



Service Description:

Cisco Subject Matter Expert Service

This document must be read in conjunction with the [How Cisco Provides Services](#) document, which is incorporated into this document by reference.

Cisco Subject Matter Expert Service is remote and/or onsite support Services Cisco provides that consist of general advice and guidance.

General Assumptions:

- The Service Description defines the full scope of the Services that Cisco will provide to Customer. This Service Description does not apply to any Product or maintenance purchase(s).
- Cisco is not providing any deliverables. The Services are comprised of general technical assistance to be performed under Customer's overall direction and management. Customer is solely responsible for the determination and successful implementation of its Network, design, business or other requirements. Services may be performed, at Cisco's discretion, by Cisco or individuals, contractors, agents, suppliers or organizations employed by or hired under contract with Cisco.

ACI and Nexus 9K (AS-AC-SMX)

Cisco will provide general technical assistance to aid Customers with products and technologies covered under Cisco Data Center Nexus 9000 Platform and ACI Fabric solutions.

The Cisco resource(s) shall have the following skills and be proficient in:

- End-to-end expertise in Cisco Nexus 9000 and ACI Fabric solutions.
- Bridging across multiple technologies for purposes of assisting Customer in planning, designing, and implementing across these products in a data center environment.
- Cisco Certified Internetworking Expert (CCIE) or equivalent.
- Consulting and recommendations on L4/L7 technologies interface with ACI solutions.
- Consulting and recommendations on programming aspects of these solutions.
- Architecting Customer's data center network environments.

Automation, Integration and Management (AS-OA-SMX)

Cisco will provide general technical assistance to aid Customers with product and technologies covered under Cisco Automation, Integration and Management solution(s). These solutions may include one of the following: Cisco Cloud Center (CCC), UCS Director, Prime Service Catalog (PSC), Enterprise Cloud Suite (ECS), and other Cisco IT and Cloud Automation supported solutions.

The Cisco resource(s) shall have the following skills and be proficient in:

- Understanding, identifying and analyzing existing business processes or workflows to recommend automation capability improvements.
- Design and implementation of Cisco Automation, Integration and Management solutions and products.
- Development of detailed designs for how Cisco Automation, Integration and Management solutions and products integrate with Customer's third party infrastructure systems (e.g., IP address management, Configuration Management database, authorization/authentication).

Cisco will provide technical advice and guidance to the Customer with:

- Design discussions around current and future state of the implementation.
- Creation and updates to existing business processes or workflows managing Customer's Cisco Automation, Integration and Management solutions and products.
- Planning, architecting, designing or implementing a software solution that provides automation and orchestration, and solution resiliency into the Customer's business process or workflows based on Cisco Automation, Integration and Management solutions and products.
- Custom installation, configuration, testing, tuning and integration of Cisco Automation, Integration and Management solutions and

- products.
- Training and one to one mentoring on Cisco Automation, Integration and Management solutions and products.

Borderless Networks (AS-RS-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Routing and switching products and technology.
- Cisco networking software features and functionality.
- Complex routing and switching networks designs and configuring Cisco routing and switching devices.
- Networking services requirements analysis.
- Software Defined Access (SD-Access) Products and technology including campus network, security, wireless, network management functions, and network automation capabilities.
- Analysis of networking services requirements for identifying considerations for implementing or migrating to an SD-Access capable infrastructure.
- SD-Access fabric design, segmentation and policy, network automation, wireless design.
- Cisco Software features and functionality for SD-Access fabric solution, ISE, wireless and network automation.
- SD-Access Products configuration including DNA-Center, ISE, Catalyst switches.
- IP protocols.
- Cisco Certified Internet Expert (CCIE) ® or equivalent.

Cisco will provide technical advice and guidance to the Customer with:

- Overall network architecture process development and management activities including guidance on the process development of infrastructure architecture frameworks.
- The network architecture lifecycle process, and associated development methodology.
- Conducting training and one to one mentoring on routing and switching technology.
- Defining and/or analyzing networking services requirements.
- Designing complex routing and switching networks.
- Assessment of network and operational readiness to assist with design and implementation of SD-Access and implementation of operational capabilities.
- Development of SD-Access design Deliverable including SD-Access fabric design, security segmentation and policy, and network automation and analytics.
- Development of implementation strategy and plan detailing requirements for deployment, integration and management of SD-Access.
- Integration of SD-Access solution with the core network infrastructure.
- Migration from an existing network to SD-Access.
- Testing and validating of design and implementation of SD-Access.
- Conducting training on the SD-Access solution including DNA-Center for automation, assurance and analytics, Identify Services Engine (ISE) for segmentation, SD-Access fabric.

Cloud Meetings and Messaging (AS-MM-SMX)

General technical assistance to aid Customer with supported Cloud Meetings and Messaging product(s) and solutions.

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco Cloud Meetings and Messaging products and technologies including: Cisco Webex, Cisco Webex Meetings, Cisco Webex Teams, Cisco Webex Board, Cisco Webex devices, Cisco Webex Meeting Server, Cisco Jabber (Cloud), Cisco Hybrid Services, Cloud Connected Audio, Hybrid Media, Cisco Webex Edge, Single Sign-On and Federation.
- Overall cloud collaboration design, configurations, implementation and migration based on Cisco and industry practices to support the Customer in meeting Customer business goals.
- Integration with existing environment to support next generation collaboration experience based on Customer capability.
- Network availability and capacity planning.

Cisco Project Manager will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations (e.g. LDAP, AD, Single Sign-On, Hybrid Services) from an engineering perspective.
- Questions / debugging of an existing implementation and integrations from an engineering perspective.
- Overall implementation process from a technical perspective (hardware, software and network).

Cisco Engineer will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations (e.g. LDAP, AD, Single Sign-On, Hybrid Services) from an engineering perspective.
- Questions / debugging of an existing implementation and integrations from an engineering perspective.

- Overall implementation process from a technical perspective (hardware, software and network).

Cisco Solution Architect will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations (e.g. LDAP, AD, Single Sign On, Hybrid Services) from an architectural perspective.
- Questions / debugging of an existing implementation and integrations from an architectural perspective.
- Overall implementation process from an architectural perspective (e.g., overall solution, technical architecture, integrations, user deployment, cloud readiness and migration).

Contact Center (AS-CC-SMX)

Cisco will provide general technical assistance to aid Customer with Cisco's Unified Contact Center products, service and technology.

The Cisco resource(s) will be proficient in Contact Center call flow plan and design, configuration and scripting changes or modifications and technical mentoring.

Cisco Application Consultant will provide technical advice and guidance to the Customer with:

- Business rule development, call flow design, configuration and scripting using Cisco and industry best practices.
- Plan and design issues arising with the following products: Unified Contact Center ICM Edition, Unified Contact Center Enterprise Edition, IP Interactive Voice Response, and Customer Voice Portal.
- Escalation of Cisco TAC cases opened by Customer with regards to the Unified Contact Center Solution products listed above.

Cisco Custom Application Engineer will provide technical advice and guidance to the Customer with:

- Custom development for Cisco products using the products Application Programming interfaces (API)'s. This includes: CTI development, CTIOS, Third Party CRM, and Custom developed applications, Custom reporting and Customer Voice Portal.
- Escalation of Cisco TAC cases opened by Customer with regards to the Unified Contact Center Solution products listed above.

Cisco Network Consultant Engineer will provide technical advice and guidance to the Customer with:

- Plan and design issues arising with the following Cisco Unified Contact Center Enterprise products: Unified Contact Center ICM Edition, Unified Contact Center Enterprise Edition and Customer Voice Portal.
- Escalation of Cisco TAC cases opened by Customer with regards to the Unified Contact Center Solution products listed above.
- Overall Contact Center deployment using Cisco and industry best practices.

Cisco Solution Architect will provide technical advice and guidance to the Customer with the following:

- Unified Contact Center architectural engineering targeted at developing recommendations on standardization, virtualization, and fault tolerance of existing or new contact center technologies across Customer centers.
- Identifying contact center overall design that will satisfy Customer business requirements.
- Overall Contact Center deployment using Cisco and industry best practices.
- Contact center sizing process.
- Addressing any issues that arise with the following Cisco Unified Contact Center Enterprise products: Unified Contact Center ICM Edition, Unified Contact Center Enterprise Edition and Customer Voice Portal.
- Escalation of Cisco TAC cases opened by Customer with regards to the Unified Contact Center Solution products listed above.

Data Center Networking (DCN) (AS-DS-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco DCN products and technologies including SAN, ANS, Nexus switches (1000V, 2000, 5000, 6000, 7000), Unified Fabric, Data Center Interconnect (OTV, Fabric Path, vPC), Workload Mobility (LISP).
- Cisco Certified Internet Expert (CCIE)[®] or equivalent.
- Performing technical assessments.

Cisco will provide technical advice and guidance to the Customer with:

- Architecting their data center network environments.
- Planning, design and implementation of Cisco products in Customer's data center.

IOT Industrial Advisory Services (AS-IN-SMX)

Cisco will provide general technical assistance to aid Customer with Cisco's IoT technology and products.

The Cisco resource(s) shall have the following skills and be proficient in:

- Internet networking, which may include Cisco Certified Internet Expert (CCIE) or equivalent.
- Planning, designing, implementing and operating IOT systems and solutions.

- Conducting technical assessments for IOT technology solutions.

Cisco will provide technical advice and guidance to the Customer with:

- Implementation, configuration, and provisioning of Cisco infrastructure to support IOT technologies.
- Transfer of information, knowledge transfer, and one-on-one mentoring pertaining to IOT technologies.
- Technical assistance to Customer during their deployment of IOT technology solutions.

Wireless Networking (AS-WN-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Business value justification, enterprise architecture, network management strategy, solution integration, and/or program design and management.
- Wireless and IP network planning, design, implementation, operation and optimization.
- Converged wireless (voice and data) network design and optimization.
- Cisco software features and functionality.
- Configuring Wireline and Wireless routing and switching devices.
- Defining and/or analyzing networking services requirements.
- Mobile technologies and expertise in Mobile Network Planning, Design, Implementation, Operation and Optimization.
- SS7 over IP (IP Transfer Point).
- Cisco and industry best practices regarding IPRAN and the related environment.
- Mobile Backhaul with integration and validation deployments: CSR, Aggregation router, MWR2941, ASR901, 7600, ASR903, ASR9k.
- Defining and/or analyzing mobile transport requirements and design solutions to assist the Customer to meet requirements for Unified Mobile MPLS Transport Solution (UMMT).
- Timing over Packet: 1588v2, SyncE.
- Cisco Certified Internet Expert (CCIE)[®] or equivalent.

Cisco will provide technical advice and guidance to the Customer with:

- Detailed design, configuration, testing, and troubleshooting.

Operational Support Systems (OSS) (AS-MO-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Operations Support Systems and Network Management Systems Architectures.
- Analyzing operations support systems and network management services requirements.
- Understanding of industry standard operations and network management frameworks, FCAPS, eTOM and ITIL.

Cisco will provide technical advice and guidance to the Customer with:

- Planning, designing, implementing and operating Operations Support Systems and Network Management Systems.
- Implementation, configuration, and provisioning of Cisco operations and network management tools.
- Conducting training and one to one mentoring on Operations Support System.

Optical (AS-ON-SMX)

Customer shall provide any required test equipment and/or instrumentation for the duration of the engagement.

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco optical products and technologies including SONET, SDH and DWDM.
- Configuring and testing Cisco optical products.

Cisco will provide technical advice and guidance to the Customer with:

- Architecting Customer's optical networks environments.
- Planning, designing, and implementing Cisco optical products.
- Technical assessments optical networks environments.
- Training and one to one mentoring on optical technology.

Security (AS-NS-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Security products and technologies including IOS security, intrusion detection and prevention, network admission control, remote access, host protection, perimeter control, and VPNs.
- Analyzing software requirements specification including security management tools.
- Understanding, identification and mitigation of security risks that affect compliance requirements.

- Analyzing security requirements for data center, unified communications solutions, and wireless environments.
- Cisco Certified Internet Expert (CCIE) ® or equivalent.

Cisco will provide technical advice and guidance to the Customer with:

- Integration of Cisco advanced security solutions with the core network infrastructure providing end-to-end security experience
- Migration from existing products to next generation security solutions.
- Technical security and vulnerability assessments of the security architecture and individual network devices, systems, and applications.
- Development of an in-depth security architecture.
- Assessment of the network's readiness to assist the Customer with the deployment of a new security solution, including the existing IT infrastructure, security devices, software operations, and security management procedures.
- Development of detailed security designs, including network diagrams, system rules and reports, and sample software configurations for protocols, policies, and features.
- Development of an implementation strategy and plan detailing the requirements for deployment, integration, and management.
- Custom installation, configuration, testing, tuning, and integration of a security solution.
- Planning, design, and implementation of security solutions.
- Testing a pilot security solution to check that expected performance is attained.

Security Advisory (AS-SE-SMX)

Cisco will provide general assistance to aid Customers with security tactics or strategy; including threat management, risk and compliance, cloud, mobile, and IoT business models.

The Cisco resource(s) shall have the following skills and be proficient in:

- Potential threats and vulnerabilities, risk and compliance frameworks, and security strategies for digitization.
- Vulnerability management and penetration testing.
- Security and compliance practices and capacity for strategic mentoring.
- Planning and execution of cloud, mobile, or IoT strategies.

Cisco will provide technical advice and guidance to the Customer with:

- Building a security strategy and for establishing the governance model for security program/policy development.
- Planning and execution of:
 - Risk and compliance management programs and third party programs.
 - Vulnerability management and penetration testing programs.
 - Secure software development lifecycle (SDLC) programs.
 - Incident response (IR), threat management, and secure operation centers (SOC) related programs.

Video Collaboration (AS-VC-SMX)

Cisco will provide general technical assistance to aid Customer with supported video collaboration endpoint(s) and infrastructure.

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco Video Collaboration products and technologies related to endpoints and infrastructure including, but not limited to: call control (Cisco Unified Communications Manager), gateways, call routing, recording & streaming, conferencing, transcoding, and other applicable focus areas.

Cisco Project Manager will provide technical advice and guidance to the Customer with:

- Project plan development to assist Customer with identifying the necessary steps, dependencies, and timeframes for agreed upon video collaboration projects.
- Overall implementation process from a project management perspective (user group coordination, user readiness and timing).

Cisco Engineer will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an engineering perspective.
- Questions / debugging of an existing implementation and integrations from an engineering perspective.
- Overall implementation process from a technical perspective (hardware, software and network).
- Operations from an engineering perspective (e.g., pro-active monitoring, backups).

Cisco Solution Architect will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an architectural perspective.
- Questions / debugging of an existing implementation and integrations from an architectural perspective.
- Planning and program enablement activities including use cases, training, community management, success criteria.
- Overall implementation process from an architectural perspective (e.g., overall solution, technical architecture, integrations, user deployment).

- Ongoing user rollouts, roadmap maintenance, reactively collecting and prioritizing requirements.

Unified Communications (AS-UC-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco Unified Communications (UC) design, deployment and migration.
- Cisco UC infrastructure and endpoint product releases.
- Cisco UC software application releases.
- Call routing plans, signaling and media protocols.
- UC application and UC infrastructure security.
- Gateway and interconnectivity solutions.
- Two or more of the following topics: IP inter-networking, LAN/WAN switching (including Layer 3 and Layer 4 routing protocols), ATM, and voice technology.
- Internetworking with troubleshooting in a large-scale network environment.
- Large scale network design.
- IP networking, specifically around requirements for successful deployment of UC.
- Telephony dial plan design and call routing and control protocols (e.g., H.323, Q.signaling, Receive and Transmit (E&M), ISDN Primary Rate Interface (PRI), Foreign Exchange Office (FXO), Foreign Exchange Station (FXS), Private Line Automatic Ringdown (PLAR), basic telephone service, Channel-associated signaling (CAS), Content services switch (CSS), Session Initiation Protocol (SIP), G.711/G.723/G.726/G.729, caller ID, direct inward dialing (DID)).
- Current pervasive technologies and advanced technologies.

Cisco will provide technical advice and guidance to the Customer with:

- Overall UC design, deployment and migration to support the Customer in meeting their business goals.
- Provision of Cisco and industry leading practices to Customer regarding UC design, deployment and migration.
- Network management, network availability and capacity planning.
- Participation in extended team status calls and planning meetings.

Unified Computing Systems (UCS) (AS-CS-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco UCS product and technologies.
- Cisco and industry best practices regarding UCS design and implementation.
- Certifications such as VCP, CCIE or equivalent skills.

Cisco will provide technical advice and guidance to the Customer with:

- Analyzing Customer's compute requirements.
- Planning, architecting, designing or implementing Customer's compute and virtualization environments.
- Developing detailed UCS design.
- Migration activities of Customer's existing products to UCS platform.
- Custom installation, configuration, testing, tuning and integration of a server solution.
- Testing a pilot UCS solution to check that expected operational characteristics of UCS platform is attained.
- Conducting training and one to one mentoring on UCS technology.

Hosted Unified Communications (AS-HU-SMX)

Cisco will provide general technical assistance to aid Customer with supported Hosted Unified Communication deployment:

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco Hosted Unified Communication architecture, including required hardware and software, as well as system configurations, and other applicable focus areas.

Cisco Project Manager will provide technical advice and guidance to the Customer with:

- Project plan development to assist Customer with identifying the necessary steps, dependencies, and timeframes for agreed upon Hosted Unified Communication projects.
- Overall implementation process from a project management perspective (user group coordination, user readiness and timing).

Cisco Engineer will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an engineering perspective.
- Questions / debugging of an existing implementation and integrations from an engineering perspective.
- Overall implementation process from a technical perspective (hardware, software and network).
- Operations from an engineering perspective (e.g., pro-active monitoring, backups).

Cisco Solution Architect will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an architectural perspective.
- Questions / debugging of an existing implementation and integrations from an architectural perspective.
- Planning and program enablement activities including use cases, training, community management, success criteria.
- Overall implementation process from an architectural perspective (e.g., overall solution, technical architecture, integrations, user deployment).
- Ongoing user rollouts, roadmap maintenance, reactively collecting and prioritizing requirements.

Cloud Unified Communications (AS-CU-SMX)

Cisco will provide general technical assistance to aid Customer with supported Cloud Unified Communication deployment:

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco Cloud Unified Communication architecture, including required hardware and software, as well as system configurations, and other applicable focus areas.

Cisco Project Manager will provide technical advice and guidance to the Customer with:

- Project plan development to assist Customer with identifying the necessary steps, dependencies, and timeframes for agreed upon Cloud Unified Communication projects.
- Overall implementation process from a project management perspective (user group coordination, user readiness and timing).

Cisco Engineer will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an engineering perspective.
- Questions / debugging of an existing implementation and integrations from an engineering perspective.
- Overall implementation process from a technical perspective (hardware, software and network).
- Operations from an engineering perspective (e.g., pro-active monitoring, backups).

Cisco Solution Architect will provide technical advice and guidance to the Customer with:

- Planning and design of future implementation and integrations from an architectural perspective.
- Questions / debugging of an existing implementation and integrations from an architectural perspective.
- Planning and program enablement activities including use cases, training, community management, success criteria.
- Overall implementation process from an architectural perspective (e.g., overall solution, technical architecture, integrations, user deployment).
- Ongoing user rollouts, roadmap maintenance, reactively collecting and prioritizing requirements.

Packet Core (AS-PC-SMX)

The Cisco resource(s) shall have the following skills and be proficient in:

- Cisco's Mobile Packet Core Portfolio including ASR5000 product and related technology.
- Mobile Internet technologies and expertise in Mobile Network planning, design, implementation, operation and optimization.
- Providing Cisco and industry best practices to Customer regarding Mobile Packet Core and the related environment.
- Understanding of Mobile Wireless 3G and 4G network technologies, this complemented with Service Provider Wi-Fi technologies.
- Integration and validation of one or more of the following services enabled on ASR5000: PDSN, HA, GGSN, PDIF, PDG, PCSCF, ICSCF, PGW, SGW, ASNGW, TTG, SGSN, MME, IPSG, EWAG and HNMGW.
- Enabling ASR5K inline value-add services such as Gx interface, Prepaid, QoS, Firewall, Parental Control.
- Cisco ASR5000 software features and functionality.
- Defining and/or analyzing mobile network requirements and design solutions to assist the Customer to meet those requirements.

Cisco will provide technical advice and guidance to the Customer with:

- Mobile call flow design, solution and systems integration, and migration activities to assist the Customer meeting their business and technical needs.
- Preparing the engineering and migration plans, Method of Procedures (MOP) and supporting MOP execution.
- Support the operations team with ASR5000 management and collecting KPIs.
- Conducting training and one to one mentoring on the Mobile Internet technology topics.

Cable Access (AS-CA-SMX)*

General technical assistance to aid Customer with Cisco's Cable Access Solution products, services and technology. The Cisco resource(s) shall have the following skill sets or capabilities in:

- Understanding day to day operations of the Cisco Cable Access components.
- In-depth knowledge of the following Cable Access topics: DOCSIS, CCAP Core, DOCSIS and Video Access, PacketCable, HFC Nodes.

- Experience configuring, provisioning, implementation and testing Cisco Cable Access components.
- Assist Customer in planning, designing, and implementing Cisco Cable Access components.
- Ability to troubleshoot complex critical Cable Access issues, analyze root cause and provide recommendations.
- Technical expertise in assisting Customer with readiness assessment, planning and design of next generation Cisco Cable Access solution deployments and integration.
- Assist Customer with readiness for next generation Cable Access services in support of Customer roadmap to integrate or migrate to Cisco Cable Access products.
- Knowledge of integrating and migrating to new Cisco Cable Access solutions within existing Customer infrastructure and ability to bridge multi-vendor applications or components into the Cisco solution.
- Proficient in Distributed Access Architecture (DAA) as well as workflow Automation.
- Ability to provide Cisco and industry best practices, conduct knowledge transfer and/or one to one mentoring concerning Cisco Cable Access technology.
- Converged Interconnect Network (CIN) for Cisco Cable Access Networks; Cisco XR-based NCS-540/560 and NCS-5500 Platforms.

* Example Cable Access Solutions include:

- CCAP/Core: cBR-8, cNBR Appliance
- RPHY Devices: RPD-120, iRPD-120, RPD-220, RPHY300/600, RPHY7200
- HFC Components: GS7K 1.2Ghz Nodes, GS7K 1.2 Ghz Intelligent Node
- Management / Orchestration: SmartPHY RPD Manager, iNode Manager