JUNIPER SOFTWARE UPGRADE ASSISTANCE SERVICE

SERVICE DESCRIPTION DOCUMENT

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1. Introduction

This Services Description Document ("SDD") describes Juniper Networks® Software Upgrade Assistance Service (the "*Services*") that Juniper makes available for purchase by End Users of Juniper Networks products (each, an "*End User*") directly or through its authorized resellers.

The Services are subject to the terms of this SDD and of the Juniper Purchase and License Agreement ("JPLA") a copy of which is posted at https://www.juniper.net/us/en/legal-notices/juniper-networks-contracts-resource.html (i.e., GTC plus the Customer Schedule or Channel Schedule, as applicable) or such other URL that Juniper may designate from time to time (or another written master services agreement signed by Juniper Networks and End User and covering within its scope the terms and conditions under which Juniper Networks will render support and maintenance services). In the event of any conflict between the terms of this SDD and that of the JPLA; the terms of this SDD shall take precedence. Unless otherwise stated in this SDD, capitalized terms used in this SDD shall be as defined in the JPLA.

The Services provide a comprehensive review of the End User's software upgrade requirements for Juniper Networks products. It includes an assessment of the upgrade risks, analysis of the potential impact on the End User's network, and recommendations for a suitable Juniper software release. The service also involves testing the upgrade in Juniper's lab environment and offering remote assistance during the upgrade implementation window. All services described in this SDD are delivered remotely from an authorized Juniper location unless otherwise specified in writing

2. Eligibility and Purchasing

The Services are available for purchase only (i) by certain qualified End Users solely for their own end use and (ii) by Juniper Networks authorized resellers solely for resale to such End User identified by name and address in such reseller's purchase order. The Services cover only those Juniper Networks' products of End-User purchased from Juniper Networks or an

authorized Juniper Networks reseller.

The Services cover only those Juniper Networks products as to which all the following eligibility requirements apply and are referred to as "Supported Juniper Products" in the Scope section below:

i. End User is using Juniper products
ii. End User has purchased or leased the Juniper products from either Juniper Networks, or a Juniper Networks authorized reseller

The services can be purchased using the following SKUs:

SKU	Description
SVC-SWUP-AST-BAS	Software Upgrade Assistance Service – BASE
SVC-SWUP-AST-PLS	Software Upgrade Assistance Service - PLUS

3. Service Features and Deliverables

As part of the Services, Juniper will use commercially reasonable efforts to provide the End User with the following:

3.1 Kickoff Meeting

A Juniper technical consultant will be assigned as a Single Point of Contact (SPOC) for the Services. The assigned Juniper resource will set up a virtual kickoff meeting with End User's key stakeholders.

The kickoff meeting provides:

- review of the End User's requirements
- review of the Services engagement scope and milestones
- review of Juniper's and End User's responsibilities, data collection requirements from the End User, and the delivery process for the collected data

3.2 Software Upgrade Assessment and Release Recommendation

Software Upgrade Assessment and Release Recommendation will provide a targeted Juniper software release recommendation after an assessment of (i) the current version of the Juniper software in use in End User's environment, (ii) the hardware platforms managed by the Juniper Software, and (iii) End User's provided feature requirements and operating configuration of the current End User's environment.

The recommendation will apply to one device family and/or model (e.g. Juniper MX family), and is limited to a single function (e.g. P-Router, PE-Router, Route Reflector etc.).

The standard tasks associated with the assessment include:

- Review current conditions, problem history, and feature requirements of End User's network infrastructure to determine a target software release which supports:
    - Existing hardware devices running on Juniper software
    - Existing feature usage and future feature requirements
    - Performance and high availability requirements
    - Solutions to previous cases and problems reported
    - Latest network infrastructure design or services changes
- Target Juniper software release analysis to determine the potential impact on the End User's network:
    - Review target software release
    - Provide details on any additional software features included in the target release such as operational

features, redundancy features, and configuration features (depending on products)

- Provide details on any default behavior and syntax changes in the target release
- Provide information on software defects found in the field that match the target release and End User's network profile, including:
  - Description of the problem
  - Impact of the problem
  - The known trigger of the problem
  - A proposed solution to the problem or any known workarounds that might alleviate or prevent the problem
- Analysis of Juniper software defects found in the field that matches the target release and End User's network profile:
  - In-depth analysis of any high-impact software defects identified in the target release and potential level of exposure on the network based on End User's specific business and networking requirements
    - Critical problems: severely affect service, capacity/traffic, billing, and maintenance capabilities; require immediate corrective action including but not limited to:
      - A loss of service that is comparable to the total loss of effective functional capability of an entire system
      - A reduction in capacity or traffic handling capability such that expected loads cannot be handled
      - Any loss of safety or emergency capability (e.g., 911 calls)
    - Major problems: seriously affect system operation, maintenance, and administration, etc., which require immediate attention but are of less urgency compared to critical problems due to less immediate impact on system performance, End User's operation, and revenue (including but not limited to):
      - Reduction in any capacity/traffic measurement function
      - Any loss of functional visibility and/or diagnostic capability
      - Short outages equivalent to system or subsystem outages
  - Assessment of the probability (High, Low, To Be Determined (TBD)) that the End User will encounter the reported defects on their network
    - High - It is likely the End User will see the issue
    - Low - It is unlikely the End User will see the issue
    - TBD - Not enough information available to correctly identify the probability of the issue at this time
  - Discussion with the End User to determine the course of action that an End User should take regarding the identified defects to avoid potential problems and establish a clear agreement on identified defects that must be fixed prior to software upgrade. Documentation of these agreed decisions will be provided.

- Juniper Software Upgrade Recommendation
  - Provide Juniper software upgrade recommendation based on the target software release analysis

3.3 Juniper Software Upgrade Testing

Software Upgrade Testing will provide End User with Juniper expertise and resources to perform Juniper software upgrade validation and upgrade procedure testing in Juniper labs prior to implementation in End User's production network.

The testing covers one (1) software release upgrade test cycle from current deployed release of Junos OS or Junos OS

Evolved to targeted release of Junos OS or Junos OS Evolved. This includes, a) setting up Juniper Networks' internal post-sales testing lab environment known as Customer Certification Lab (CCL) for a single Device Under Test (DUT) with End User's specific configuration, for the role for which it has been deployed in an optimized simulation; and b) testing and documenting the Method of Procedure (MOP) for the single DUT upgrade. Software upgrade testing is limited to a single platform type DUT in one role, e.g. MX480 as an edge router.

The standard tasks associated with the testing include:

- Assigning a test engineer for the duration of the Software Upgrade Testing to execute the target software upgrade testing process
- Setting up the identified target software version for the supported Juniper hardware DUT via Software Upgrade Recommendation deliverable
- Setting up the topology in the Juniper lab and configuring the topology
    - Analyzing the End User-provided network configuration data
    - Developing the Software Upgrade Test plan and reviewing the plan with the End User. Software upgrade test plan consists of Juniper recommended test cases. The test plan accommodates the End user's test cases and scenarios where possible, but Juniper is not obligated to do so.
    - Establishing a lab test environment with lab devices and traffic flow configuration
- Executing the Software Upgrade Test Plan
- Validating software defects and issue handling
- Test reporting and single DUT upgrade MOP
    - Capturing results and developing final test exit report
    - Documenting the steps associated with the upgrade of the software code for the single DUT in the form of a MOP without traffic diversion and network migration steps

3.4 Software Upgrade Maintenance Window Support

The Juniper technical consultant resource will work with the End User during the upgrade maintenance window and assist the End User with any questions, concerns, or problems experienced during the Juniper software upgrade.

- Upgrade Maintenance Window Support: Juniper technical resource will be on standby during one (1) maintenance window (up to 5 hours) for one (1) instance of the target Juniper software upgrade. The Juniper technical resource will perform the following key activities:
    - Address any question, concern, or issue raised by the End User during the software upgrade
    - If escalated by the End User, diagnose and engage Juniper TAC for remote troubleshooting of unforeseen issues that may arise during the software upgrade
    - Recommend solutions to any identified issues and provide support for any proposed software upgrade solution
    - Transition any outstanding issues following the change control maintenance window to End User's point of contact or Juniper representative (if available) for follow-up and escalation to Juniper Networks Technical Assistance teams
- Post-upgrade review:
    - The Juniper technical consultant will discuss the software upgrade to assess the results and highlight outstanding actions to the End User

4. Service Term

i. Service Term. Subject to Juniper's acceptance of a valid Purchase Order from End User or an Authorized Reseller, the term of the applicable Service Contract will begin on: (1) the date of Purchase Order acceptance if the Purchase Order does not include the associated Hardware (if any) or the Service Contract is for Software only; (2) the date the

Hardware is deemed delivered by Juniper if the Purchase Order for the Service Contract includes associated Hardware; or (3) the date as agreed to in writing between the Parties (including as quoted by Juniper and listed in the Purchase Order), if any, in which event such date shall supersede any date determined under (1) or (2).

ii. Renewal Term. The start date of the Service Contract following the initial Services term of the Services (and any subsequent renewal terms) will begin on the day after the immediately preceding Service Contract expired.

5. End User Responsibilities

Juniper Networks' obligation to provide the applicable Services is conditional upon End User meeting the following obligations:

- Provide information on the current network design, current software releases, and configurations in their network
- Provide information on business objectives and technical requirements for target software releases
- Provide information on planned short-term and long-term network changes such as new technology applications, major design changes, or service additions
- Review and provide response to Juniper within two (2) days of any inquiries or updates surfaced by Juniper team
- Provide inputs and guidance to develop the Software Upgrade Test plan (e.g. key business requirements or processes that are required to be executed during the software upgrade activity)
- Approve the final Software Upgrade Test plan and configurations prior to test execution
- Engage the Juniper team for maintenance window support within sixty (60) days of receiving the final test exit report and software upgrade MOP document
- Notify Juniper at least fourteen (14) days in advance to schedule a mutually agreed maintenance window
- Provide detailed network maintenance upgrade window plan, deployment schedule, and any business or technical constraints End User may have
- Provide remote connection to End User's network to enable the Juniper Networks technical resource to provide diagnostics on potential issues escalated during the Juniper Software Upgrade Maintenance window support
- Provide up-to-date contact information and designate at least two (2) but not more than four (4) senior technical representatives, who must be the primary technical interface and will be responsible for providing the network information required for the Services
- Participate in ongoing communications with Juniper Networks' primary contact(s) that will help in the delivery of the Services
- Provide a common documentation repository and populate the repository with services engagement documentation
- Ensure that the requirements identified for the proper working of the Juniper Networks' solution are in place. These requirements may be documented in the product documentation or user guides, or additional recommendations communicated by the Juniper Networks team from time to time for proper delivery of Juniper Networks' services
- Advise Juniper on any information Juniper may reasonably request about the execution of the Services throughout the delivery thereof. If third-party participation and co-operation is required for the End User to perform the End User responsibilities, End User shall be responsible for securing such participation and co-operation
- Provide written notice to Juniper Networks as soon as it becomes aware or has reason to believe that the End User will not meet any of the End-User responsibilities
- End User to be the primary contact and take full responsibility for any integration requirements with all the third-party vendors involved and End-User's back-office systems
- Provide any information Juniper may reasonably request about the execution of the Services throughout their delivery. If third-party participation and cooperation is required for the End User to perform the End User responsibilities, the End User shall be responsible for securing such participation and cooperation

6. Availability

- Services shall be delivered remotely from an authorized Juniper location unless otherwise specified in writing
- All Services deliverables are available in English only unless otherwise specified in writing by Juniper
- The Services are available in countries excluding those listed in Group E under the U.S. Export Administration Regulations (currently, Belarus, Cuba, Iran, North Korea, Russia, Syria, and the non-governed regions of Ukraine including Crimea, Donetsk, Luhansk, Kherson and Zaporizhzhia) and any other countries as to which the furnishing of such Services may be prohibited by law or regulation
- The lead time to start the Services delivery is two to four (2 to 4) weeks from the date of purchase
- Services shall be delivered during the hours of 9:00 a.m. to 5:00 p.m., Customer local time, working week, excluding Juniper observed holidays as per the Juniper delivery team's authorized location
- Juniper's obligation to perform any particular Services hereunder is contingent upon Juniper receiving from End User such cooperation, network access, consents, information, and materials that Juniper may reasonably request to enable Juniper's proper and efficient performance of such Services and to enable Juniper to do so in compliance with all applicable laws and regulations

7. Scope

The Services are designed to assist the End User in transitioning to the target version of the Juniper software, testing the upgrade path for the recommended software on supported DUT, and offering support during the maintenance window for upgrading the software on the tested Juniper device. Juniper is not responsible for (i) more than one (1) cycle each of the Juniper software upgrade recommendations, software upgrade testing, and the upgrade maintenance window support; (ii) all activities associated with upgrade over the term of the contract; or (iii) a full upgrade and functionality of the solution.

7.1 The unit price for the Services is limited to

- One (1) report on Juniper Software Upgrade Recommendation. The type of report required will be determined by hardware platform, configuration technology functions (e.g., BNG, Core and Edge, or Others) and target software version. The grouping of the Juniper products for the purpose of creating one (1) report is defined as follows:
    - Juniper Networks MX Series
    - Juniper Networks MX-BRAS*
    - Juniper Networks PTX Series
    - Juniper Networks ACX Series
    - Juniper Networks SRX Series
    - Juniper Networks EX Series
    - Juniper networks EX9200*
    - Juniper Networks QFX Series

  * A separate report is required for this Juniper product as it cannot be grouped into one (1) report.
- One (1) software release upgrade testing cycle for one (1) supported Juniper hardware platform in one (1) role from current deployed release to targeted release identified by the Software Upgrade Recommendation report.
- One (1) maintenance window support (continuous up to five (5) hours, maximum) during any 24- hour period for one (1) software release upgrade cycle of the Juniper software

7.2 Testing is limited to topology, as per the Juniper Software Upgrade Services Reference Document.

- End User-provided network topology configuration will be adjusted to DUT in Juniper's CCL reference test topology
- Software Upgrade Testing will support configurations and procedures as per the table below

Juniper Platforms (DUT)	MX series, PTX series, ACX series, SRX series, EX series, QFX series
Service Provider Roles (DUT)	Business Edge, LSR, LER, BNG, CGNAT, Route Reflectors

Firewall Roles (DUT)	Branch, NGFW, Perimeter firewall, Gateway Firewall SNAT, DNAT, Zone, IPsec, Firewall Filters
Data Centre Roles (DUT)	Legacy MC LAG, Spine leaf, EVPN Multihoming, EVPN-VXLAN ERB, CRB, Collapsed Fabric
Protocols and Services	Protocols and services that can be set up with the reference topology in Juniper CCL with basic IXIA licenses simulated. Examples: OSPF, BGP, ISIS, L3VPN
Method of Procedure (MOP)	Single device upgrade steps performed in the lab from deployed release to target release without traffic diversion and without network migration steps
Network Operating System (NOS)	From Junos OS to Junos OS, from Junos OS Evolved to Junos OS Evolved
Link Speed	1G, 10G, 40G, 100G
Traffic type and speed	Unicast, Multicast, Internet MIX (iMIX). End-to-end traffic check maximum 20G

7.3 Software Upgrade Test Plan is based on Juniper recommended test cases and is limited to the following test areas and the test case numbers for two available service offerings as per the table below. The Software Upgrade Test Plan accommodates the End User's test cases and scenarios where possible, but Juniper is not obligated to do so.

Software Upgrade Assistance Service – BASE	**Software Upgrade Assistance Service – PLUS**
Basic upgrade testing covering the following test areas - • Software upgrade • Configuration validation check post upgrade • Post Upgrade: Management connectivity check • Post Upgrade: Hardware status checks • Downgrade/Rollback • Basic protocols and traffic check	Basic upgrade testing, limited negative testing and limited functional testing covering the following test areas - • Software upgrade • Configuration validation check post upgrade • Post Upgrade: Management connectivity check • Post Upgrade: Hardware status checks • Downgrade/Rollback • Basic protocols & traffic check • Software negative • Hardware Negative • Services check • Protocol operation • Interface operation
Software Upgrade Test Plan is limited to up to twenty (20) test cases	Software Upgrade Test Plan is limited to up to seventy (70) test cases

7.4 Software defect validation and issue handling is limited to

- Issues observed during test execution will be reported and tracked internally. Fixes for the reported issues will be verified, if available, within the duration of Software Upgrade Test Cycle
- In the event of an identified software feature issue, Juniper will attempt to recommend a solution and/or workaround to overcome the issue on the selected Juniper Software version

8. Exclusions

Juniper Networks is not obligated to provide Services for any of the following:

- Problems with Juniper products or software or parts thereof that are past their End-of-Support date (as provided for in Juniper's EOL/EOS Policies)
- Third-party products
- Gray-market products
- End User or third-party modified software code

- Software Upgrade Recommendation Report for management or orchestration platform used to manage DUT
- Software Upgrade Testing exclusions:
    - Non-Juniper hardware platform
    - Any associated management or orchestration platform release certification testing
    - Scale and Performance testing
    - Execution of customer provided test plan
- Software Upgrade Testing configurations and procedures exclusions as per the table below

Juniper Platforms (DUT)	SSR, NFX, vMX, vSRX, cSRX, SD-WAN
Service Provider Roles (DUT)	SP Roles that cannot be implemented with the reference topology in Juniper CCL - Seamless MPLS, No SR, No Inter AS
Firewall Roles (DUT)	Group VPN, Advance Security features - IDP, ATP, SecIntel, AAMW, DNS Security, Screens, SSL Proxy), Cluster
Data Centre Roles (DUT)	Inter DC, BMS EVPN Type 5 Solution, VCF, OTT DCI, Collapsed Spine with EVPN Multihoming, EVPN-VXLAN on-demand Security inspection
Protocols and Services	Protocols and services that cannot be set up with the reference topology in Juniper CCL with basic IXIA licenses simulated. For example: BGP PIC, LFA, Redundancy, traffic convergency.
Method of Procedure (MOP)	Traffic diversion steps in upgrade (MOP), Validation of the End User provided MOP, Full migration MOP
Network Operating System (NOS)	Paragon, Apstra, MIST and cloud integration
Link Speed	400G, 800G
Traffic type and speed	Advance security traffic, Line rate bandwidth

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for End-Users. Our solutions deliver industry-leading insight, automation, security, and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability, and equality.

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