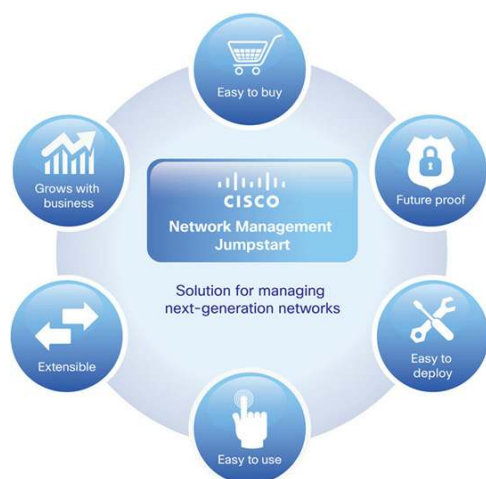


Cisco Network Management Jumpstart



As a next step in the drive toward a converged next-generation network, service providers are making investments today in extensible system architectures that grow with their business needs such as the Cisco® ASR 9000 Series and ASR 1000 Series edge routers. With these scalable platforms for IP next-generation networks (IP NGNs), service providers are able to address issues critical to success - including demands for bandwidth, convergence, video, and rich media.

As service providers are taking these steps to evolve their networks, they also need a next-generation network management system that will scale along with their business and will help them reduce operating expenses and accelerate time to value for network services. Cisco Network Management Jumpstart does just that. A cost-effective network management tool for IP NGN service architectures, Cisco Network Management Jumpstart is a fast and easy-to-deploy, prepackaged solution that includes a set of predefined professional services for a predictable, low-risk network management implementation.

The first release of Cisco Network Management Jumpstart provides a self-contained network management layer for ASR 9000 and ASR 1000 architectures and includes the following:

- Cisco Active Network Abstraction (ANA): Comprehensive network management solution for IP NGN infrastructure networks. Cisco ANA creates and maintains an accurate "virtual" abstract model of the network in near real time to manage devices, networks, and services and to integrate with network management systems (NMSs) and operational support systems (OSSs).
- [ASR 9000 Craft Tool \(ACT\)](#): Quick-start ASR 9000 operations and management tool that reduces node turn-up time and assists field troubleshooting.
- Cisco Unified Computing System (UCS) C200 M2: High-density, two-socket, one rack-unit (RU) rack-mount server built for production-level network infrastructure, web services, and mainstream data center, branch, and remote-office applications.

- Cisco Advanced Services (AS) package: Predefined statement of work (SOW) for design, implementation, and testing of deployment of all the above software components.

Network Management Jumpstart Benefits

Cisco Network Management Jumpstart is a carrier-grade solution that helps drive down the cost and complexity of deploying IP NGN network management architectures. Specific benefits include:

- **Reduced time to value:** This turnkey solution includes a predefined SOW for installation and allows service providers to realize a faster, comprehensive management system deployment. In addition, the management architecture is simplified to one box, reducing the number of disjoint applications and servers, and the open northbound interface (NBI) supports quick integration with existing OSSs/business support systems (BSSs). All of these features help to ensure rapid adoption of the network operation layer and timely service delivery for a faster time to revenue realization.
- **Low risk and saves money:** Cisco Network Management Jumpstart is a self-contained, pretested solution that includes all network management components needed to be plugged into the service provider network operations center (NOC) - all from one vendor at a cost-effective price point. By simplifying the purchase process and including easy to understand pricing for all known costs with a fixed-price services contract, the Cisco Network Management Jumpstart solution helps minimize risks and future surprises.
- **Extensible and grows with the business:** Cisco Network Management Jumpstart provides a roadmap to success sooner than competitive solutions by addressing the issues of scale, convergence, and service delivery - all accelerating conversion to an IP NGN.

Network Management Jumpstart Features

The configuration of the first release of Cisco Network Management Jumpstart includes Cisco ANA and the ASR 9000 Craft Tool installed on a Cisco UCS C200 M2 server. The UCS is configured to contain several virtual machines - two running Linux and operating Cisco ANA and a third running Microsoft Windows to allow the usage of ANA GUI clients and the ACT. The ACT cross-launch capability in ANA provides an integrated management experience.

Table 1 summarizes the network management features available in Cisco ANA.

Table 1. Cisco ANA Network Management Features

Feature	Description
Device inventory	Complete device inventory including both physical and logical information
Configuration and image management	<ul style="list-style-type: none"> • Automatic device configuration file backup of inventory information • Functionality to view, compare, remove, and search the configuration archive • Ability to bookmark and restore configuration files • Automation of device software upgrade/downgrade • Software image repository for local collection of device software images
Topology management	<ul style="list-style-type: none"> • Visual representation of physical connections • Autodiscovery and topological views for multilayer logical links
Fault management	<ul style="list-style-type: none"> • Fault detection, identification, and association • Local and network-level fault correlation and root-cause analysis • Ticket management • Specialized viewer application with contextual navigation capability

Feature	Description
Service management	<ul style="list-style-type: none"> • Service discovery • Monitoring of service connectivity events • Service representation: Service inventory, service topology views, and overlay representation
Troubleshooting	Path Trace and Ethernet Operations, Administration, and Maintenance (E-OAM) troubleshooting tools
Northbound interface	Standards-compliant information model and NBLs to simplify integration to OSS/BSS

Table 2 summarizes the device-level management features available in the ASR 9000 Craft Tool.

Table 2. ACT Device-Level Management Features

Feature	Description
Chassis view	<ul style="list-style-type: none"> • Dynamic/graphical views of the device/card LED and physical interface status
Real-time monitoring interface lookup and monitoring	<ul style="list-style-type: none"> • Real-time key performance indicator (KPI) monitoring and graphs for CPU, RAM, and input/output packets through simple Interface Explorer, Bundle-Ether Explorer, XConnect Explorer, and Bridge Domain Explorer. Note: all explorers provide baselining on counters.
Configuration and command-line interface (CLI)	<ul style="list-style-type: none"> • Graphical Configuration Editor, Template Configuration Manager, and configuration rollback • Support for CLI commands using Telnet and Secure Shell Protocol Version 1 and Version 2 (SSHv1 and SSHv2)

Figure 1. Easily Add Network Management to Cisco ASR 9000 and ASR 1000 Series Architectures



Predefined Advanced Services Package

Cisco Advanced Services provides comprehensive, customized planning, design, and implementation services that help to ensure the ability to support Cisco ASR 9000 and ASR 1000 network management requirements.

For Cisco Network Management Jumpstart, these services include implementation of ANA 3.7.2 with up to 20 ASR 9000 and up to 20 ASR 1000 devices in a stand-alone configuration on a single combined ANA Gateway/ANA Unit/UCS server with an embedded Oracle database. The solution also includes installation of VMware, Linux, Windows, and ACT software. Cisco Network Management Jumpstart consulting and engineering services follow best-in-class Cisco methodologies and include a design workshop, solution staging, implementation, acceptance testing, and a knowledge transfer workshop. All projects are governed by a professional project manager. The document deliverables include a SOW, a Low Level Design (LLD), an Implementation Plan, a Network Management Ready for Use (NMRFU) Test Plan, and product standard documentation. Price and availability of Advanced Services may vary; contact your Cisco sales representative for details. Information provided is applicable to the United States, Canada, and Europe. Alternatively, customers may elect to provision implementation services from their local Cisco partner.

Ordering Information

The first release of Cisco Network Management Jumpstart includes the orderable items listed in Tables 3, 4, and 5.

Table 3. Active Network Abstraction Bundle and Associated Service Application Support (SAS) for Entitlement to Cisco Technical Assistance Center (TAC) Support

Part Number	Description
ANA-372-ASRMGMT-K9	Cisco Network Management Jumpstart: ANA for ASR (Limit 1 Only)
This ANA Bundle includes entitlement for: ANA 3.7.2 Software Base Kit - Limit to one-only installation <i>This includes one ANA application, three concurrent user-interface client licenses (ANA-3-UI), unlimited use of the northbound interface, and embedded Oracle installation.</i> 20 ASR 1000 Right to Manage licenses 20 ASR 9000 Right to Manage licenses	

Note: Additional Right to Manage licenses for ASR 9000 and ASR 1000 devices can be bought separately.

Table 4. Cisco Unified Computing System C200 M2, Including Linux and VMware Licenses

Part Number	Description	Quantity
Cisco Unified Computing System (C200 M2)		
R200-1120402W	UCS C200 M2 Svr w/1PSU, DVD w/o CPU, mem, HDD or PCIe card	1
A01-X0102	2.93 GHz Xeon X5670 95W CPU/12 MB cache/DDR3 1333 MHz	2
N01-M308GB2	8 GB DDR3-1333 MHz RDIMM/PC3-10600/dual rank 2Gb DRAMs	12
R2X0-ML002	LSI 1064E (4-port SAS 3.0G RAID 0, 1, 1E) Mezz Card	1
N2XX-ABPCI01	Broadcom 5709 Dual-Port Ethernet PCIe Adapter	1
R200-D300GB03	Gen 2 300 GB SAS 15K RPM 3.5 inch HDD/hot-plug/C200 drive sled	4
R250-CBLARM	Cable Management Arm for R200-1032RAIL	1
R2X0-PSU2-650W-SB	650W power supply, with added 5A Standby for UCS C200 or C210	1
CAB-9K12A-NA	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	2
R2XX-G31032RAIL	G3 shorter stronger Rail Kit for UCS 200, 210 Rack Servers	1
Linux license		
RHEL-AP-3A	RHELAP/3yr subscription/svs required/0 media	1
RHEL-53	RHEL 5.3 media only (multilingual)	1
VMware license		
VMW-VS-ADV-1A	VMware vSphere Advanced (1 CPU), 1yr support required	2

Note: Microsoft Windows 7 license shall be made available by the customer.

The Cisco UCS C200 M2 has been validated to support:

- Mixed configuration of ASR 9000 and ASR 1000 network: up to 35 ASR 9000 devices and up to 100 ASR 1000 devices
- Cisco ASR 1000 only network: up to 150 ASR 1000 devices
- Cisco ASR 9000 only network: up to 55 ASR 9000 devices.

Table 5. Cisco Predefined Advanced Services

Part Number	Description
AS-OSS-CNSLT	ANA 3.7.2 Implementation for IP NGN Networks
SOW for consulting and engineering services to deploy Cisco Network Management Jumpstart for up to 20 ASR 1000 devices and up to 20 ASR 9000 devices. Services include implementation of Cisco ANA 3.7.2 in a stand-alone configuration on single ANA Gateway/ANA Unit/UCS server with an embedded Oracle database. Installation includes VMware, Linux, Windows, and ACT software. The SOW includes an option to deploy additional devices (up to the number supported by the UCS). This option is priced according to the number of devices.	

Expanding Cisco Network Management Jumpstart

Cisco ANA supports more than 50 Cisco network element families and a wide variety of network technologies including IP/MPLS, IP RAN backhaul, and Carrier Ethernet. The distributed architecture allows expansion of the same management instance simply by adding more servers - thereby facilitating further extensibility of the Cisco Network Management Jumpstart solution.

For more information about Cisco Network Management Jumpstart, contact nm-jumpstart@cisco.com

For more information about Cisco Active Network Abstraction, visit <http://www.cisco.com/go/ana>, contact your local Cisco account representative, or send an email to ask_ana_pm@cisco.com.

For more information about Cisco Unified Computing System, visit <http://www.cisco.com/en/US/netsol/ns944/index.html#~product> or contact your local Cisco account representative.

For more information on the Cisco Network Management Jumpstart predefined statement of work contact your account service sales team or the WWSP OSS/BSS alias, wwsp-oss-bus-dev@cisco.com. Alternatively, contact your local Cisco partner for customized services.

To place an order, contact your local Cisco account representative or visit the Cisco Ordering Homepage.



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