



Comprehensive management: from HP server hardware to OS and beyond

HP OneView and HP Server Automation Virtual Appliance

HP OneView and HP Server Automation Virtual Appliance (SAVA) complement each other to enable complete and comprehensive management of your hardware, operating systems, and application stack—for both HP and non-HP servers. In this white paper, you will gain a better understanding of how these two software products work together to make data center management more efficient.

Table of contents

HP OneView feature overview	2
How HP OneView helps you.....	3
Software-defined flexibility.....	3
HP Virtual Connect management.....	3
Server provisioning	3
Open integration.....	3
HP Server Automation Virtual Appliance (SAVA) feature overview	4
How HP Server Automation helps you	5
Visibility and control.....	5
Change and configuration management	5
Compliance management	5
Upgrade and provision	5
Process automation	5
HP OneView and HP Server Automation complement each other	6
Key takeaways	8

HP OneView feature overview

HP OneView is a lifecycle management platform for HP Converged Infrastructure. HP OneView is a resource-oriented solution focused on the entire hardware lifecycle—from initial configuration to ongoing monitoring and maintenance of both logical and physical resources. Logical resources might include server profiles, networks, and connections. Physical resources (those you can touch) might include servers, interconnects, and enclosures.

This advanced architecture connects the resources with a common representation of the servers, networks, storage, and other components of the converged infrastructure. This powerful domain-specific representation of resources also models associations and interdependencies, which enables each area to contribute to the “one view” of the converged infrastructure.

HP OneView includes the following features:

- Converged infrastructure groups and server profiles
- Enclosure groups and logical interconnect groups
- Logical interconnects with enclosure-level stacking
- Network sets and uplink sets
- Pervasive smart search and map view
- System health monitoring
- Firmware management and updates
- Server provisioning using HP Insight Control Server Provisioning (ICsp)
- Environmental management (i.e., power, thermal)
- Remote management (iLO Advanced)
- An easy-to-set-up management appliance
- Full access via REST API and state-change message bus

How HP OneView helps you

Software-defined flexibility

Software-defined infrastructure in HP OneView allows you to capture and standardize your IT team's best practices. These implementations leverage your best expertise from across your organization and keep your best practices intact as you grow, while allowing for customization. HP OneView is architected to help your administrators specify configurations and build them for your environment. These software structures can provision hundreds of enclosures and servers quickly and consistently, and can control change management across your data center.

HP Virtual Connect management

Powerful capabilities for managing HP BladeSystems are augmented by HP Virtual Connect. It provides a wire-once, change-ready environment to make it easy for your administrators to manage your dynamic network environment at the server edge. Both HP ProLiant servers and the HP BladeSystem enjoy simplified monitoring by using a streamlined, modern alert management architecture that automatically sets up monitoring for managed resources. In addition to remote management and environmental management of your data center, HP OneView enables efficient, reliable, non-disruptive, and simple firmware management across the data center with firmware baseline capabilities.

Server provisioning

HP OneView gives you the right to use HP Insight Control server provisioning—a complete provisioning solution for HP servers, with capabilities for multi-server operating system (OS) and firmware provisioning to ProLiant and BladeSystem servers. Server provisioning automates the process of deploying and provisioning server software, enabling your IT team to quickly and easily adapt to changing business demands.

Open integration

“Open integration” gives you access to the full power of the management architecture via the REST API and state-change message bus. You can automate, integrate, and customize your management environment using your favorite scripting or programming language using the REST API. The REpresentational State Transfer (REST) API with an HTML5 user interface allows your custom scripts and integrations to be notified of any and all changes to managed resources, with commands returned within 500 milliseconds.

This open integration can address a wide variety of user needs, including:

- Automating standard work flows and troubleshooting steps
- Integrating in-house user customizations automating integrations (such as a configuration management database, or CMDB)
- Connecting to service desks
- Monitoring resources
- Collecting and exporting data
- Mapping and modeling systems
- Attaching custom databases or third-party business tools

HP Server Automation Virtual Appliance (SAVA) feature overview

HP Server Automation Virtual Appliance (SAVA) is used to provision and manage servers through the entire lifecycle for both HP and non-HP servers. SAVA uses resources such as OS build plans and scripts to run deployment jobs. With SAVA, you can establish patch policies to install and maintain patches for supported operating systems running on managed servers. Your compliance managers have visibility across the managed servers to see which servers are out of compliance and can then remediate non-compliant servers to bring them back into compliance, based on policies created within HP Server Automation.

SAVA allows you to:

- Scan your networks for unmanaged servers and deploy Service Automation agents for management
- Install Windows®, Linux, VMware® ESXi, and Hyper-V® on HP and non-HP servers
- Update drivers, utilities, and firmware on HP ProLiant servers using HP Service Packs for ProLiant (SPPs)
- Configure HP ProLiant system hardware, Integrated Lights-Out (iLO), BIOS, and HP Smart Array
- Deploy to target servers without using PXE (HP ProLiant Gen8 and later, HP servers only)
- Apply the required operating system patches for Windows and Linux servers
- Install and configure software applications using templates called software policies
- Use out-of-the-box application configuration templates to push configurations to all managed servers
- Define server configuration policies to enable your SAVA-managed servers to meet corporate-defined standards and compliance regulations from industry-standards bodies or government organizations
- Remediate non-compliant servers to bring them into compliance
- Get complete visibility of all physical and virtual machine environments (VMware ESXi and Hyper-V) from a single tool
- Create and manage VM templates for multiple virtualization vendor tools within SAVA
- Search for VMs based on their genealogy (creation record) and by other virtual characteristics
- Manage servers remotely for routine maintenance or troubleshooting issues from a single tool using SA Global Shell (OGFS) capability

How HP Server Automation helps you

Visibility and control

HP Server Automation enables you to bring your entire server environment under management quickly and gain unprecedented visibility into servers and operations. After bringing servers under management through an automated process, HP Server Automation provides a high degree of flexibility for managing and reporting server and application operations. The server explorer facilitates easy browsing of operating systems, patches, and applications across a heterogeneous group of servers. The global shell and Windows PowerShell interfaces let you run automation scripts easily and with enhanced security features across multiple servers at once.

All administrator actions are stored and digitally signed in a central data repository for performing compliance and IT reporting. With a record of all changes and real-time server and business application views, HP Server Automation provides deep visibility and increased control for your application environment.

Change and configuration management

Without automation, IT activities such as application and patch installation can consume countless hours of your administrators' time. Beginning with initial provisioning, HP Server Automation supports operating system, software provisioning, and automated deployment of applications. Policies created to manage best practices for operating system and software configurations can be defined by subject matter experts. These policies can be shared and utilized by administrators in any location, ensuring compliance with corporate standards across all servers in all data centers. Users can also create shared application and deployment model for faster, more consistent software deployments.

HP Server Automation offers powerful capabilities that aid in managing change and configurations. A secure communication channel enables your IT staff to access any server under management and view operating system, patch, running services, and audit trail information. Your administrators can compare current application states with previous points in time to quickly identify changes and roll back as necessary.

Compliance management

HP Server Automation leverages user-defined best practices and provides out-of-the-box policies to help you proactively manage software configuration settings to correct or prevent drift. You can audit your entire IT server infrastructure to validate compliance against audit policies and immediately remediate any areas that are out of compliance. You can write policies to cover software installation, application configuration, system configuration, virtualization, networks, and storage.

In addition, reports show whether systems comply with regulatory standards. You can use the HP Business Service Automation (BSA) Essentials security and compliance subscription service to acquire the most up-to-date security and regulatory compliance policies, which you can apply to systems as appropriate. The compliance policies from this service are drawn from standards such as Center for Internet Security (CIS), Sarbanes-Oxley (SOX), Payment Card Industry (PCI), Health Insurance Portability and Accountability Act (HIPAA), and Federal Information Security Management Act (FISMA). New security vulnerability policies are generated daily from the National Vulnerability Database (NVD). As these policies are configured as HP Server Automation policies, you can add them easily to systems for quick auditing and remediation.

Upgrade and provision

HP Server Automation provisions operating systems quickly, consistently, and with minimal manual intervention. You can enforce, easily update and patch, and refresh consistent and secure server baselines to meet your corporate standards quickly. For software provisioning, a simple user interface makes it easy for you to create new software policies that contain code, content, scripts, and configurations. All policies, for both software and operating systems, are stored in folders with read/write access to foster sharing of policies while maintaining control over who can deploy, edit, and view policies. All operating system and software policies can be used across physical and virtual servers.

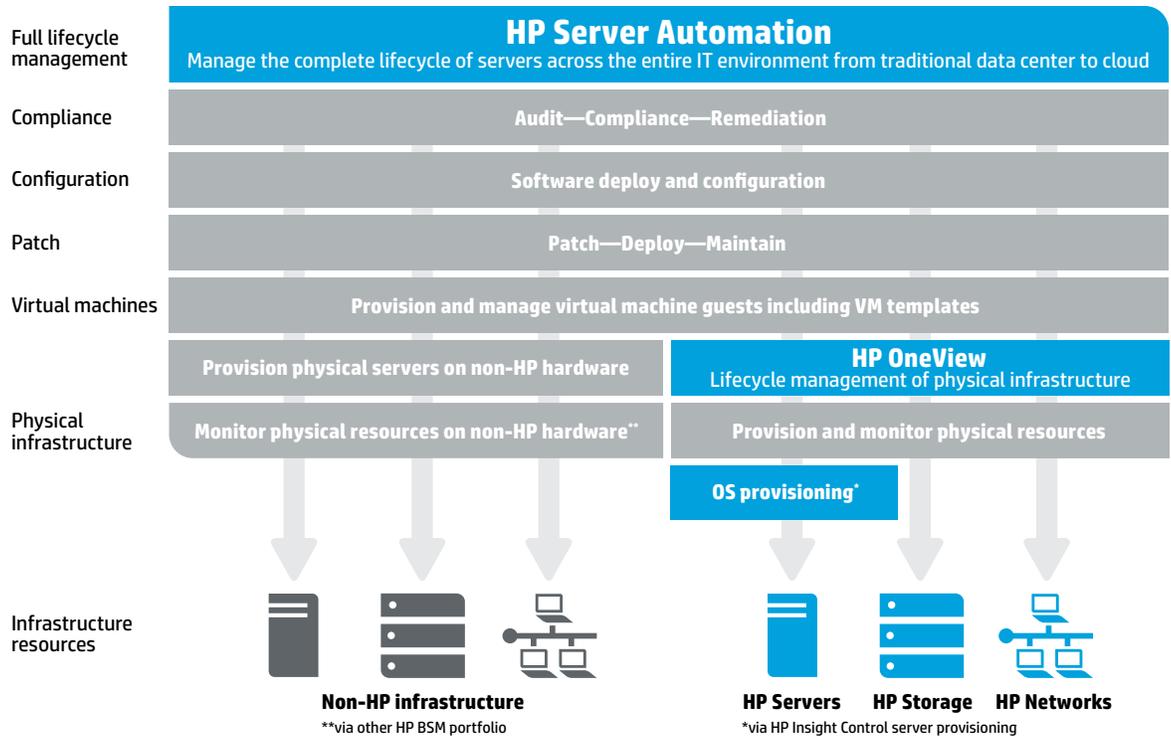
Process automation

HP Server Automation provides capabilities to automate key server management and application deployment tasks. When you use HP Server Automation in conjunction with HP Operations Orchestration, you can automatically coordinate and sequence IT processes and their sub-tasks to manage end-to-end operations and to enable your IT organization to follow best practices. Also, by seamlessly integrating with other HP Software products—such as HP Network Automation, HP Database Middleware Automation, and HP Continuous Delivery Automation—HP Server Automation offers your server administrators deep visibility into the network, database, and business application elements in your data center.

HP OneView and HP Server Automation complement each other

Figure 1 shows how HP OneView and HP Server Automation complement each other to manage the entire server lifecycle.

Figure 1. HP OneView and HP Server Automation



While HP OneView features are extensive, when you use HP Insight Control in conjunction with HP Server Automation, you can reduce the time and effort spent managing your HP servers through the entire stack. HP Server Automation gives you more control over the consistency of software deployment and configuration, resulting in fewer errors. The HP Server Automation auditing and compliance features make it easy for you to improve compliance with corporate security guidelines. With HP Server Automation and HP OneView, your IT staff can better manage end-to-end business services with complete infrastructure control.

The key features of HP OneView and HP Server Automation together are shown here:

Feature/Capability		HP OneView	HP Server Automation Virtual Appliance
Configure	Converged infrastructure groups and server profiles	Yes	
	Enclosure groups	Yes	
	Logical interconnects	Yes	
	Network sets	Yes	
Visibility	Map view	Yes	
Monitor	System health	Yes	
Manage	Power, thermal, etc.	Yes	
	Remote (outside OS)	Yes (iLO advanced)	Yes (via iLO)
	Firmware	Yes	Yes (via OS Build Plan)
Delivery	Implementation	Easy-to-set-up virtual appliance	Easy-to-set-up virtual appliance
Provision	Operating system (OS)	Yes (Insight Control server provisioning)	Yes (HP and non-HP)
Deploy	Application		Yes
	OS patching		Yes
Scan	Audit for server configuration		Yes
	Compliance against regulatory standards		Yes
Remediate	Non-compliance failures		Yes

Key takeaways

HP leads the industry in providing solutions for managing IT infrastructure at all levels, from applications and services to infrastructure components, such as clients, networks, servers, and storage.

HP Server Automation and HP OneView are complementary tools for managing your HP Converged Infrastructure. HP OneView focuses on server hardware management with its deployment, health management, remote control, and power management capabilities. HP Server Automation enables you to easily manage the entire lifecycle of large numbers of heterogeneous servers through its policy-based configuration and auditing capabilities.

Today, HP OneView and HP Server Automation complement each other to make data center management more efficient.

Learn more at

hp.com/go/serverautomation

hp.com/go/oneview

Sign up for updates
hp.com/go/getupdated



Share with colleagues



Rate this document

© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Windows and Hyper-V are U.S. registered trademarks of Microsoft Corporation. VMware is a trademark or registered trademark of VMware, Inc. or its affiliates.

