

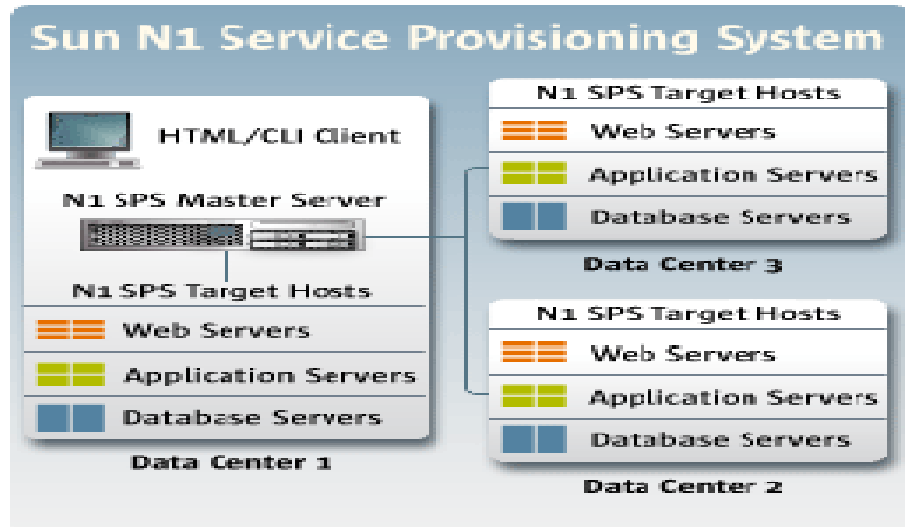


Multi-tier Software Provisioning

Automate your application service deployment.

Highlights

- Intelligent provisioning software to ease the pain of application deployment.
- Eliminates need to rely on ad-hoc scripts and manual procedures, virtually eradicating installation errors and increasing application availability.
- Speedy installation with pre-built models for commonly used applications and operating systems.
- Parallel updates across multiple systems.
- Deployment simulation, roll-back, and configuration comparison capability.
- Object-oriented modeling approach for custom applications. SDK and Java API support.
- Application provisioning support in virtual environments like Solaris10 Containers.



Feature	Function	Benefit
Multi-tier Application Provisioning	Provisions application running on Solaris, Linux, Windows, AIX, and HP-UX, across multiple tiers	Reduces the need to rely on scripts and manual procedures to provision, change, and re-provision application services across multiple tiers
Application Portfolio	Offers pre-built models for deploying application servers, Web servers, and databases	Accelerates the delivery of business services
Configuration Comparison	Checks for differences between two installed application instances	Helps ensure compliance by enabling users to identify and track all changes, including errors and unauthorized changes, between deployments
Deployment Simulation	Simulates the deployment process prior to implementing changes, ensuring that key criteria such as connectivity, permission, disk space, and dependencies are met	Helps reduce configuration errors, increasing application availability
Version Control and Roll-back	Records every action taken by administrators across applications and managed servers - enables rollback to previous states	Provides a historical record of changes; enables administrators to quickly revert back to previous states, decreasing application downtime
Role-Based Access Control (RBAC)	Grants specific management permissions to specific users, authenticating users via LDAP or Microsoft Active Directory	Provides increased security controls to help comply with regulations
Software Developer Kit (SDK) / Public Java API	Provides APIs to help developers build custom models for provisioning specific applications	Extends the N1 Service Provisioning System to help develop components and plans to meet specific business requirements
Bare Metal OS Provisioning	Remotely installs and configures operating systems (Solaris, Red Hat Enterprise Linux, Microsoft Windows Server) onto specified systems	Automates and tracks the operating system installation process - IT operators can provision the entire software stack, from OS to application, with one tool

Heterogeneous Platform Support

Operating Systems Supported

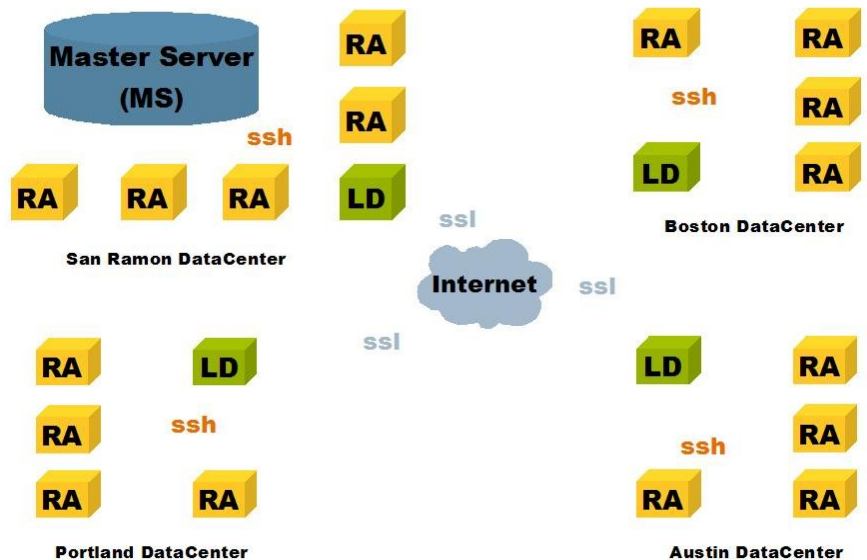
- Solaris 7, 8 (SPARC Editions), Solaris 9, 10 (SPARC and X86 Editions)
- Microsoft Windows Server 2000, Advanced Server 2000
- Microsoft Windows Server 2003 - Web, Enterprise, Standard and Datacenter Edition
- Microsoft Windows Server 2003 - Enterprise and Standard edition (64 bit)
- Red Hat Linux Advanced Server 2.1, 3.0 (32/64 bit), 4.0 (32/64 bit)
- IBM AIX 5.1, 5.2, and 5.3
- HP-UX 11i
- SuSE Linux Enterprise 8 and 9

Operating Systems Provisioned

- Solaris 9, 10 (SPARC and X86 Editions)
- Red Hat Linux Advanced Server 3.0 (32/64 bit), 4.0 (32/64 bit)
- SUSE Linux Enterprise Server 9
- Microsoft Windows 2000 Server, 2000 Advanced Server
- Microsoft Windows Server 2003 - Standard and Enterprise Edition (32/64 bit), Web Edition

Pre-built Application Models

- Sun Java System Application Server 8.
- Sun Java System Web Server 6.7
- Oracle Application Server 10g
- Oracle Database 9i, 10g
- SAP 6.4, 7.0
- IBM WebSphere 5.1
- BEA WebLogic 6, 7, 8, 9
- Solaris Container, packages, patches
- Red Hat Linux Package Manager (RPM) packages
- Windows 2000 Internet Information Services (IIS), Component Object Model (COM), COM+ applications



Architectural Overview

N1 Service Provisioning System **Master Server (MS)** is a central server that:

- Stores application components and deployment plans in a secure repository.
- Performs version control on the objects stored in the gold repository.
- Authenticates IT operators and ensures that only authorized users perform specific operations.
- Provides both an HTML interface and a command line interface (CLI) for users.
- Includes special-purpose engines for performing tasks such as dependency tracking and deployments.

The *Deployment Engine* manages all the tasks involved in deploying an application on a set of servers.

The *Configuration Engine* determines an application's proper configuration by querying the state of a server and comparing this state to the variables in a component template.

The *Dependency Engine* automatically checks the myriad configuration details of a deployment, identifying conflicts and omissions that most data centers discover only when it is too late.

The *Comparison Engine* reports how any application has changed since its last deployment or upgrade *and* differences in two installed instances of the same application.

The *Notification Engine* collects Master Server statistics along with status messages from remote hosts during deployments.

The *Transport Engine* provides secure, bandwidth-efficient communication and data transfer among the Master Server, Local Distributors, and Remote Agents.

Remote Agents (RAs) manage operations on individual servers.

Local Distributors (LDs) act as proxies for the Master Server.

For more information on related technologies, visit:
<http://www.sun.com/software/n1gridsystem/index.xml>