

APSTRA AUTOMATED DATA CENTER DEPLOYMENT SERVICE DATASHEET

Service Overview

Designing, deploying, operating, and troubleshooting [data center network](#) can be difficult, expensive, and resource intensive. [Juniper Apstra](#), a turnkey, software-only, intent-based solution uses automation to dramatically simplify the process in both single and multivendor environments. Apstra Automated Data Center Deployment Service is designed to support new deployments of next-generation data center networks by using easy-to-deploy, highly validated data center reference designs, as well as highly flexible freeform reference designs tailored to specific customer requirements. The service provides access to Juniper technology experts, best practices, and tools.

Service Description

Juniper Apstra is a software-only, multi-vendor, [intent-based networking](#) solution that uses automation to solve complexity of designing, building, deploying, and operating next generation data center networks. Apstra manages the entire network life cycle from translating business intent and technical objectives to essential policy and device specific configuration. Additionally, Apstra continuously self-validates and resolves issues to assure compliance. It provides the ability to easily expand and scale your network, extract meaningful device telemetry, analytics dashboards, as well as powerful Intent-Based Analytics and Time Voyager capabilities.

Apstra Automated Data Center Deployment Service is specifically designed to support enterprises, [cloud providers](#), and [service providers](#) who are deploying next-generation data center networks. This fully customizable service can be used for new (greenfield) deployments by using easy-to-deploy and highly validated data center reference designs for network architectures such as 3-stage Clos, 5-stage Clos or collapsed fabric. The data center reference design provides the advantage of abstraction and automation. For all other data centers that require specific or out-of-the-box topologies, the service allows the deployment using highly flexible Freeform reference design to leverage any feature, protocol, or architecture.

This service gives your organization access to data center deployment experts with extensive knowledge of [Juniper products and technologies](#). The service employs proven best-practice implementation methodology and tools that provide a high degree of assurance, faster completion speed, and reduced deployment risks.

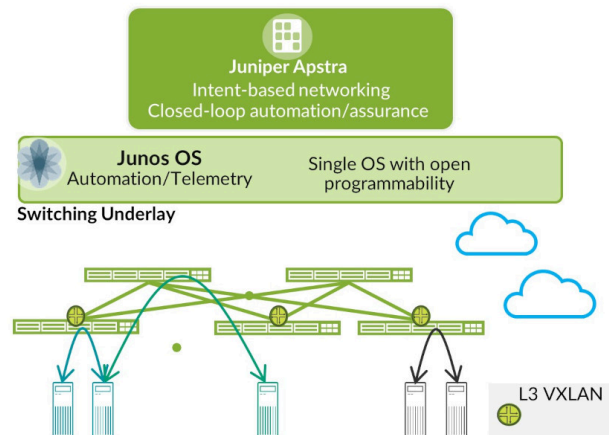


Figure 1: Automated Data Center

Key Service Activities

As part of this service, the [Juniper Professional Services](#) consultant will advise on optimal phasing and grouping of the activities. Key activities performed by Professional Services consultant during deployment service include installing the Apstra software as one or a set of virtual machines (VMs) to connect and manage devices via agents installed on or off the devices, designing your rack types and fabric network using Apstra templates and instantiating these templates into blueprints.

For data center reference designs, details such as single/dual-homing of servers, collapsed/3-stage/5-stage style of fabric, Ethernet VPN (EVPN)/IP fabric, and [IPv4/IPv6](#) underlay can be specified as part of the template type and options. Once the fabric template is completed, it can be instantiated into blueprints, each representing an actual physical network. The allocation of the managed devices and network resources (“build phase”) is done within the blueprints. As the blueprint is built, Apstra automatically produces the necessary configuration for devices, providing an abstraction layer across vendors. In cases of Freeform, Apstra

presents an interactive canvas to visually design or model any arbitrary network topology to your specific deployment requirements. Blueprints created in the Freeform reference design consist of systems and links that you add and configure yourself, using Configuration Templates giving you complete control over your architecture.

Service Methodology

Juniper Apstra Automated Data Center Deployment Service methodology follows a four-phase approach (Design, Build, Deploy, and Operate) and is tightly integrated with the Juniper Project Management Methodology, which addresses both the project management and risk mitigation aspects of your project. While the methodology identifies the standard phases and types of activities within each phase, the specific activities to be included in an engagement are defined on a customer-by-customer basis. Similarly, the specific deployment tools and resource requirements are identified for each customer situation.

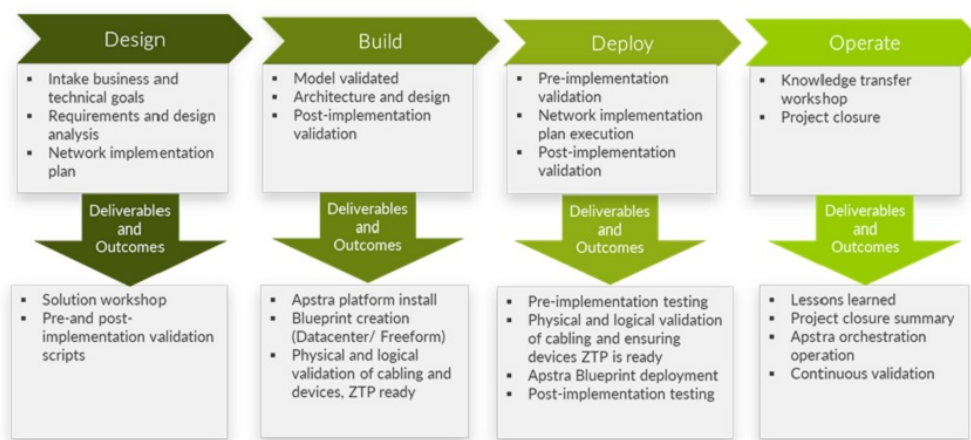


Figure 2: Service Methodology

Specifications

Deliverable	Description	Features and Benefits
Solution Workshop	Collaborative workshop for intake of customer data, review of the design to be used, and documentation and approval of the validated design.	<ul style="list-style-type: none"> Align on design details, project scope, and expectations Adapt best-practice design to customer environment Leverage the skills and experience Juniper consultants have acquired working with hundreds of successful enterprise IT deployments
Blueprint Creation (Data Center / Freeform)	<p>For data center reference designs, Apstra Blueprint creation of physical and virtual aspects of the infrastructure to be deployed. This includes interface maps, VLANs, VXLANs, route zones, DCI and endpoints staged and ready to deploy via Apstra ZTP.</p> <p>For Freeform reference designs, Apstra Blueprint creation includes creation of physical and virtual aspects of the infrastructure to be deployed. This includes importing device profiles, creation of internal and external systems, physical links between systems, creating property sets and configuration templates.</p>	<ul style="list-style-type: none"> For data center reference designs use blueprinting and pre-staging capabilities to create a pristine design prior to the implementation For Freeform reference designs, incorporate Apstra attributes such as UI, IB analytics, Time Voyager etc. over any network design (i.e., non-data center reference design) Use automated tools to accelerate and optimize deployment times and risks
Network Implementation Plan (NIP)	<p>Site readiness and prerequisites review, identifying any missing data or actions required by the customer before Network Implementation Plan Execution can begin.</p> <p>Prepare pre- and post-implementation validation and Network Implementation Plan details.</p>	<ul style="list-style-type: none"> Leverage Juniper consultants' best practices to organize the network deployment phases
Network Implementation Plan Execution (NIPE)	<p>Installation of the data center network solution in the customer's environment, validating the accuracy and quality of the installation, and ensuring it's free of errors and functioning as expected.</p> <ul style="list-style-type: none"> Physical and logical validation of cabling and ensuring devices ZTP ready Apstra Blueprint deployment Post-Implementation Validation 	<ul style="list-style-type: none"> Use process-driven approach to ensure efficiency and accuracy; ensure that the platform is correctly installed and functioning properly
Knowledge Transfer Workshop (KTW)	Documentation from prior phases and a workshop that reviews all Juniper hardware and software implemented, including Day-2 basic operations of the Juniper Apstra.	<ul style="list-style-type: none"> Accelerate infrastructure availability and employee readiness for improved operational efficiencies

Examples of Deployment for the Service

- Greenfield deployment of EVPN-IP fabric using Apstra for a single data center (1 DC): 1 DC with up to 2x10 redundant spine and leaf nodes based on Apstra data center reference design (3 stage clos EVPN ERB or collapsed spine) with required number of virtual elements such as virtual networks or routing zones.
- Greenfield deployment of EVPN-IP fabric using Apstra for two data centers (2 DC): 2 DC with up to 2x10 redundant spine and leaf nodes based on Apstra data center reference design (3 stage clos EVPN ERB or collapsed spine) with required number of virtual elements such as virtual networks, or routing zones with Data Center Interconnect (DCI), gateway connectivity to legacy network

Additional Juniper Professional Services Options

As leaders in data center networking, Juniper Professional Services consultants and engineers are uniquely qualified to assist you in designing, implementing, and optimizing network solutions. The following consulting and services are available to help you migrate your next generation data centers using Apstra.

Juniper Apstra Automated Data Center Migration Service: Apstra Automated Data Center Migration Service, specifically designed for migrations from existing production data center networks to next-generation data center networks by using easy-to-use migration packages with validated data center reference designs. The service also offers fully customizable migrations using highly flexible freeform reference designs or data center reference designs to leverage any feature, protocol, or architecture. See [Juniper Apstra Automated Data Center Migration Service](#) for details.

Juniper Training Options

Network engineers automating data center deployments and migrations with Apstra should consider attending the [Data Center Automation Using Juniper Apstra \(APSTRA\)](#) training course. Engineers will learn the foundational knowledge required to work with the Juniper Apstra System and to manage data center networks with Juniper Apstra software. Alternatively, the [All-Access Training Pass](#) provides access to every Juniper instructor-led or On-Demand (self-paced) training course, for a full year, for one low price.

Juniper Service and Support

Juniper ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit <https://www.juniper.net/us/en/products-services/>

Ordering Information

To order the Apstra Automated Data Center Deployment Service, or for additional information, contact your Juniper account manager.

Exclusion

The scope of this service is for Apstra Automated Data Center Deployment Service only and does not include separately sold assessment, design, migration, or deployment services. If you require additional services from your Juniper Professional Services consultant, please contact your Juniper account manager.

About Juniper Networks

Juniper Networks brings simplicity to [networking](#) with [products](#), [solutions](#), and [services](#) that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable, and secure networks to move at the speed of business.

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