Service Description: Professional Services – Fixed Price

Cisco QuickStart Implementation Service for Tetration Analytics SaaS/V – 1000 Workloads
ASF-DCV1-G-TA-V1K

This document describes Advanced Services Fixed Price: Cisco QuickStart Implementation Service for Tetration Analytics SaaS/V – 1000 Workloads

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Cisco Implementation Service for Tetration Analytics SaaS/V – 1000 Workloads

Service Summary

This service covers the following areas:
- Project Management
- As applied to Tetration-V or Tetration SaaS Analytics Solution:
    - Tetration on-boarding
    - Sensor Install guidance
    - Application Dependency Mapping
    - Dashboard Creation (1)
    - Knowledge Transfer
- Service is limited to the ADM of 20 applications and each not exceeding 50 endpoints

Deliverables
1) Project Management Plan ("PMP")
2) Tetration Analytic As-Built document
3) Operations Run-Book
4) Pre-requistite checklist and templates as described below.

Location of Services

Services will be performed remotely, from Cisco Site(s)

Project Management

Project management will be provided in conjunction with, and is limited to the management of, the Services and Deliverables as described herein.

Cisco Responsibilities

- Provide the Customer with a list of designated Cisco personnel roles and responsibilities under this Service.
- Provide a Project Management Plan ("PMP"). PMP is a baseline document from which the Cisco PM can manage deliverables, assess progress, and manage change management issues and any on-going questions.

- Work with Customer to identify and document dependencies, risks and issues associated with the successful completion of the project.
- Provide Customer with the Pre-Requisite Checklist. The Pre-Requisite Checklist is a Cisco provided document that provides a detailed specifications of the hardware requirements for Tetration-V or connectivity requirements for SaaS
- Participate in scheduled project review meetings or conference calls, if required.
- Deliver a weekly project status to the Customer.
- Identify and manage project team members.
- Define the communication flow with the project sponsor and key stakeholders and document it in the Project Plan.
- Work with Customer to identify and document dependencies, risks and issues associated with the successful completion of the project.
- Provide the following:
    - Kick-off Meeting
    - Scheduling of Cisco Resources
    - Project Plan
    - Change Management
    - Manage the project to the agreed upon Project Plan.

Customer Responsibilities

- Provide Cisco with completed responses to the Pre-requisite Checklist within ten (10) Business Days of receipt.
- Identify Customer's project sponsor and key stakeholders and define their role in supporting this project.
- Work with the Cisco Project Manager to ensure the Customer's project sponsor, key stakeholders and all project team members receive project communications and are included in regularly scheduled communications sessions.
- Work with Cisco to schedule the kick off meeting, and communicate the meeting schedule to the Customer-identified stakeholders.
- Review the project schedule, objectives, Services, Deliverables and roles and responsibilities with Cisco.
- Schedule the necessary facilities for meetings (such as: conference bridges).
- Participate in regularly scheduled project review meetings or conference calls.
- Work with Cisco to identify specific objectives and critical success factors for the project.
- Coordinate any third party activities (such as in country carrier/telco activities), deliverables or schedules as required for Cisco's completion of the services.

- Notify Cisco of any scheduling changes related to this project at least five (5) Business Days ahead of the scheduled activity.

Site Readiness

Cisco Responsibilities:

- Provide a pre-requisite checklist, which defines all items that need to be considered prior to an installation taking place or connectivity to Cisco SaaS infrastructure.
- Review the Customer completed checklist and notify the customer of any remediation steps required to support the Tetration implementation.

Customer Responsibilities:

- Return the completed Cisco provided pre-requisite checklist within 10 Business Days of receipt.
- Complete any remediation as requested by Cisco within 10 Business Days from completion of Cisco's checklist review.

Tetration On-boarding

Cisco Responsibilities:

- Conduct one (1) remote workshop (2 hours) for a maximum of ten (10) Customer stakeholders to review business requirements for the project.
- For a Tetration-V perform hardware and software validations for Customer provided Tetration Environment to support one (1) Tetration appliance.
- For Tetration-V support installation for maximum of 2 hours on the Customer-provided Environment, using the Site information provided by the Customer in the pre-requite checklist.
- For Saas provide customer on-boarding checklist which details cluster connectivity details.

Customer Responsibilities:

- Designate Customer stakeholders responsible for supporting implementation tasks, to include,
    - For Tetration V: a) Ensure customer provided hardware for Tetration-V or Tetration-SaaS Appliance is powered on and has the right environmental conditions available, as dictated by the Prerequisite Checklist Report; b) Provide connectivity between the Tetration-V or Tetration-SaaS Appliance as per Prerequisite Checklist Report (Inter and intra server cabling and Tetration-to-Customer network

infrastructure connectivity); c) Ensure that the Tetration rack can connect to the Customer network over network ports (TCP/UDP) specified by Cisco; d) obtain the Tetration package installer from CCO and ensure it is available for Cisco's use.

- For Tetration SaaS: Ensure that the Tetration-SaaS can connect to the Customer network over network ports (TCP/UDP) specified by Cisco.
- For Tetration-V: Manage the delivery, installation, and configuration of equipment not provided by Cisco that is required to work with, or act as, part of the Cisco-provided equipment.
- For Tetration-SaaS: Manage the installation of software agents on the servers for providing telemetry data to the Tetration SaaS infrastructure.

- Ensure Cisco has access to Customer personnel and/or remote access to Customer site (including access to solution, devices, and facilities) as necessary for Cisco to perform the Services.
- Create and provide an email alias to be used specifically for communication related to the Tetration Services.
- Provide Cisco with Customer Site/server/host information, via the template provided with Prerequisite Checklist Report at project kick-off.
- For Tetration–V, provide Cisco with remote access to the cluster.
- Manage any Customer internal change management procedures.
- For Tetration-V, make any necessary adjustments to Customer-provided Virtual Environment to meet Cisco's requirement as required.
- For Tetration-V Adopting/fine tuning to Vcenter best practices.
- For Tetration-SaaS, make any necessary adjustments to Server Environment to meet Cisco Tetration-SaaS requirements.
- For Tetration-V, allow Cisco to remotely set up the Tetration software onto the Virtual Environment and system access to Cisco.
- Provide assistance, as required by Cisco, to troubleshoot any environmental or other issues, to bring up the cluster. The list of issues that Cisco may require assistance may include but are not limited to, as applicable to Tetration-V or Tetration SaaS a) Virtual Environment issue; d) Workstation issues; e) Corrupted Tetration software RPM due to improper download mechanisms; f) Tetration-SaaS environment; g) Server/workstation/host.
- Provide an email address and network access to Cisco for purposes of logging into the cluster using 'support role' credentials. This access is

required for the duration of the Services, specifically: a) for Tetration-V, local to the data center where the cluster is located; and b) through a site-to-site VPN, wherever applicable, as agreed between the parties.

- Provide necessary connectivity to the customer network, as required by Cisco, from the cluster to the network where the sensors will reside.
- Perform the necessary routing to enable the sensors and users to reach the cluster.

Sensor Support for Installation

Cisco Responsibilities:

- Cisco to provide access to sample scripts that Customer may use for internal use only to install supported sensors. The format of the scripts will be decided by Cisco and could include one or more of:
  - Ansible
  - Chef
  - Puppet
  - Bash
  - Python
  - Powershell
- Cisco to use data from sensors for analysis of applications. The sensors will be deployed on hosts and/or switches that will provide flow data for the chosen applications.
- Cisco to assist customers during sensor deployment for up to 8 hours.
- Cisco will include following in As-Built report, if applicable:
  - Number of sensors
  - Operating Systems deployed
  - Sensor profile information
  - Applicable automation Scripts

Customer Responsibilities:

- Customer is responsible for requisitioning the change management windows needed for the agreed upon number of sensors to be deployed with Cisco support.
- Customer is responsible for installing the remainder of the total number of sensors on their hosts determined during the kick-off call between customer and Cisco.
- Customer understands that Cisco will not assume any support responsibility for Scripts provided to the customer during the course of the deployment.
- Unless required by applicable law or agreed to in writing, the Scripts are provided on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. Cisco and its licensors retain sole and

exclusive ownership of the Scripts, including without limitation all intellectual property rights in the Scripts and in all modifications, enhancements and derivative works thereto. Scripts may contain open source software subject to separate open source license terms.

Application Dependency Mapping (ADM) Run and Compliance

Cisco Responsibilities:

- Cisco to provide analysis of no more than Twenty applications. Not to exceed 50 endpoints per application discovered with live sensors for example any IPv4/IPv6 address is an end point - as an input to the ADM run.
- Cisco to provide templates in Tetration Analytics canonical formats of SLB configurations, DNS and Route Tag configurations to customer.
- Cisco to provide recommendations pertaining to clusters/groupings for endpoints being analyzed.
- Cisco will conduct up to three (3) application reviews with customer per application.
- Cisco to create no more than two (2) ADM workspaces per application being analyzed.
- Cisco to provide no more than three application views per ADM workspace.
- Cisco to run no more than three (3) live compliance analyses for published policies, per application.
- Cisco will provide an As-Built report containing the following, if applicable:
  - ADM Policy Export Report inclusive of following:
    - Whitelist policies between clusters
    - Micro-segmented policies
    - Endpoints within an Application Cluster
    - Compliance analyses and recommendations
    - Application Views

Customer Responsibilities:

- Customer is responsible for providing application stakeholders to participate in up to three (3) checkpoints/reviews per application being analyzed.
- Customer to provide stakeholder to review every ADM run results and 'approve clusters' provided in results of every ADM iteration.
- Customer to provide stakeholders to participate in analysis of live and experimental compliance view results, as requested by Cisco.

- Customer to provide stakeholders to participate in any discussions of creation of whitelist policies, as requested by Cisco.
- Customer to use Tetration Analytics templates for DNS/SLB/Route-tags provided by Cisco to generate their configurations for providing them as input to the ADM analysis.

Operations Run-Book

Cisco Responsibilities:

- Provide the Operations Run-Book which documents standard operating procedure(s) and three Tetration use cases selected for Knowledge Transfer that address a specific operational or technical procedure for Tetration.

Customer Responsibilities:

- Work with Cisco to document the system requirements, configurations and connection settings relevant to Operations Run-Book.
- Work with Cisco to document the operating system or virtualization software installed relevant to the Operations Run-Book.
- Work with Cisco to document the technical aspects and configurations of the applications installed relevant to the Operations Run Book.

Knowledge Transfer

Cisco Responsibilities:

- Provide information to Customer regarding any Knowledge Transfer pre-requisites for Customer personnel nominated to attend the Knowledge Transfer workshop. Cisco will determine an appropriate format and delivery method for the Knowledge Transfer workshop(s).
- Within five (5) Business Days following completion of the ADM Run and Compliance deliverables, reach agreement with the Customer on the commencement date of the Knowledge Transfer workshop.
- Conduct one (1) remote Knowledge Transfer workshop on topics relevant to Tetration solution deployed in Customer's production network. Each workshop will be held for one (1) consecutive Business Day, for up to a maximum of fifteen (15) participants.
- The Knowledge Transfer workshop may include, but is not limited to, one or more following topics: a) GUI walkthrough; b) ADM analysis; c) Compliance analysis; d) Exploring and searching flows; e) Operationalizing Tetration cluster; and f) Dashboard views.

- Provide related knowledge transfer material, if any.
- Discuss and demonstrate no more than three (3) Customer selected use cases from the following list for no more than eight (8) hours per use case:
  - Flow Analysis Use Case, comprising: Create filters and drill down to specific flow(s) of interest based on filter criteria specified by Customer; Guidance for creating and analyzing flows based on filters specified by Customer; Create a library of commonly used flow search queries (Not to exceed 10 commonly used flow searches).
  - Forensics and Visibility Use Case, comprising: Demonstrate the creation and baselining of various metrics such as latency, bandwidth, and flow activity for various applications, network segments; Illustrate how to perform fault isolation for network/app related issues available from within Tetration.
  - Near Real-time Application/Software Inventory and Process Detection Use Case, comprising: Demonstrate on how to baseline the behavior of the processes running on the servers to identify any behavior deviations and compare them with known "bad" patterns exhibited by these processes; Illustrate how to identify operational fault isolation for compute and host process/sub-process related issues; Illustrate the near real-time authoritative updates which can be integrated with customer's CMDB only for Tetration-V.
  - Network Performance Use Case, comprising: NPMD features supported by software sensors only.
  - Neighborhood Graphs Use Case, comprising: Demonstrate how to discover adjacent application servers based on end to end application flows and traffic patterns; Illustrate how to discover asymmetric application flows; Illustrate the detailed per-hop flow information.
  - Best Practices Guidance, Upcoming Releases Guidance & Integration in Day 2 Operations Use Case, comprising: Conduct Question and Answer, Roadmap and best practice sharing; Illustrate how to deploy and run Tetration in alignment with Cisco best practices; Provide guidance on integration of Tetration in Customer's day 2 processes; Illustrate how to leverage new features for faster time to value

Customer Responsibilities:

- Provide further information about Customer requirements to enable Cisco to deliver a more focused and tailored Knowledge Transfer.
- Provide Cisco with the names and basic profiles of personnel attending the Knowledge Transfer workshop at least five (5) Business Days before commencement of the workshop(s).
- Within five (5) Business Days following completion of the ADM Run and Compliance Deliverables, agree with Cisco on the actual location and the commencement date of the Knowledge Transfer workshop(s).
- Ensure that Customer's personnel attending the Knowledge Transfer workshop(s) meet all course pre-requisites identified by Cisco.

Project Assumptions and Exclusions

- Cisco to assist Customer in upgrading the cluster, assuming an upgrade is available to the Customer during the delivery of the Service.
- Cisco to assist Customer in operational activities limited to:
  - Creation of no more than ten (10) user accounts on the cluster.
  - Validate condition of cluster before and after upgrade through snapshots.
  - Validate that sensors that have been marked for auto-upgrade have been upgraded.
- No work can start on cluster initiation until Customer has returned all site information to Cisco project manager.
- Cisco will make commercially reasonable efforts to create a design capable of being automated by a third party or Cisco orchestration systems. However, Cisco cannot be responsible for any current or future third party software or implementations.
- Cisco will make commercially reasonable efforts to provide project management and scheduling around availability of third party hardware on which the completion of services depends, which may include the servers on which Tetration software agents will be installed.However Cisco Services will not be responsible for schedule impacts due to third party deliverables or dependencies.
- Customer is responsible for determination and implementation of Customer design requirements and implementation of any recommendations provided by Cisco. Cisco recommendations are based upon information provided to Cisco at the time of the services. In no event shall Cisco be liable for the accuracy or completeness of the information contained in the Cisco recommendations.
- Customer is responsible for system level and application end to end solution testing, acceptance and certification. Cisco to

collaborate and provide architectural design and sub-system level testing for components in the data center.

- Customer will be responsible for migrating and testing all server-based applications.
- Implementation/Migration Plan Execution Support does not include physical installation, racking and stacking of equipment, or physical cable installation.
- Customer shall supply the workplace policies, conditions and environment in effect at Customer Site(s). All data (designs, topologies, and requirements) provided by Customer are assumed to be current and valid.
- Customer shall integrate and validate any network monitoring solutions.
- IPv6 is excluded from this Service.
- Multicast configuration is excluded from this Service.
- All method of procedures (MOP) / detail migration plans regarding servers and applications are excluded from this Service. The MoP mentioned above is related to network elements only.
- This Service does not include any tool-based discovery and recording of network communication.
- Developing server, network devices and application inventories are not part of this Service

Invoicing and Completion

Invoicing
Services will be invoiced upon completion of the Services.

Completion of Services

Cisco will provide written notification upon completion of the Services to Customer. Customer shall within five (5) Business Days of receipt of such notification provide written acknowledgement of Cisco's completion of the Services. Customer's failure to acknowledge completion of the Services or to provide reasons for rejection of the Services within the five (5) Business Day period signifies Customer's acceptance of completion of the Services in accordance with this Service Description.

Customer expressly understands and agrees that the Services shall take place and complete within ninety (90) calendar days from issuing a Purchase Order to Cisco for the Services herein.