

Engineering, Furnishing, and Installation Service Description Document – November 2009

Contents

1. Introduction	2
2. Eligibility and Purchasing	2
3. Service Features and Deliverables	2
4. Customer Requirements	6
5. Service Prerequisite	6
6. Service Exclusions	6
7. Assumptions.....	6
8. General Terms and Conditions	7
About Juniper Networks	10



1. Introduction

This Service Description Document (“**SDD**”) sets forth the terms of Engineering, Furnishing & Installation Service (“**Service**”) The Service provides a customized installation package which includes any combination of the following: facilities engineering, data and premise cabling, facility infrastructure, and furnish all necessary materials to install Juniper equipments at End User’s location. The scope of this work will consist of performing site survey at End User’s location/s, prepare a Bill of Materials (BOM), furnish and install all equipment listed on the Juniper BOM. This type of installation can involve work for planning and/or implementation of Power, Fiber Optic cables, Data cables, Risers, Supports, Premise Wiring, Racks, and installation of all designated equipment, and provide power up and primary connection to establish out of band (OOB) signaling of Juniper Networks equipment.

As used in this SDD, “**Juniper**” means the Juniper Networks affiliate identified as the “Contracting Juniper Entity” in a Juniper-issued form Task Order referenced by the purchase order placed for the Service (“**Task Order**”). “**Customer**” means the party placing the order for Services on Juniper, and “**End User**” means the owner of the Juniper Network Elements or the party for whose benefit the Juniper Network services are provided.

2. Eligibility and Purchasing

This Service is available for purchase only by (i) Juniper-authorized channels to support their service offerings to their end user customers and (ii) End Users who have purchased Juniper Networks Elements through Juniper-authorized channels. This Service is available only if the Customer has met the prerequisites set forth in Section 5, below.

Juniper’s commitment to perform the Services is also conditioned upon fulfillment of the other assumptions (including those set forth in Section 8) and the Customer Requirements (including those set forth in Section 4).

3. Service Features and Deliverables

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

3.1. Engineering Services

Juniper engineering services can provide any of the following: site surveys, detailed installation documentations, bill of material specifications and material ordering for the targeted installation work.

3.1.1. Site Survey (Mandatory item)

Juniper shall make a physical inspection of the End User Installation Site and review the Customer-furnished End User Installation Site information to determine whether the site meets Juniper Network Element requirements. As part of the site survey, Juniper may:

- Identify and assess the rules and logistics for working in and around the building site for the installation.
- Verify the Customer’s preliminary drawings associated with the installation.
- Identify the major materials to be installed, the required schedule, and the specifics of the location for the installation.
- Evaluate installation requirements of the rack locations and the ability to support the rack installation.
- Evaluate power availability.
- Identify how the equipment is interconnected to the communication network.
- Verify the capability to run and secure the required grounding cable(s) and the ground point/bar capacity to meet the grounding requirements.

- Visually inspect existing cable/fiber racks to determine if sufficient space is available to run and secure the necessary cables from the equipment to the point of termination.
- Prepare a written Site Survey Report detailing the results of its site survey and Juniper recommendations.
- Develop specific listing of material items necessary to complete the installation (Bill of Material - BOM).
- Prepare a fixed bid quote for the Customer on all costs for engineering, materials and installation work for the Juniper Network Elements.

3.1.2. Site Engineering (Following items as needed)

- Develop site-engineering requirements for installation of ordered Juniper Equipment.
- Develop the associated equipment configuration drawings identifying proposed Relay Rack or Cabinet arrangements as well as any intra-rack cabling requirements.
- Develop site wiring requirements and provide wiring engineering that can cover 120/220 AC premise wiring, -48 VDC premise wiring, Demarcation Extensions, Cat5/6 wiring and Fiber
- Determine the capacity of the designated power source and Loop Voltage Drop to support the equipment being installed. This includes the AC power, both for the equipment to be installed and the tools used in the installation process, as well as any Un-interruptible Power Supply (UPS) requirements. The – 48 volt DC power capacity should be verified at either the Power Board (PBd), the Battery Distribution Fuse Board (BDFB) or the fuse panel specified by the customer. Identify any material necessary to complete the installation including but not limited to power cable (AC/DC), fusing, lugs, etc.
- Design appropriate termination of power cables/leads. This can include heavy/light gauge runs that originate from the -48V source i.e. DC plant, Uninterrupted Power Source (UPS), or a distribution frame (typically referred to as a BDFB-Battery Distribution Fuse Bay or PDF-Power Distribution Frame) or AC power source. Ground terminations are also done within the scope of power activities that involves frame/bay/rack grounding back to central ground potential or ground plane in accordance with installation guides and industry regulations. Power runs require separate rack/troughs from copper/fiber. Timing cables may or may not be needed based on the Customer design.
- Design appropriate cable runs -- copper cable placed in overhead troughs/ladder racking that is used for interconnection to MDF's (Main Distributing Frame), IDF's (Intermediate Distributing Frames), inter-frame/bay connectivity and alarm panel/bay connectivity.
- Design appropriate Fiber Optic runs - Fiber Optic runs require separate protected troughs (if runs are inter-frame/bay) because of support requirements and BRL's (Bending Radius Limits). Intra-frame/bay optic jumpers are traditionally housed in vertical troughs or secured to frame/bay tie points. Inter-frame/bay optics will typically terminate to FDP's (Fiber Distribution Panel) or Fiber MUX's (Multiplexer).
- Provide power cable running list and assignments to run and connect the power cables to the assigned BDFB's fuse panel or circuit breaker position.
- Provide run lists and assignments to run and connect the fiber cables to the assigned FDP, and jack position.
- Provide run list and assignments to run and connect the LAN interface cables to the assigned Juniper equipment installed.
- Provide run list and assignments to run and connect the DSX1 or DSX3 cables to the assigned DSX bay, panel, and jack position.
- Provide run list and assignments to run and connect the alarm cables to the assigned Vertical and Block of the MDF/SSLPDF.
- Provide run list and assignments to run and connect the timing cables to the assigned timing sources.
- This specification provides to and from location detail for all cable runs, floors, tagging of relay rack cabling, shelf location, etc.

- Provide to and from location detail for all fiber runs and jumper installations to relay rack, shelf, sequences, slot numbers, types of fiber, etc.
- The Juniper Network Engineer will review the Customer-provided network design documentation, equipment lists and software configurations to verify the proposed equipment installation design meets the Customer's requirements for connectivity.
- Prepare BOM - This specification provides detailed material list by item number, associated notes, quantities, units, material identification, account codes, etc. Ensure all equipment, features, cables, power cords and other items required to complete the staging and installation portions of the project are included.

3.2. Furnishing Services

Juniper furnishing services can include any of the following: installation materials ordering, tracking and shipping, and procurement process management.

- 3.2.1.** Source and order all installation materials required to complete the installation that were identified in the engineering Bill of Materials (BOM) and/or determined from the site survey. This can include cable, wire, lugs, cable racking, auxiliary framing, bracing, floor anchors, cross connect panels, fiber distribution panels, fiber ducting, fuses, fuse and alarm panels, relay racks, cabinets, etc. and associated power equipment.
- 3.2.2.** Manage procurement process for Juniper provided material delivery to installation site, and provide reasonable inspection for shipping damage.

3.3. Installation Service

Juniper installation service provides the Customer with basic installation services in accordance with Juniper production installation procedures which can include any or all of the following:

- In preparation for the installation, Juniper will move Juniper Network Elements from End User storage area, provided such equipment is on the same floor and in the same building to the End User installation location Juniper will unpack, inspect, and inventory the Juniper products to be installed.
- Prepare MOP (Method of Procedure) (Pre-Quote):
Complete the preliminary Method of Procedure (MOP) document that defines the step by step manner in which the installation will be undertaken. Ensure agreement with the Customer expectations by obtaining appropriate signatures and approval of the MOP. MOP should cover, but is not limited to, the following:
 - Major work activities to be performed by Juniper
 - Job start and end dates, and daily work schedules
 - Key personnel / Stakeholder names and contact information
 - Delivery, storage, and staging of equipment
 - Detailed site and Juniper security, safety, and service protection responsibilities and procedures
 - Checklist of Operations
 - Detailed listing of all work to be performed
 - Details of locations (buildings, floors, walls, etc.) involved in installation
 - Detailed procedures of how work will be performed including order of procedures/work
 - Identification of maintenance window / work hours
 - An additional maintenance window MOP will be provided per site conditions.
 - An additional MOP may be required for work to be performed during maintenance window.

- Safety procedures
- Documentation covering the handoff of all deliverables and activities for completion of the Service
- Juniper shall perform installation of equipment consistent with Juniper Networks hardware installation requirements. Installation may include the following:
 - Label all hardware/equipment that is newly installed By Juniper.
 - Connect power cable and ground cable.
 - Connect the console and Ethernet cables for Out-Of-Band (OOB) access according to the customer design document.
 - Visually verify that all newly installed cables and equipment are correctly installed.
 - Power-Up the newly installed equipment and verify and record final equipment and interface configuration.
 - Perform power and system-level tests per Juniper's installation procedure.
 - Load customer-provided IP addresses (if requested) enabling the end user to access the unit remotely.
 - Initiate actions to correct any faults identified during the installation.
 - Clean/remove packing and other work material to customer-specified disposal location (provided such location is on the same floor and in the same building).
 - After completion of the installation, Juniper and the Customer agree as follows:
 - Juniper shall complete a walk through and final installation inspection with the Customer.
 - Juniper shall hand over all documentation, materials, cables, accessories and the packaging provided with the product, to the Customer and provide a Materials Disposition Report (MDR) if applicable.
 - The Customer shall accept and sign-off on the Service.

3.4. Project Management Input for Juniper Service Deliverables

Juniper will manage activities mentioned in this SDD in coordination with the Customer.

3.4.1. Designated Professional Services Consultant

Juniper will assign a Professional Services Project Manager that serves as a single point of contact for the administration and management of the Service deliverables mentioned in this Service Description Document. If Juniper changes the point of contact, it will notify the Customer.

3.4.2. Input to Customer's Project Plan

Juniper will provide input for executing the various deliverables mentioned in this service offering to the Customer's project manager as input regarding flow of deliverables, task list, dependencies, Juniper responsibilities, timelines, and milestones to enable integration of the Services into the Customer's project plans.

3.4.3. Project Communications

Juniper will provide regular communication to the Customer's project manager on Service status.

4. Customer Requirements

The Customer shall be solely responsible for each of the following:

- 4.1. At least five (5) business days prior to the site survey, the Customer shall provide Juniper with the implementation plan that outlines the equipment to be installed prior to placing the order. The implementation plan will layout the specific requirements for the site survey. At a minimum this will include site layout and floor plans, rack elevation drawings (front view of rack units where equipment is to be mounted), to and from designations on all cables to be installed, router layouts showing card numbers and locations.
- 4.2. Provide Juniper detailed information regarding location within the End User Installation Site for installation of the Juniper Network Element and details of building and installation layout.
- 4.3. On or before seven (7) business days prior to commencement of installation work, verify site readiness for installation (including availability of power service) and give Juniper confirmation of site readiness.
- 4.4. Prior to Juniper issuing a quote for materials and installation services, the Customer shall address with Juniper any discrepancies found between the customer initial Design Document and other Customer-furnished documentation, on the one hand, and the Site Survey Report, on the other hand.
- 4.5. The Customer will provide unobstructed, continuous access to sites and systems required for the performance of the Service.
- 4.6. The Customer will obtain all necessary permits, licenses and consents that may be required for installation to proceed in compliance with zoning, building, environmental or health and safety laws, ordinances, rules or regulations.
- 4.7. The Customer will ensure that the Juniper personnel onsite at any End User facility are furnished working conditions that are safe and secure, that are adequate in all respects to allow them to efficiently perform the Services and that comply with all applicable health and safety regulations.
- 4.8. The Customer will identify a project manager to be responsible for approving final deliverables.
- 4.9. The Customer shall be responsible for cooperating fully with Juniper in its performance of the Services and for promptly confirming completion of Services.

5. Service Prerequisite

None

6. Service Exclusions

For avoidance of doubt, the following are not within the Service Scope:

- 6.1. Any service or on site visits beyond those expressly included in this SDD.

7. Assumptions

- 7.1. Service will not commence until the issuance by the Customer of a non-cancellable purchase order for the Service.

- 7.2. No security clearance or other certification or training is required as a condition of Juniper access to End User systems or facilities for purposes of performing the Services. If additional security clearance is required, the Customer will provide a detailed list of requirements necessary for clearance, in a timely manner (no later than 5 days prior to installation). If there is a Customer specific required training or certification (Including Health & Safety) needed by installation teams to access any facility, the Customer must notify Juniper prior to issuing the PO to Juniper.
- 7.3. Unless Juniper otherwise agrees in writing, any Services shall be delivered during normal business days between the hours of 9:00 a.m. to 5:00 p.m. local time, and the Customer shall arrange for Juniper's accessibility to End User Installation Site accordingly.
- 7.4. All Customer and End User documentation and information is accurate and up-to-date. Juniper shall not be responsible for verification of information furnished by the Customer, End User or any contractors.
- 7.5. Juniper Networks shall have no responsibility for the conduct or performance of anyone who is not a Juniper employee or subcontractor.
- 7.6. Juniper shall not be responsible for any delays caused by the Customer, End User or by any third party.
- 7.7. Change fee will be charged if the Customer requests a change to a scheduled site visit with less than 5 days notice to Juniper.

8. General Terms and Conditions

The Customer shall pay Juniper or its authorized resellers the Services fees in the amounts and at the rates set forth in the applicable quote. Unless otherwise provided in the Task Order or Referenced Master Agreement identified in the Task Order, payment terms are net 30 days from invoice date in US Dollars or other currency specified by Juniper Networks. Juniper may suspend or terminate Services for non-payment or failure of any assumptions or any breach by Customer of its responsibilities, and in such case Juniper may require equitable fee and cost adjustments as a condition of further performance.

All prices and license fees payable under this agreement are exclusive of tax. Customer shall be responsible for paying taxes arising from the purchase of the products, license, or importation or use of the Software. If applicable, valid exemption documentation for each taxing jurisdiction shall be provided to Juniper prior to invoicing, and the Customer shall promptly notify Juniper if their exemption is revoked or modified. All payments made by the Customer shall be net of any applicable withholding tax. The Customer will provide reasonable assistance to Juniper in connection with such withholding taxes by promptly: providing Juniper with valid tax receipts and other required documentation showing the Customer's payment of any withholding taxes; completing appropriate applications that would reduce the amount of withholding tax to be paid; and notifying and assisting Juniper in any audit or tax proceeding related to transactions hereunder. The Customer shall comply with all applicable tax laws and regulations, and the Customer will promptly pay or reimburse Juniper for all costs and damages related to any liability incurred by Juniper as a result of the Customer's non-compliance or delay with its responsibilities herein. The Customer's obligations under this Section shall survive termination or expiration of this Agreement.

Changes to the Services shall be made only pursuant to a written change order signed by Juniper and the Customer. If Juniper furnishes the Customer with written notice of completion of Services, such Services shall be conclusively deemed completed to the satisfaction of the Customer unless the Customer returns written notice of objections identifying actual non-conformities of Services or Deliverables to the requirements of the SDD within five business days of the date on such notice.

Juniper warrants that Services provided by Juniper or its subcontractors will be performed with reasonable skill and care based on the data actually furnished by the Customer. Juniper shall have no liability for failure to inquire or inspect, for

failure to warn or for failure to consider information not actually furnished it by the Customer. For any breach of this warranty reported to Juniper in writing within ninety (90) days after completion of the Services or the failure of Juniper to perform the Services, Juniper shall, in its discretion, promptly perform, correct or re-perform those Services. The foregoing warranty does not apply with respect to defects or nonconformities from abuse, acts of God or other external factors or use not in accordance with the applicable documentation, modifications, or unauthorized maintenance. THE FOREGOING STATES JUNIPER' SOLE OBLIGATION AND CUSTOMER'S SOLE REMEDY FOR NON-CONFORMANCES AND IS IN LIEU OF ALL OTHER WARRANTIES AND/OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR CONDITIONS OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. IN NO EVENT WILL JUNIPER OR ITS SUPPLIERS AND/OR LICENSORS BE LIABLE FOR (1) THE COST OF SUBSTITUTE PROCUREMENT, PUNITIVE, SPECIAL, INDIRECT, INCIDENTAL, LOST PROFITS, LOST OPPORTUNITY COST, REMOTE, OR CONSEQUENTIAL DAMAGES, OR (2) ANY DAMAGES RESULTING FROM INACCURATE OR LOST DATA OR LOSS OF USE OR PROFITS ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, THE FURNISHING OF SERVICES, OR THE USE OR PERFORMANCE OF PRODUCTS COVERED UNDER AN ORDER FOR SERVICES, EVEN IF INFORMED OF SUCH DAMAGES. IN NO EVENT WILL JUNIPER'S CUMULATIVE LIABILITY FOR ANY DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT EXCEED THE TOTAL AMOUNT PAID TO JUNIPER UNDER THIS AGREEMENT FOR THE SPECIFIC SERVICES CONNECTED TO SUCH DAMAGES.

This SDD, the Juniper-issued Task Order (Standard Support Offering/Fixed Price) referenced by the Customer's Purchase Order and the Juniper-issued Quote to which it is associated shall together constitute the complete understanding and agreement of the parties with respect to the Services and supersede all prior or contemporaneous agreements or understandings on the subject matter hereof. Any additional terms or conditions that may appear on the face or reverse side of a purchase order issued by the Customer in connection with the Services are hereby deemed deleted and shall have no force or effect. This Agreement may only be modified in writing duly executed by an authorized representative of each party. This Agreement may not be transferred or assigned by the Customer, in whole or in part, without the prior written consent of Juniper. Juniper may subcontract all or any portion of the Services at its discretion. This agreement shall be governed by the laws of the State of California, without giving effect to its choice of law principles. The parties agree that the United Nations Conventions on Contracts for the International Sale of Goods are specifically excluded. This agreement shall in no event create, or be construed as creating any agency, joint venture, partnership or other business organization, and each party's status shall be that of independent contractor. Without limiting the foregoing, the Customer shall not be authorized to make any representations or undertake any obligations on behalf of Juniper with respect to End User or any third party. Except with respect to payment, neither party shall be liable to the other party for failure to perform or delay in performance due to circumstances beyond its reasonable control.

Juniper hardware, software and technical data are controlled under US Export Control laws and regulations, and the Customer may not export or re-export any of them (including, without limitation, release of technical data to a foreign national) without all required export licenses. Juniper shall be under no obligation to furnish any Services in support of any hardware or software product that has been exported or re-exported without all required export licenses.

Any and all inventions, derivative works, improvements developments or other intellectual property rights generated by Juniper or its subcontractors in the course of performing the Services shall be the sole and exclusive property of Juniper. Any and all copyrightable works that may be created or modified by Juniper or its subcontractors in the course of performing the Services shall NOT be deemed a "work for hire." Juniper shall be providing identical services to other Customers, and nothing herein shall impair its right or ability to do so.

Each party agrees, subject to the terms below, to use reasonable precautions to protect the confidentiality of Confidential Information disclosed to it by the other party in the course of activities related to the Service. The receiving party shall not disclose such Confidential Information except to its own employees, affiliates and contractors with a need to know. Nothing herein shall restrict Juniper from (a) using for its other professional services business activities any network information of general utility that it may learn of in the course of the Services, provided that it does not in doing so make

otherwise unauthorized disclosure of the Customer's or End User's association with such information or of their confidential materials. Each party represents, warrants and agrees not to furnish the other any third party confidential

information without authorization of its owner and without conspicuously labeling the information as confidential information (or where the information is furnished only orally, by specifically identifying such information as confidential in a written notice to the receiving party).

If the Customer is not also the “End User”, then (a) the Customer shall be solely responsible for securing all necessary or appropriate authorizations and assistance from the End User (including, without limitation full authorization (subject only to the confidentiality terms of the preceding paragraph) to disclose any End User Confidential Information to Juniper, and full authorization from End User for Juniper to disclose to the Customer any and all End User Confidential Information and all Deliverables and work product associated with the Services; and (b) the Customer shall indemnify and hold Juniper harmless from any and all End User claims except for claims directly arising from personal injury or damage to tangible property caused by willful misconduct or gross negligence of Juniper.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

Corporate and Sales Headquarters

Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or 408.745.2000
Fax: 408.745.2100

APAC Headquarters

Juniper Networks (Hong Kong)
26/F, Cityplaza One
1111 King's Road
Taikoo Shing, Hong Kong
Phone: 852.2332.3636
Fax: 852.2574.7803

EMEA Headquarters

Juniper Networks Ireland
Airside Business Park
Swords, County Dublin, Ireland
Phone: 35.31.8903.600
EMEA Sales: 00800.4586.4737
Fax: 35.31.8903.601

Copyright 2009 Juniper Networks, Inc. All rights reserved. Juniper Networks, the Juniper Networks logo, Junos, NetScreen, and ScreenOS are registered trademarks of Juniper Networks, Inc. in the United States and other countries. All other trademarks, service marks, registered marks, or registered service marks are the property of their respective owners. Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

990237 – November 2009