

Digital Advisory Services Professional Service Description

SIP SBC with Field Trial Management Takeover Model

1. Description of Services.

1.1 SIP SBC with Field Trial Management Takeover.

Verizon will assist Customer with the planning, documentation, and migration of their Session Border Controllers (SBC) in preparation of management takeover by Verizon managed services.

2. **Scope of Work.** In collaboration with Customer, Verizon will provide technical expertise, oversight and guidance through a logical sequence of activities designed to assist Customer with a management takeover of their SBCs. All work will be performed remotely.

2.1 Professional Services Overview. Verizon will perform the following tasks:

2.1.1 Configure the appropriate management protocols (SNMP, Radius, NTP) for the ACME Packet, Cisco CUBE or Sonus SBCs as specified in the Engagement Letter;

2.1.2 Reconfigure the existing SBC management interface (or create a new interface) with a new IP address which allows access from the Verizon management domain (if required);

2.1.3 Test connectivity from Verizon management domain to the new SBC management interface;

2.1.4 Draft basic Customer environment documentation, including IP addressing, management protocol information and SBC access information (collectively, the "Documentation");

2.1.5 Customer documentation:

2.1.5.1 Review Customer provided design documentation including SBC configuration (show support-info), header manipulation rule description, redundancy detailed design, CODEC policy, etc., related to the SBC devices, if specified in the Engagement Letter, **OR**

2.1.5.2 Prepare design documentation including SBC configuration (show support-info), header manipulation rule description, redundancy, detailed design, CODEC policy, etc., related to the SBC devices, if specified in the Engagement Letter.

2.1.6 Service provider documentation:

2.1.6.1 Review service provider IP trunk/IPCC documentation (Network SBC IP address and port, fully qualified domain name (FQDN), call flow, etc.), if specified in the Engagement Letter, **OR**

2.1.6.2 Work with the Service Provider to create IP trunk/IPCC documentation (Network SBC IP address and port, FQDN, call flow, etc.), if specified in the Engagement Letter.

2.2 **Engagement Management.** Verizon will designate an "Engagement Project Manager" who will act as the single point of contact throughout the Engagement. The Engagement Project Manager is also responsible for managing the change control process. Should the Engagement's requirements change during the course of the Engagement, the Engagement Project Manager will ensure that any modifications to the SIP SBC with Field Trial Management Takeover are agreed to and documented in writing.

Customer will appoint a single point of contact that is responsible to: coordinate the Engagement activities, interact with Verizon, and ensure timely data flow and exchange of information required for execution of the Engagement within the agreed time frame.

Verizon will work with Customer to schedule a kick-off discussion to initiate the Engagement. Verizon and Customer will collaborate to determine required stakeholders and other attendees, agenda, and meeting location (i.e. on site or virtual). At or before the kick-off discussion, Customer shall provide a list of appropriate contact personnel with contact numbers, and appropriate on-site authorization documentation (where applicable). As an output of the discussion, Verizon will confirm the resources, date, time, and location for the SIP SBC with Field Trial Management Takeover with the Customer.

All Engagement Management activities and duties will be delivered remotely.

3. Deliverables and Documentation to be produced by Verizon. Deliverables are intended for Customer and Verizon use only. Customer may disclose a Deliverable to a third party pursuant to the Agreement's confidentiality terms. Verizon will provide:

3.1 The Documentation.

4. Documentation to be produced by Customer and Customer Obligations. Delivery of the SIP SBC with Field Trial Management Takeover Professional Services by Verizon is dependent on Customer's performance of the following:

4.1 Provide the necessary commitment of resources and timely response to requests for information to achieve the delivery of the SIP SBC with Field Trial Management Takeover within the mutually agreed timeframes.

4.2 Designate, prior to start of the Engagement, a project manager who will function as the single point of contact ("SPOC") to Verizon and must be involved throughout the duration of the Engagement.

4.3 Actively participate in all Engagement related meetings and discussions and mutually collaborate with the SPOC designated by Verizon to resolve issues and changes to plan.

4.4 Make available, as required, all necessary contacts and stakeholders for input and participation in this Engagement.

4.5 Provide the assistance as defined under Customer Obligations section of the SOW

4.6 **Customer's Third Party Vendors.** Unless otherwise stated in the Engagement letter, Customer's Project lead will coordinate all activities between Verizon and any third party vendors used to fulfill Customer's responsibilities set forth herein. This includes, but is not limited to, third party vendors used for:

4.6.1 Upgrade of Customer PBX/IPPBX;

4.6.2 Electrical power systems;

4.6.3 Data/voice cabling systems;

4.6.4 Carrier services;

4.6.5 Equipment (software and hardware);

4.6.6 Implementation and professional services; and

4.6.7 Maintenance services.

4.7 **Field Trial Test Requirements.** Customer is responsible to provide the following in their call control system in order to enable Verizon to perform the field trial tests.

4.7.1 Phone call types.

4.7.1.1 Phones able to receive inbound calls with Caller ID:

4.7.1.1.1 Ability to call a number that is not registered;

4.7.1.1.2 Ability to call a number that does not answer;

4.7.1.1.3 Ability to call a number that is busy; and

4.7.1.1.4 Phone on public switched telephone network (PSTN) able to make these calls.

4.7.1.2 Phones able to make outbound calls to (country dependent)

4.7.1.2.1 Local;

4.7.1.2.2 Long Distance/national fixed and mobile;

4.7.1.2.3 International fixed and mobile;

4.7.1.2.4 Local services;

4.7.1.2.5 Emergency services;

4.7.1.2.6 Operator assisted / directory assistance calls;

4.7.1.2.7 Privacy enabled calls; and

4.7.1.2.8 Phone on PSTN able to receive these calls.

4.7.1.3 Fax machine on the PSTN able to send an outbound fax.

4.7.1.4 Fax machine on the PSTN able to receive an inbound fax.

4.7.1.5 Transfers (REFER or REINVITE or both):

4.7.1.5.1 Two phones on SIP side able to transfer to each other and PSTN;

4.7.1.5.2 Two phones on PSTN side able to take calls and be transferred;

4.7.1.5.3 Ability to test attended transfer type;

4.7.1.5.4 Ability to test semi- attended transfer type; and

4.7.1.5.5 Ability to test blind transfer type.

4.7.1.6 Features:

4.7.1.6.1 Ability to place a call on hold;

4.7.1.6.2 Ability to place music on hold;

4.7.1.6.3 Ability to conference two callers together;

4.7.1.6.4 Ability to test dual-tone multi-frequency signaling (DTMF) in both directions; and

4.7.1.6.5 Ability to test alternate caller ID (ACID) feature.

4.7.1.7 Hardware and Configuration Support:

4.7.1.7.1 Ability to test failover capabilities by disabling SBCs, private branch exchanges (PBXs), routers and/or switches;

4.7.1.7.2 Ability to test all types of endpoints including any voice gateways and voice mail servers where required;

4.7.1.7.3 Ability to test G.711 and G.729 calls; and

4.7.1.7.4 Ability to test with ambient background noise.

4.8 Provide internet access that will enable Verizon to access external systems using VPN capability, if necessary.

4.9 Provide remote VPN access to applicable systems.

4.10 Provide relevant supporting documentation, as requested by Verizon including without limitation, system management and administrative documents.

4.11 Rack and stack and connect all equipment to the network.

4.12 Acquire, install, and configure any client software on any PCs (for example Wireshark) within the scope of the Engagement.

4.13 Procure, design, install, configure troubleshoot, manage, and support all Customer-owned CPE. The applicable CPE may include, but is not limited to, the call control device (PBX/IP PBX), SBCs, LAN switches, routers/gateways, and telephony devices.

4.14 Confirm that all CPE devices are configured, installed and tested prior to the start of the field trial testing.

4.15 Additional Customer responsibilities consist of:

4.15.1 Connecting the PIP circuit and configuring applicable CPE devices to support the IP connectivity and IP/SIP Trunk(s).

4.15.2 Customer will perform packet captures of the SIP traffic during the field trial testing, using WireShark or an equivalent packet capturing product. Upon completion, the Customer will provide the packet capture files to Verizon.

5. Assumptions. In addition to the (i) above-stated obligations, policies, and parameters and (ii) the assumptions stated in the Assumptions section of the SOW, the following assumptions and considerations shall apply. Should any of these assumptions prove to be incorrect or incomplete then Verizon may modify the price, scope of work, or milestones:

5.1 SIP SBC with Field Trial Management Takeover will be performed during the hours defined in the Engagement Letter.

5.2 Any Assumptions under the applicable Engagement Letter will also apply to the SIP SBC with Field Trial Management Takeover.

- 5.3 Customer's network will be "stable" during the data gathering period, which means no fundamental changes and/or equipment deployments during the discovery window as agreed upon between Verizon and Customer prior to field trial commencement.
- 5.4 The dial plan design for this Engagement is specifically to allow for SBC integration with the Customer's IPPBX. Any dial plan design outside of this integration is not included in the Engagement.