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New Implementation Services Packages Offer Sheet IP Telephony – New Installations

Part of the Avaya Global Services organization, Consulting & Systems Integration (CSI) offers three comprehensive services packages to cover the level of service required to fully implement or upgrade an IP Telephony solution.

The **Industry Standard Package** includes project management support based on the specified deliverables. Avaya will perform software programming, including system programming, trunking translations, and software programming for IP Interface Boards. Avaya will install hardware including trunks, cables, UPS, cross-connects, and provide cutover support during business hours.

The **Full Service Package** includes all of the activities listed in the Industry Standard Package plus station installation and placement, End-User Training, System Handoff Review and Help Desk support. In addition, after hours cutover support is provided.

The **Premium Service Package** includes all of the activities listed in the Full Service Package plus any necessary premium routing such as IGAR, DCS/QSIG, Private Networking or AAR and Third Party Vendor Engagement.

See grid under Package Comparison for a complete list of deliverables.

COMMUNICATION MANAGER PRODUCTS

AVAYA DELIVERABLES/CUSTOMER RESPONSIBILITIES

Project Management

(For Media Servers)

Avaya will designate an individual responsible for overseeing the project. Once the contract is signed, this individual will be the single point of contact (SPOC) for all issues related to system implementation. The SPOC will direct implementation to support installation and the scheduled in-service date.

The Avaya project manager will:

- Create and maintain project plan and milestone schedule.
- Provide environmental specifications to Customer.
- Coordinate equipment delivery and inventory management.
- Manage change request process.
- Schedule resources.
- Conduct routine project status meetings.
- Conduct project closure meeting.

(For LSPs, Gateways, and Backup Servers)

The Avaya project manager will:

- Provide Customer with environmental specifications.
- Coordinate equipment delivery.
- Schedule resources.
- Conduct project closure meeting.

Third-Party Vendor Engagement

Avaya will notify Customer's vendors of the requirements, specifications and installation schedules for items including wiring, electrical, heat, ventilation and air conditioning (HVAC) and network facilities. Avaya will communicate relevant installation requirements to a predefined number of third-party vendors.

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On Site Project Management

Project Manager will deliver cutover support or first day of business help desk on site.

Solution Preparation

Network Readiness Assessment – Detailed

Avaya will:

- Perform detailed network readiness assessment of critical elements required to deploy IP Telephony solution on Customer's network, including:
 - Provide consultation on how to implement QOS, voice VLANS, TFTP, and DHCP to support Avaya's IP telephony equipment
 - Inject simulated IP telephony traffic into Customer's network.
 - Install analysis tool at a single Customer location in order to monitor traffic's movement and status.
 - Test up to a maximum of 250 concurrent calls per site. **NOTE:** Any call volumes that exceed 250 calls per site will require additional services charges.
 - Analyze data and compare information to best-practice standards for delay, loss and jitter.
- Produce detailed network readiness assessment report, including:
 - Validation of Customer's current infrastructure
 - Results of injection of simulated traffic, with statistics on mean opinion scores, packet delay, loss and jitter
 - Findings and test results for each LAN segment
 - Traffic analysis reports based on all captured data for all segments monitored and injected with simulated VoIP calls
 - Results of voice traffic simulation on Customer's network.
 - Summary of behavior and performance of networking devices under current IOS version
- Outline critical information, including:
 - Technical recommendations on deploying IP Telephony solution
 - Technical specifications (for example, setting up VLANs)
 - Bandwidth engineering information which can be used by Customer to determine impact of voice on network
 - Recommendations regarding configuration of LAN switches, IP phones and general PBX to optimize performance of IP Telephony solution
 - Design recommendations
 - Vendor-specific configuration suggestions
- Conduct conference calls between Avaya and Customer at mutually agreed-upon intervals.
- Meet with Customer remotely to review final network readiness assessment.

Customer will be required to:

- Designate technical contact with understanding of Customer's data network.
- Ensure that technical contact is available to Avaya consultant throughout network assessment.
- Provide Avaya with accurate and current topology maps of new and existing network designs. **Note:** Avaya can provide this service at an additional charge.
- Provide the running data configuration files for the existing switch and router devices that will support the VoIP solution.
- Complete data-configuration survey provided by Avaya.
- Provide Avaya with estimates of projected busy-hour call averages.
- Provide any non-Avaya equipment and/or software upgrades required to optimize Customer's network.
- Validate that all LAN and WAN segments at all test sites are functional during same test period. **Note:** Testing individual sites or subsets of the full complement may result in additional charges, calculated on a per-site basis.
- Implement recommendations resulting from IP telephony assessment. **Note:** Avaya can perform these tasks at an additional charge.
- Plug in Avaya-provided ExpertNet™ endpoint(s) at remote location designated by Avaya.

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Note: Customer must return ExpertNet™ endpoint(s) to Avaya using Avaya prepaid return shipping package within ten days of project's completion. Failure to do so may result in a charge of \$350 for each endpoint.

Network Readiness Assessment – Basic

Avaya will remotely:

- Perform basic network readiness assessment of Customer's network.
- Install high-level analysis tool in order to:
 - Passively monitor activities.
 - Record network problems.
- Gather data for five consecutive business days.
- Deliver analysis of Customer's existing network infrastructure, including:
 - Determination of network readiness
 - Recommendations for improving performance

Note: The Avaya basic network readiness assessment cannot record and report every error that may be occurring on Customer's network. Additional troubleshooting and/or further analysis may identify other issues. Avaya can provide these services at an additional charge.

Customer will be required to:

- Complete site-configuration survey.
- Download required software tools to PC on which IP application is located; Install software.
- Provide Avaya with accurate and current topology maps of new and existing network designs. **Note:** Avaya can provide this service at an additional charge.
- Ensure that all LAN and WAN segments at all test sites are functional during same test period.
Note: Testing individual sites or subsets of the full complement may result in additional charges, calculated on a per-site basis.

Solution Design and Development

System Software and Network Translations

Customer will be required to:

- Provide site-specific information, such as software networking and trunking requirements.
- Work with Avaya to determine the following for each Communication Manager system:
 - Direct inward dialing (DID) numbers
 - Listed directory numbers
 - Feature dial access codes
 - Station numbering plans
- Work with Avaya to finalize numbering plan.
- Work with Avaya to determine connectivity of trunk facilities.
- Obtain authorization from Avaya project manager before making any of these system changes:
 - Accessing Avaya software system logins
 - Changing permissions of any logins intended for exclusive use by Avaya
 - Establishing maintenance software permissions (MSPs) for customer-level logins without having applicable and current Avaya maintenance agreement or Avaya software permissions addendum
 - Activating any feature for which license has not been obtained from Avaya

Note: Avaya can, at an additional charge, dial each DID number individually during post-DID swing testing.

System Software and Network Translations – Enhanced (For S87xx/S8500 Media Servers)

Avaya will:

- Activate all software options purchased by Customer.
- Activate Customer's dial plan based on Customer's requirements.

- Program system software and network translations (SNTs) for Customer.
This task includes:

- Customized feature access codes
- Customized classes of restriction (COR)
- One automatic route selection (ARS) table to coincide with COR
- ARS dialed strings, including:
 - Emergency: three dialed digits (for example, 911)
 - Local: 2 to 10 dialed digits (for example, 2xx-xxxx or 2xx-xxx-xxxx)
 - Long distance: 11 dialed digits (for example, 1+xxx-xxx-xxxx)
 - International: maximum of 18 dialed digits
- Customized classes of service (COS)

Note: Changes requested by Customer after the software download may result in additional charges.

System Software and Network Translations – Basic (For S8400/S8300 & MVE Media Servers)

Avaya will remotely:

- Activate all software options purchased by Customer.
- Activate Customer's predefined 4-digit dial plan, which will be restricted to the 1000-8999 range.
- Use predefined system software and network translation templates.

This task includes:

- Predefined feature access codes
- One each of these eight predefined classes of restriction (COR):
 - For emergency and in-house calls only
 - For above plus local calls
 - For above plus intraLATA
 - For above plus statewide
 - For above plus long distance calls (USA and Canada)
 - For above plus international calls
 - For above plus operator
 - For above plus direct access to Caribbean and 900/976 service
- One ARS table to coincide with COR listed directly above
- Sixteen predefined classes of service (COS)

Note: Changes requested by Customer after the software download may result in additional charges.

System Software and Network Translations – LSPs

Avaya will remotely:

- Activate all software options purchased by Customer.
- Activate Customer's dial plan, based on system requirements.
- Program system software and network translations (SNTs) for Customer.

This task includes:

- One ARS table to coincide with COR
- ARS dialed strings, including:
 - Emergency: three dialed digits (for example, 911)
 - Local: 2 to 10 dialed digits (for example, 2xx-xxxx or 2xx-xxx-xxxx)
 - Long distance: 11 dialed digits (for example, 1+xxx-xxx-xxxx)
 - International: maximum of 18 dialed digits

Note: Any changes requested by Customer after the software download may result in additional charges.



System Software and Network Translations (For Gateways and Backup Servers)

Avaya will create and download the remote feature activation (RFA) license and password file needed for the new implementation or upgrade. Any additional translations required will be priced separately.

Basic Call Center Implementation

Avaya will remotely:

- Activate all basic call center features as defined by Customer.
- Create up to five:
 - Splits/hunt groups
 - Routing vectors
 - VDNs

Messaging System Parameters (For MVE)

Avaya will remotely:

- Design and program system parameters, feature sets and class of service (COS) options.
- Design and create up to three Automated Attendants.

Customer will be required to:

- Provide script and resource to voice Automated Attendant and other applicable voice recordings.
- Back up messaging platforms after testing has been completed, in order to save all programming.
- Provide one representative to support Help Desk.

Mailbox Creation (For MVE)

Avaya will remotely create to a predefined number of mailboxes for Customer.

Customer will be required to:

- Conduct subscriber mailbox detail-gathering (for example, matching of existing voice terminals and data modules with users, defining classes of service, defining call coverage, call pickup groups) in accordance with Avaya instructions.
- Use Station Builder tool to accomplish subscriber mailbox customization.
- Hand off Station Builder output to Avaya software resource for verification and upload to server.

My Phone Implementation (For MVE)

Avaya will remotely load and configure the application.

Customer is responsible for ensuring that stations can be administered with the application.

Follow Me Implementation (For MVE)

Avaya will remotely load and configure the application.

Customer is responsible for ensuring that stations can be administered with the application.

MultiVantage Call Analysis Implementation (For MVE)

Avaya will remotely:

- Administer link between Communication Manager (CM) and MVCA.
- Monitor data collection between CM and MVCA and verify that it is functioning properly.
- Demonstrate data backup for Customer.
- Brief Customer on rate-table customization, including:
 - Identify path to rate tables.
 - Identify customizable fields.

Customer will be required to:

- Assign resource to MVCA administration.
- Administer stations and trunks for Call Detail Recording data collection.

- Obtain costing data from network providers, if applicable.
- Obtain internal costing methods, if applicable.
- Modify rate tables.
- Back up data in accordance with Customer's business practices.

AE Services (AES) Implementation (For MVE)

Avaya will remotely:

- Identify all requirements related to AES software-only implementation.
- Administer CLANs or processor board in server so that it can communicate with AES software.
- Verify that AES software and CM software can communicate with each other.
- Add telephony server application programming interface (TSAPI) login and unrestricted-access permissions to AES.
- Administer AES and CM software to communicate with TSAPI application.
- Work with TSAPI application vendor, if available, to verify that application can connect and test sampling of stations from CM software through AES interface.

If TSAPI application requires additional verification or more restrictive permissions beyond the initial test, Avaya can perform these tasks at a Time & Materials rate.

Trunking Translations

Avaya will provide the basic system translations for trunking and network connectivity.

Avaya will integrate the SIP trunks to one third party proxy.

Wide Area Network (WAN) Media Module (For S8300)

Avaya will configure the device(s) for WAN functionality.

Virtual Private Network (VPN) Media Tunnels (For S8300)

Avaya will configure two IP addresses for to a predefined number of VPN tunnels.

Station Programming

Avaya will translate to a predefined number of telephone stations. Avaya will allow Customer to fully customize station software.

Avaya will integrate a predefined number SIP stations with the SES SIP server.

For Full Service Offer. Customer will be required to:

- Conduct station detail-gathering in accordance with Avaya instructions, including:
 - Matching existing voice terminals with users
 - Matching existing data modules with users
 - Defining station classes of service (COS)
 - Determining button features
 - Defining call coverage, call pickup groups and call restrictions for stations
- Use Station Builder tool to accomplish station customization.
- Hand off Station Builder output to Avaya software resource for verification and upload to server.

Data Gathering and Input

The Avaya software resource will:

- Interview and provide consultation services to each Customer end-user coordinator.
- Collect all end-user data.
- Input data into Avaya provisioning tools.

Station Programming for IP Softphones

Avaya will register and configure two IP Softphones on Communication Manager server, unless otherwise specified.

The remaining Softphones will be Customer-installable.



Customer will be responsible for installing IP Softphones after Avaya has registered and configured the first two units. **Note:** Avaya can provide this service at an additional charge.

Station Programming for IP Softconsoles

Avaya will register and configure two IP Softconsoles on Communication Manager server, unless otherwise specified.

The remaining Softconsoles will be Customer-installable.

Customer will be responsible for the following:

- Loading console software on Customer PC
- Configure console software on Customer PC
- Create console directory on Customer PC

Customer will be responsible for installing IP Softconsoles after Avaya has registered and built attendants for the first two units. **Note:** Avaya can provide complete install at an additional charge.

DCS/QSIG Networking

Avaya will configure the server for DCS/QSIG network connectivity and feature transparency between an Avaya server or adjunct. For QSIG, the network connectivity may be to a third party server up to the first endpoint. Avaya can provide routing and facility transport at an additional charge.

Customer will be required to provide QSIG internetworking requirements and access to third-party vendors and providers, as appropriate.

Software Programming for IP Interface Boards

Avaya will input the translations for the IP interface board configuration, into the server. The IP interface board configuration will require matching settings on the Ethernet switch in which the boards terminate.

Avaya will make the physical connection to Customer's LAN and program the IP address provided by Customer, once the corresponding settings have been verified by Customer on the terminating Ethernet switch.

Avaya will provide feature access codes to Customer. Customer will be able to access switch administration via the administrator's PC.

Customer will be required to provide resources for recording voice announcements.

Network Region Design Implementation

Avaya will implement the network region design based on the following Customer requirements:

- Available bandwidth between regions
- Estimated call volumes between regions
- QoS policy, as defined by Customer
- Failover/DR practices and policies
- Complete IP address scheme provided by Customer
- VLAN settings
- Port speed/duplex settings

Although the network region configuration will be defined at the Communication Manager server, it will affect all IP phones, gateways and devices that register to the Communication Manager server.

Control Network Implementation

Avaya will:

- Deploy Layer 2 switches in control network for S87xx architecture.
- Prepare and load configurations.
- Test equipment to verify that it transports agreed-upon network protocol.



IMS Applications Implementation

Avaya will:

- Verify that Customer has installed Red Hat Linux Server or Microsoft Windows 200x Server operating system.
- Verify configuration of Red Hat Linux Server or Microsoft Windows 200x Server operating system prior to installing IMS applications.
- Verify Red Hat Linux Server RPMs, if applicable, prior to installing IMS applications.
- Verify IP connectivity to IMS managed devices.
- Install and configure VMM or NMC and VMM IMS application software on one Customer's network-management servers.
- Configure 10 SNMP devices on the network to be discovered by NMC.
- Perform user acceptance testing (UAT) on one managed device for each IMS application.
- Configure voice systems, including login IDs and passwords and IP addresses of Customer's network-management servers, for compatibility with IMS applications.

Note: Installation of IMS applications does not include configuration of these parameters within the adjuncts.

- Configure modem board for serial alarming for adjuncts.
- Install SMON license key in one Cajun P130/P330 device for NMC.
- Execute auto-discovery of IMS managed devices for NMC.
- Verify alarm path, if appropriate, for NMC.

Avaya will cover the following topics in an informal knowledge transfer for Customer's system administrators:

- Reviewing GUI for IP network connections
- Displaying IP network view
- Launching new IP discovery

Note: System handoff review, which provides a basic overview of the telephony system, is not a substitute for onsite or WebEx instruction.

Customer will be required to:

- Complete and return Avaya Configuration Request Forms.
- Complete all offer-specific Customer responsibilities prior to scheduled installation date.
- Provide all non-Avaya hardware or software required to install IMS applications.
- Load current IMS-certified Red Hat Linux Server or Microsoft Windows 200x Server operating system on Customer's network-management servers.
- Test login IDs and passwords on Customer's network-management servers to ensure that they are functional.
- Verify server readiness with system powered on and OS booted up.
- Verify availability of remote connectivity to Customer's network-management servers and managed devices.
- Load product CDs into server CD drives.

Microsoft Windows 200x Server Technical Requirements

Customer will be required to:

- Install and configure Microsoft Windows 200x Server operating system before Avaya can implement either VoIP Monitoring Manager (VoIP Mgr) or Network Management Console (NMC) IMS applications



- Enable Simple Network Management Protocol (SNMP) services on Customer's network-management servers.

In order for Avaya to have remote access to and remote control of Customer's network-management servers at least five days prior to implementing the IMS applications, Customer must provide one of the following remote access methods:

- Remote connectivity to the servers via Secure Services Gateway (SSG)
- Connectivity to the servers using VPN clients
- Modem lines to Customer's network-management servers.
- Web Conferencing is supported at the Customer's expense.

In addition, the following information must be provided to the Implementation Engineer five days in advance:

- Login IDs and passwords for Customer's network-management servers
- Linux root access for Red Hat Linux Server operating system, if applicable
- VNC Server and PCAnywhere software for Microsoft Windows 200x Server operating system, if applicable

Note: If Customer does not provide Avaya with remote access to Customer's network-management servers, the Avaya implementation engineer will perform the required tasks onsite at an additional charge.

Uniform Dial Plan (UDP) Routing

Avaya will provide system translations for UDP routing, defined as extension-to-extension calling over public or private trunking.

Complex Routing

Avaya will provide system translations for Tail End Hop Off (TEHO) complex routing, which includes the appropriate location-based routing and associated tables as well as route patterns.

Avaya will access multiple databases which can be used to obtain up-to-date and accurate interLATA and intraLATA dialing for Customer's physical location. These databases will use Customer's local DID range, per location, to determine rate and tariff information.

Private Routing

In order to accommodate various routing schemes, Avaya will provide customized system translations for AAR/private-network dialing on a per node, per site basis.

Inter-Gateway Alternative Routing (IGAR)

Avaya will:

- Implement IGAR design based on Customer input.
- Test IGAR routing for intra-switch, inter-location calls.
- Verify correct routing and completion of IGAR calls.

Customer will be required to:

- Provide DID number for IGAR LDN at each location or network region.
- Provide bandwidth and/or quantity-of-calls restrictions for each network region pair.
- Ensure that PSTN trunks meet IGAR requirements at each location.
- Ensure that adequate number of trunks is available for IGAR routing.

EC500 Mobility

Avaya will configure EC500 mobility software licenses for to a predefined number of users.

On Site Support - Software Specialist

A software resource will be on site for a single meeting to collect data for system software network and translations (SNT) and system parameters; and cutover support or first day of business help desk.

Solution Deployment

Hardware Installation

Avaya will:

- Unpack, inspect and inventory hardware.
- Install hardware and connect all adjuncts to Communication Manager server, if applicable.
- Install software and firmware upgrades, if applicable.
- Observe units upon power-up and verify successful completion of self-test diagnostics.
- **Optional ala carte:** Avaya will test to a predefined number of LSPs/gateways connected to the survivable server(s).
- **For Full and Premium Offer.** Avaya will install a predefined number GigE adapters.

For S87xx Server, if applicable

Avaya will:

- Install same server "pair" greater than typical 100 meter distance.
- Connect two S87xx Media Servers via Customer-provided fiber connectivity.

Note: Fiber terminations should be located in each equipment room at the wallfield. The main S87xx media server will be co-located at the existing PPN location ("Primary Building"). The second S87xx Media Server will be located at a "Secondary Building".

Customer will be required to provide space in an existing 19" data rack or provide new racks for the Media Servers and gateways.

Use of Existing Wire

Customer will be required to:

- Engage wiring vendor to verify, tag, tone and test pre-existing wire and cable.
- Determine whether wire and cable, if reused, will meet Avaya requirements.
- Repair or replace any wiring and/or cable that does not meet Avaya requirements.

If Avaya determines that the required wiring work would delay system cutover, Customer may:

- Proceed with installation without unusable sets and arrange for sets to be installed after wiring has been repaired; **OR**
- Delay installation and pay applicable charges for rescheduling work.

Note: Delayed and rescheduled work will be subject to the Avaya then-current Time & Materials rate.

Staging

Prior to hardware installation, Avaya will perform the following activities at the Avaya National Staging Center:

- Receive equipment.
- Inspect equipment for quality and quantity.
- Report any shortages or overages to project coordinator.
- Enter Customer's inventory into Staging Inventory Management System (SIMS) for tracking purposes.
- Assemble hardware and firmware components.
- Load system and application software, patches, firmware upgrades, system translations and system configurations.
- Test application, including solution components, component integration and call processing.
- Package solution.
- Ship solution to Customer's site.

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Trunk Installation

Avaya will:

- Terminate and test each trunk into the media server
- Inform Customer of trunk test results.
- Perform loop-back test from server DS-1's (integrated CSUs only) to facilities demarcation point.
- Inform Customer of loop-back test results, if applicable.
- Test connectivity to Customer's network services.

Cable Installation

Avaya will:

- Install cables of default length and gender.
Note: Avaya can install longer cables or different genders at an additional charge.
- Use Amphenol connectivity at both ends of cable extending from back of switch to 110 wallfield.
Note: Avaya can provide a different type of connectivity at an additional charge.
- Use PVC cable under 100 feet in length.
Note: Avaya can upgrade the cable at an additional charge, if plenum cable is required or the distance from wallfield to switch exceeds 100 feet.
- **For Full and Premium Offer.** Provide field termination of machine cables.

Uninterruptible Power Supply (UPS) Implementation

Avaya will unpack, install and power up the UPS.

Customer will be responsible for hard wiring, if necessary.

Station Installation

Avaya will unpack and install a predefined number of telephone stations for Avaya-provided hardware and/or install existing compatible customer provided telephones.

Avaya will deploy IP telephones that utilize DHCP server and TFTP and/or HTTP servers and, in some cases, LDAP and DNS servers.

If IP telephones are shipped with older software revisions and Customer downloads a newer software revision and places it on the TFTP and/or HTTP server, the IP telephones will upgrade to the newer revision during installation.

Customer will be required to:

- Provide station layout floor plan including:
 - Extension
 - Phone type
 - Cable pair
 - Jack number
 - User name
- Provide phone designation strips and label telephone stations, if applicable.
- Provide spreadsheet with corresponding information for cross-connect work to be performed in equipment room.
- Complete station wire and terminations, if applicable.
- Set up and configure any DHCP, TFTP, HTTP, LDAP and DNS servers according to requirements defined in applicable IP telephone administrator's guide.
- Ensure that TFTP and/or server is correctly administered with current software revision.
- Provide LAN connectivity for IP stations to the desktop.

Station Placement

Avaya will place and test to a predefined number of telephone stations according to Customer-provided floor plans indicating each user's location and station type.

After the analog/digital stations are deployed, Avaya will perform facility testing of basic TDM-to-TDM calling.



After the IP stations are deployed, Avaya will perform facility testing of basic IP-to-IP calling and IP-to-TDM calling.

Customer will be required to provide Avaya with floor plans indicating each user's location and station type.

Station Programming, Installation and Placement

For Industry Standard Offer. Customer will be responsible for all station installation, placement and programming.

Cross Connects

Avaya will perform the following cross-connects for analog/digital stations in the switch room utilizing the main distribution field (MDF):

- Maintenance modems and external line used for alarm origination
- Station and trunk ports (for example, where station wires terminate on 110 hardware in switch room)
- Station and trunk terminations (for example, where trunks terminate on RJ-21 or 110 hardware provided by facilities vendors)

All in-house wiring runs must be installed, labeled and tested before cross-connect work can be performed.

Customer will be required to complete cross-connects in intermediate wire closets, campus inter-building "black" cable, or fiber-optic cable.

Remote Access Connectivity

Avaya will:

- Verify remote dial access, if Customer's modem was purchased from Avaya.
- Install dial-up modem for remote access capability, if Customer's modem was purchased from Avaya.
- Verify modem's connectivity to appropriate support center.
- Register Customer's hardware.

Note: Avaya can install modems supplied by Customer or Customer's vendors at an additional charge.

If Customer's modem was **not** purchased from Avaya, Customer will:

- Verify remote dial access.
- Install dial-up modem for remote access capability.

Cutover Support

Avaya cutover support will assist Customer in activating network dial tone. Related tasks include:

- Turn down Customer's existing system, if applicable.
- Activate new system.
- Move old facilities over to new switch.
- **For MVE Messaging** Activate switch ports to messaging system in order to ensure that switch can route calls to voice mail.

Note: Customer's system may be unavailable for up to four hours during cutover. Cutover will be completed in a single phase. If a multi-phased cutover is requested by the Customer, additional charges will apply for each Avaya Services' resource involved in the cutover and help desk support as applicable. The Project Manager will submit a Change Request Management Authorization (CRMA) with additional charges to the customer when applicable.

Help Desk Support: New Installation

An Avaya software resource and customer service engineer will provide Help Desk support on the first day of business following the in-service date of a new installation.

For Telephony Systems: The extent of this support is calculated based on the number of new stations being installed, as indicated below:

- One hour for 1-10 users



- Two hours for 11-50 users
- Three hours for 51-100 users
- Four hours for 101-250 users
- Eight hours for 251-500 users
- Sixteen hours for 501-1000 users
- Twenty-four hours for 1001-3000 users
- Thirty-two hours for more than 3000 users

Help Desk support will be available on consecutive business days during Standard Service Hours, as defined under Standard Service Hours.

Avaya can provide additional Help Desk support in four-hour blocks at an additional charge. Under this Agreement, Avaya will provide to a predefined number of hours beyond the basic hours outlined above.

Customer will be required to provide one representative to support the Help Desk operation.

Education & Knowledge Transfer

Instructor-Led End-User Training

Avaya customized onsite training for end users may cover the following topics related to systems functionality:

- Voice terminal features
- Call center phone features
- Console operations

Note: This is for digital, analog or H.323 stations only.

For each group of up to 60 end users, Avaya will provide a four-hour block of instructor-led training. Under this Agreement, Avaya will provide to a predefined number of hours of training.

Instructor-led end-user training will be available on consecutive business days during Standard Service Hours, as defined under Standard Service Hours.

Training Room Setup

Avaya will use Customer-provided hardware to set up Customer's designated training room. This set up will include the installation and programming of ten training stations.

System Handoff Review

Avaya will cover the following topics in an informal knowledge transfer for Customer's system administrators:

- Accessing system
- Administering user moves, add and changes
- Changing feature access codes
- Managing features
- Adding, customizing, upgrading, swapping and removing telephones
- Routing outgoing calls
- Understanding dial plans

System handoff reviews will be conducted remotely on consecutive business days during Standard Service Hours, as defined under Standard Service Hours. This service is available in four-hour blocks for each two system administrators.

Note: System handoff review provides a *basic* overview of the telephony system. It is not a substitute for classroom instruction.

Implementation Delivery

Negotiation with Telecommunication Service Providers and Wire Vendors

Customer will be required to:

- Ensure that any network problems are referred to Customer's network service provider and resolved.
- Provide and install MDF or wallfield for station wire terminations.
- Consult with Avaya project manager to determine wallfield requirements before placing cables.
Note: Following site inspection, any work performed by Avaya in connection with MDF or wallfield issues may result in additional charges.
- Provide all station, riser, feeder and inter-building cable and wire to meet specifications provided by Avaya.
- Verify, tag, tone, test and document the distribution system according to requirements provided by Avaya project manager.
- Create spreadsheet documenting requirements including:
 - Cable pair (including IDF closets)
 - Jack number
 - Station number
 - Station type
 - Cube location
- Create wall/floor plan identifying all locations identified in requirements spreadsheet.
- Arrange for any telephone number changes required in connection with cutover.
- Order, install and test all network circuits.
- Ensure that circuits are fully extended, terminated and labeled on plywood mounting within switch room.
- Provide Avaya with signaling, framing and network programming information compiled by Customer's network vendor.
- Work with Avaya and Customer's network vendor to reach agreement on testing date and time.



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Package Comparison

IP TELEPHONY	New Installation		
SERVICES AND DELIVERABLES	INDUSTRY STANDARD	FULL SERVICE	PREMIUM SERVICE
PROJECT MANAGEMENT			
Project Management (For Media Servers)	x	x	x
Project Management (For LSPs, Gateways and Back Up Servers)	x	x	x
Third-Party Vendor Engagement			x
On Site Support - PM		Optional	Optional
SOLUTION PREPARATION		x	
Network Readiness Assessment: Detailed	Optional	Optional	Optional
Network Readiness Assessment: Basic	Optional	Optional	Optional
SOLUTION DESIGN AND DEVELOPMENT			
System Software and Network Translations – Enhanced (For S87xx/S8500 Media Servers)	x	x	x
System Software and Network Translations – Enhanced (For S8400/S8300 & MVE Media Servers)			x
System Software and Network Translations – Basic (For S8400/S8300 & MVE Media Servers)	x	x	
System Software and Network Translations – LSPs	x	x	x
System Software and Network Translations – Gateways & Backup Servers	x	x	x
Additional RFA Licenses	Optional	Optional	Optional
Basic Call Center Implementation		x	x
For MVE:		x	
Messaging System Parameters	x	x	x
Mailbox Creation		x	x
My Phone Implementation	x	x	x
Follow Me Implementation	x	x	x
MultiVantage Call Analysis (MCVA) Implementation	x	x	x
AE Services (AES) Implementation		x	x
Trunking Translations	x	x	x
SIP trunking integration with third party proxies			x
For S8300:			
Wide Area Network (WAN) Media Module		x	x
Virtual Private Network (VPN) Tunnels		x	x
Station Programming		x	x
SIP phone integration		x	x
Data Gathering and Input			x

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Station Programming: IP Softphones/IP Softconsoles		x	x
Software Programming for IP Interface Boards	x	x	x
Network Region Design Implementation	x	x	x
Control Network Implementation	x	x	x
Network Management Applications			
VoIP Monitoring Manager (VMM) Implementation		x	x
Add'l VMM Servers		Optional	Optional
Network Management Console (NMC) Implementation			x
Add'l NMC Servers			Optional
Converged Network Analyzer (CNA) Implementation	CUSTOM		
Adaptive Path Controller (APC) Implementation	CUSTOM		
Routing/Networking			
Uniform Dial Plan (UDP) Routing			x
Complex Routing			x
Private Networking			x
Inter-Gateway Alternative Routing (IGAR)			x
DCS/QSIG Networking			x
Add'l Premium Routing/Networking Nodes			Optional
EC500 Mobility		x	x
On Site Support – Software Specialist		Optional	Optional
SOLUTION DEPLOYMENT			
Hardware Installation	x	x	x
LSPs/gateways will be connected to the ESS server	Optional		
Gigi Adapters		x	x
Server Separation	x	x	x
Staging	x	x	x
Trunk Installation	x	x	x
Cable Installation	x	x	x
Custom field terminated cables		x	x
Uninterruptible Power System (UPS) Installation	x	x	x
STATIONS			
Station Installation		x	x
Station Placement		x	x
Cross-Connects	x	x	x
Station placement and cross connect after business hours			x
Remote Access Connectivity	x	x	x
Cutover Support - During Business Hours	x		
Cutover Support - After Business Hours	Optional	x	x
Help Desk Support: New Installation		x	x

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Additional Help Desk		Optional	
KNOWLEDGE TRANSFER			
Instructor-Led End-User Training		x	x
Additional EU Training		Optional	
Training Room Setup		x	x
System Handoff Review		x	x

HELP DESK SUPPORT

IP TELEPHONY			
Total Users	Total Hours	Total Users	Total Hours
1-10	1	251-500	8
11-50	2	501-1000	16
51-100	3	1001-3000	24
101-250	4	> 3000	32

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ADDITIONAL CSD RELATED PRODUCTS **AVAYA DELIVERABLES/CUSTOMER RESPONSIBILITIES**

SIP Enablement Services

SIP Enablement Services Implementation

Avaya will:

- Deploy SIP Enablement Services (SES) server, including SIP Proxy and SIP Registrar functionality.
- Deploy one Home/Edge proxy to support SIP users.
- Deploy one SIP trunk from Home/Edge proxy to Avaya Communication Manager server for SES 2.1 and below.
- Deploy one SIP endpoint with SIP user agent (UA).

Handle-Based Dialing

Avaya will install and configure handle-based dialing on one SES server to work with one existing external LDAP directory in Customer's environment.

Avaya will:

- Review pre-install checklist with Customer to verify readiness.
- Identify Customer requirements for lookup.
- Confirm that Customer has on hand all information needed to configure directory lookup.
- Remotely install handle-based dialing software module on SES server.
- Configure software module to access and communicate appropriate information from LDAP database.
- Work with Customer to perform basic functionality testing in order to verify successful lookup and communication.

Customer will be required to:

- Verify that application server with LDAP directory is connected to TCP/IP LAN.
- Verify correct IP configuration through testing.
- Validate LAN connectivity for all administered IP addresses via "ping test."
- Assist with integration testing.
- Assist with configuration of handle-based capability.
- Verify that directory is using standard LDAP protocol as implemented in open LDAP.
- Verify that LDAP directory can be accessed using simple or anonymous authentication.

CTI Integration

Application Enablement Services Turnkey Remote Integration

Avaya will:

- Identify all requirements related to implementation of AES solution.
- Create implementation schedule based on dates agreed to by Customer.
- Administer CLANs or processor board in Media Server so that it can communicate with AES server.
- Verify that AES software and Media Server can communicate with each other.
- Administer AES software on Avaya-provided IBM x306 so that it can communicate with Media Server and CTI application.
- Work with CTI application vendor to verify that application can connect to and exchange ASAI heartbeats with Media Server through AES interface.
- Generate license file; download to AES server; and install license.
- Validate CLAN connectivity for all administered IP addresses via "ping test."CVLAN

Customer will:

- Provide Avaya, prior to the project kick-off meeting, with name and title of single point of contact (SPOC) who:
 - Has thorough understanding of Customer's business requirements and technical environment.
 - Is authorized to make binding decisions on Customer's behalf.
 - Is authorized to accept and sign for services and deliverables provided by Avaya.
- Ensure that Communications Manager (CM) software R3.0 or higher is installed on Media Server.
- Ensure that two or more dedicated CLANs are installed on Media Server and connected to Customer's LAN or WAN.
- Provide remote access to Media Server and AES server.
- Provide remote access line for maintenance and alarming.
- Verify that AES server can communicate with application server(s) across Customer's network.
- Identify IP addresses of CLAN card(s), AES server(s), and application server(s) that will communicate with AES solution.
- Verify settings on Ethernet switch in which IP interface boards terminate.
- Provide anticipated VLAN settings and port speed/duplex setting for IP interface boards.
- Provide two non-DID numbers for each CTI application, one number for data module and one for CTI link.
- Provide and install main distribution frame (MDF) or wallfield for station wire terminations. Note: Any work performed by Avaya in connection with wallfield and/or MDF following site inspection may result in additional charges.
- Provide resources for recording voice announcements.
- Backup AES server after downloading and testing are complete.

CVLAN Integration

Avaya will remotely:

- Administer the C-LAN or Processor board in the Media Server for communication to the specified CVLAN R9 server.
- Administer the CVLAN R9 software on the customer provided Linux server for communication to the Media Server and to the CTI application.
- Configure the Co-Resident DLG CTI Link in the Media Server for communication to the CVLAN R9 server and the CTI application.
- Ping and confirm all administered IP addresses for connectivity.
- Work with the CTI application vendor to verify the CTI application can connect to, and exchange ASAI heartbeats with, the Media Server through the CVLAN R9 interface.
- Generate License file for download into CVLAN R9 server.
- Send a completed work document to the project manager and the customer contact with information about all IP addresses and configuration for future reference.

Customer will:



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- Provide a working, configured Linux server to support the CVLAN R9 application.
- Install Red Hat Linux 9 or Red Hat Enterprise ES 3.0 Update 2 or 3 onto customer-provided Linux server (See Appendix C pages 85 and 86, in the CVLAN R9.1 Installation and Administration Guide for detailed instructions).
- Provide Remote access to Avaya Media Server and to the CVLAN R9 server. See Appendix B in your CVLAN R9.1 Installation and Administration Guide for detailed instructions.
- Provide 100Meg/full duplex Cat-5 Ethernet LAN cable to the C-LAN and two cables to the CVLAN R9 server.
- Provide eth0 NIC card MAC address to Avaya consultant.
- Provide IP address and CTI application information to Avaya consultant.

Enhanced Meet Me Conferencing (EMMC)

EMMC Implementation

Avaya will:

- Install EMMC Software on the EMMC media server
- Configure services on the EMMC media server
- Configure EMMC on the Communication Manager media server
- Configure connectivity from the Avaya Communication Manager server to the EMMC media server

Package Comparison

ADDITIONAL CSD PRODUCTS	New Installation		
	INDUSTRY STANDARD	FULL SERVICE	PREMIUM SERVICE
SERVICES AND DELIVERABLES			
SES SIP SERVER			
SIP Enablement Services Implementation	x	x	x
Handle-Based Dialing			x
CTI			
Application Enablement Services Turnkey Remote Integration	x	x	x
CVLAN Integration	x	x	x
CONFERENCING			
EMMC	x	x	x

Offer sheet:

This offer sheet can be found on the Avaya Enterprise Portal under "Offer Definition/C&SI/Market Based Packaging": <https://portal.avaya.com/ptlWeb/so/CS2005125161635945060>

Standard Service Hours

Optional ala carte for Industry Standard Offer: Work activities that do not affect service, excluding cutover support, will be performed and completed during Standard Service Hours, as defined under Standard Service Hours.

Pricing is based on the assumption that Services will be performed between 8:00 AM and 5:00 PM local site time, Monday-Friday, excluding Avaya-designated holidays ("Standard Service Hours") unless otherwise stated. Work performed outside Standard Service Hours may be subject to overtime charges at the following rates:

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Overtime (1.5 times)	Premium Overtime (2.0 times)
Evenings, Monday-Friday 5:00 PM - 8:00 AM	Saturday 12:00 AM (midnight) – Monday 8:00 AM
Saturday, 8:00 AM–12:00 AM (midnight)	Avaya-designated holidays

Standard Delivery

The Avaya project manager and software resource will deliver services remotely unless otherwise purchased.

Travel and Living Expenses

If on-site support is required, the cost of travel will be billed to the customer. Avaya will present an estimate of travel and living expenses for approval in advance if requested. Once approved, arrangements will be secured and actual charges will replace the estimated costs and billed to the customer.

Availability

This offer is available in the NAR Region through Avaya direct and indirect sales channels. For availability outside NAR, check with Avaya Global Services in the appropriate country or region.

How to Engage Avaya Consulting & Systems Integration (CSI)

This Offer Sheet is not to be used for Contractual purposes. To engage the ATAC Design Central team, for pricing, please pursue the following steps for a quote.

For Direct requests: Go to Avaya Enterprise Portal, Tools, Sales Tools, Siebel Sales

For Indirect requests:

- Log into the Enterprise portal enterpriseportal.avaya.com Select: Support > Installation & Registration > Operations Resource System (ORS) > Access the ORS System or bpcc.avaya.com directly.
- New ORS users must complete an online ORS registration requesting an ORS login ID and password. Questions regarding ORS may be referred to the ORS helpdesk on 800-229-5006 prompt 2.

If you have any additional questions, please contact Chris Peterson, Implementation Offer Manager, at 615-377-2750 or chpeterson@avaya.com.

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