

1. WE WILL ALSO PAY

D. **We Will Also Pay** of **Part One** (WORKERS' COMPENSATION INSURANCE); and

E. **We Will Also Pay** of **Part Two** (EMPLOYERS' LIABILITY INSURANCE) is replaced by the following:

We Will Also Pay

We will also pay these costs, in addition to other amounts payable under this insurance, as part of any claim, proceeding, or suit we defend:

1. reasonable expenses incurred at our request, **INCLUDING** loss of earnings;

2. premiums for bonds to release attachments and for appeal bonds in bond amounts up to the limit of our liability under this insurance;

3. litigation costs taxed against you;

4. interest on a judgment as required by law until we offer the amount due under this law; and

5. expenses we incur.

PART THREE

2. How This Insurance Applies

Paragraph **4.** of **A. How This Insurance Applies** of **Part 3** (Other States Insurance) is replaced by the following:

4. If you have work on the effective date of this policy in any state not listed in Item 3.A. of

the Information Page, coverage will not be afforded for that state unless we are notified within **sixty** days.

PART SIX

3. Transfer Of Your Rights and Duties

C. **Transfer Of Your Rights and Duties** of **Part 6** (Conditions) is replaced by the following:

Your rights or duties under this policy may not be transferred without our written consent.

If you die and we receive notice within **sixty** days after your death, we will cover your legal representative as insured.

4. Cancellation

Paragraph **2.** of **D. Cancellation** of **Part 6** (Conditions) is replaced by the following:

2. We may cancel this policy. We must mail or deliver to you not less than **15** days advance written notice stating when the cancellation is to take effect. Mailing that notice to you at your mailing address shown in Item 1 of the Information Page will be sufficient to prove notice.

5. Liberalization

If we adopt a change in this form that would broaden the coverage of this form without extra charge, the broader coverage will apply to this policy. It will apply when the change becomes effective in your state.

SECTION II

VOLUNTARY COMPENSATION AND EMPLOYERS' LIABILITY COVERAGE

6. Voluntary Compensation Insurance

A. **How This Insurance Applies**

This insurance applies to bodily injury by accident or bodily injury by disease. Bodily injury includes resulting death.

1. The bodily injury must be sustained by any officer or employee not subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page.

2. The bodily injury must arise out of and in the course of employment or incidental to work in a state shown in Item 3.A. of the Information Page.

3. The bodily injury must occur in the United States of America, its territories or possessions, or Canada, and may occur elsewhere if the employee is a United States or Canadian citizen, or otherwise legal resident, and legally employed, in the United States or Canada and temporarily away from those places.

4. Bodily injury by accident must occur during the policy period.

5. Bodily injury by disease must be caused or aggravated by the conditions of the officer's or employee's employment. The officer's or employee's last day of last exposure to the conditions causing or aggravating such bodily injury by disease must occur during the policy period.

B. We Will Pay

We will pay an amount equal to the benefits that would be required of you as if you and your employees were subject to the workers' compensation law of any state shown in Item 3.A. of the Information Page. We will pay those amounts to the persons who would be entitled to them under the law.

C. Exclusion

This insurance does not cover:

1. any obligation imposed by workers' compensation or occupational disease law or any similar law.

2. bodily injury intentionally caused or aggravated by you.

3. officers or employees who have elected not to be subject to the state workers' compensation law.

4. partners or sole proprietors not covered under the Standard Sole Proprietors, Partners, Officers and Others Coverage Endorsement.

D. Before We Pay

Before we pay benefits to the persons entitled to them, they must:

1. Release you and us, in writing, of all responsibility for the injury or death.

2. Transfer to us their right to recover from others who may be responsible for the injury or death.

3. Cooperate with us and do everything necessary to enable us to enforce the right to recover from others.

If the persons entitled to the benefits of this insurance fail to do those things, our duty to pay ends at once. If they claim damages from you or from us for the injury or death, our duty to pay ends at once.

E. Recovery From Others

If we make a recovery from others, we will keep an amount equal to our expenses of recovery and the benefits we paid. We will pay the balance to the persons entitled to it. If the persons entitled to the benefits of this insurance make a recovery from others, they must reimburse us for the benefits we paid them.

F. Employers' Liability Insurance

Part Two (Employers' Liability Insurance) applies to bodily injury covered by this endorsement as though the State of Employment was shown in Item 3.A. of the Information Page.

This provision 6. does not apply in New Jersey or Wisconsin.

EMPLOYERS' LIABILITY STOP GAP COVERAGE

7. **Employers' Liability Stop Gap Coverage**

A. This coverage only applies in Montana, North Dakota, Ohio, Washington, West Virginia and Wyoming.

B. Part One (Workers' Compensation Insurance) does not apply to work in states shown in Paragraph A above.

C. Part Two (Employers' Liability Insurance) applies in the states, shown in Paragraph A., as though they were shown in Item 3.A. of the Information Page.

D. Part Two, Section C. **Exclusions** is changed by adding these exclusions.

This insurance does not cover;

5. bodily injury intentionally caused or aggravated by you or in Ohio bodily injury resulting from an act which is determined by an Ohio court of law to have been committed by you with the belief than an injury is substantially certain to occur. However, the cost of defending such claims or suits in Ohio is covered.

13. bodily injury sustained by any member of the flying crew of any aircraft.

14. any claim for bodily injury with respect to which you are deprived of any defense or defenses or are otherwise subject to penalty because of default in premium under the provisions of the workers' compensation law or laws of a state shown in Paragraph A.

E. This insurance applies to damages for which you are liable under West Virginia Code Annot. S 23-4-2.

SECTION III

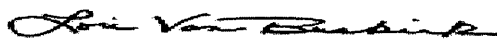**8. SCHEDULE OF COVERED STATES**

A. This endorsement only applies in the states listed in this Schedule of Covered States.

B. If a state, shown in Item 3.A. of the Information Page, approves this endorsement after the effective date of this policy, this endorsement will apply to this policy. The coverage will apply in the new state on the effective date of the state approval.

C. Schedule of Covered States:

SC

Countersigned by _____

Authorized Representative

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