

IBM Tivoli Provisioning Manager for OS Deployment

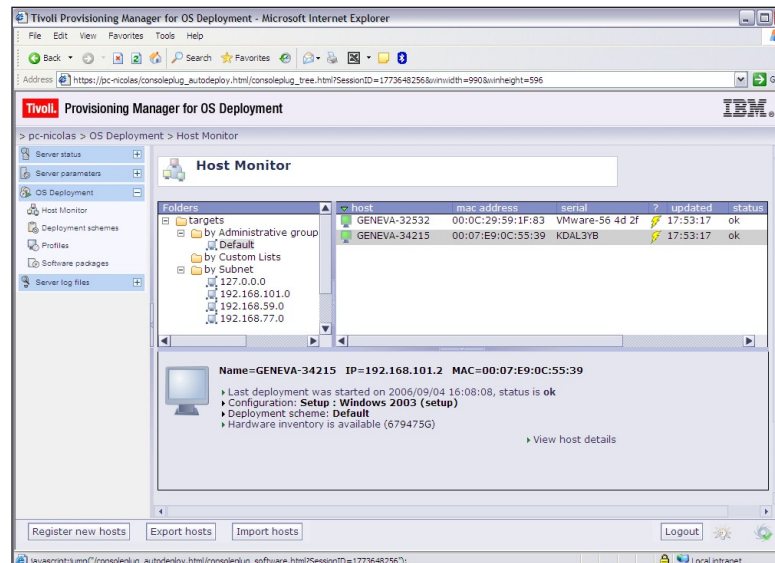
Highlights

- Streamline operating system (OS) provisioning and migration through remote, automated installations of Microsoft Windows and Linux OS to bare-metal devices
- Get flexible deployment options such as multicast or unicast with a single tool that supports various installation methods such as network PXE boot and auto-executable CDs
- Utilize a centralized Web portal and other ease-of-use features to remotely deploy and configure computers across the enterprise
- Help drive security of unattended deployments by closing common security loopholes
- Leverage scalability that is ideal for deployments in large networks
- Help simplify image creation and reduce costs of maintaining and storing OS images by using a universal image and driver injection feature
- Conserve storage space with single instance storage, to reduce the footprint of deployment images needed across an organization

IT departments in companies both large and small spend a disproportionate amount of time manually provisioning and migrating OS on desktop and laptop computers. The IT resources needed to manage the devices, hardware inventory and images across the enterprise can quickly become prohibitive. In-person deployments can be costly and impractical, because employees are often spread across multiple lines of business and

geographies. Also, manual provisioning is prone to configuration errors and is highly inefficient — additional staff time is often needed to troubleshoot problems or reinstall. Even automated deployments can open organizations to security risks, if changes or errors go undetected.

IBM Tivoli® Provisioning Manager for OS Deployment delivers an easy-to-use, security-rich interface for remote



The Tivoli Provisioning for OS Deployment interface provides a complete view of your target devices.

configuration, simultaneous deployment, updates and restoration of Linux® and Microsoft® Windows® across hundreds of devices, in networks large and small.

This scalable and flexible tool delivers dynamic image management capabilities, which can significantly reduce the number of images required across your environment, as well as the effort and costs required to manage and store them. You can use Tivoli Provisioning Manager for OS Deployment to completely automate your OS provisioning process and easily take computers from bare metal to fully functional, from preparation of the target disk to the high-level configuration of the operating system, such as:

- Creating a user.
- Joining a Windows domain.
- Installing a software package.

And you can accomplish all of these things without requiring any intervention at the target computer's desk, helping to reduce the time and costs of desk-side support and direct interaction with target systems.

Flexible provisioning supports your business objectives

Tivoli Provisioning Manager for OS Deployment offers a variety of provisioning options — including multicasting — to enable you to simultaneously deploy across multiple computers using an encrypted multicast protocol. For large deployments, multicasting helps optimize bandwidth by sending the same image to all computers. Tivoli Provisioning Manager for OS Deployment supports the following provisioning scenarios:

- Scripted installations.
- Cloned installations.
- Auto-executable CD or DVD deployment.

Web portal and other ease-of-use features help streamline provisioning and migration

Tivoli Provisioning Manager for OS Deployment comes equipped with numerous features that allow for simple, consolidated provisioning across the enterprise, including:

A Web-based console — provides access to target computers and provisioning material (OS images, application packages, OS configuration

properties) so you can organize and execute provisioning tasks on multiple devices simultaneously. The console allows you to access information unique to every computer, including the images and hardware drivers that are applied to each. It also enables you to:

- Configure hardware and system settings.
- Create system profiles from installation CDs and DVDs.
- Monitor installations by viewing real-time and historical reports.
- Synchronize multiple provisioning servers across an organization.

A centralized database — stores the components involved in a provisioning operation, from hardware and software inventories to system settings. Every time a target computer boots on the network, it can retrieve a record in the database to determine the action to perform. When you store information in a single location, your OS deployments are both accurate and efficient.

Tivoli Provisioning Manager for OS Deployment includes built-in wizards and contextual menus to help get your IT staff quickly up to speed and productive.

Other ease-of-use features include:

- *Imaging engine* — create file-based images that are both more detailed and more flexible than sector-based images, to help minimize the number of images you need to store.
- *GUI interface* — offer a user-friendly, intuitive user experience.
- *Cross-platform support* — run the deployment server on Windows, Linux, Sun Solaris OS or Mac OS X.
- *Disk read/write access* — create, read and modify file systems such as Microsoft Windows NT® file system (NTFS), File Allocation Table (FAT32) or second extended file system (ext2 or ext3).
- *Server synchronization* — maintain the same provisioning material on multiple servers.
- *Networked database access* — store and retrieve provisioning data and communicate with the Web console.
- *OS configuration* — read and write registry entries in Windows, Linux configuration files and so on.
- *Auto-discovery of your hardware inventory* — collect key information on devices, serial numbers and model names to target the correct OS and configuration items.
- *Offline access to disk images* — enable image modification (rather than re-creation) on a managed server.
- *Built-in self-healing* — rapidly reinstall failing systems.

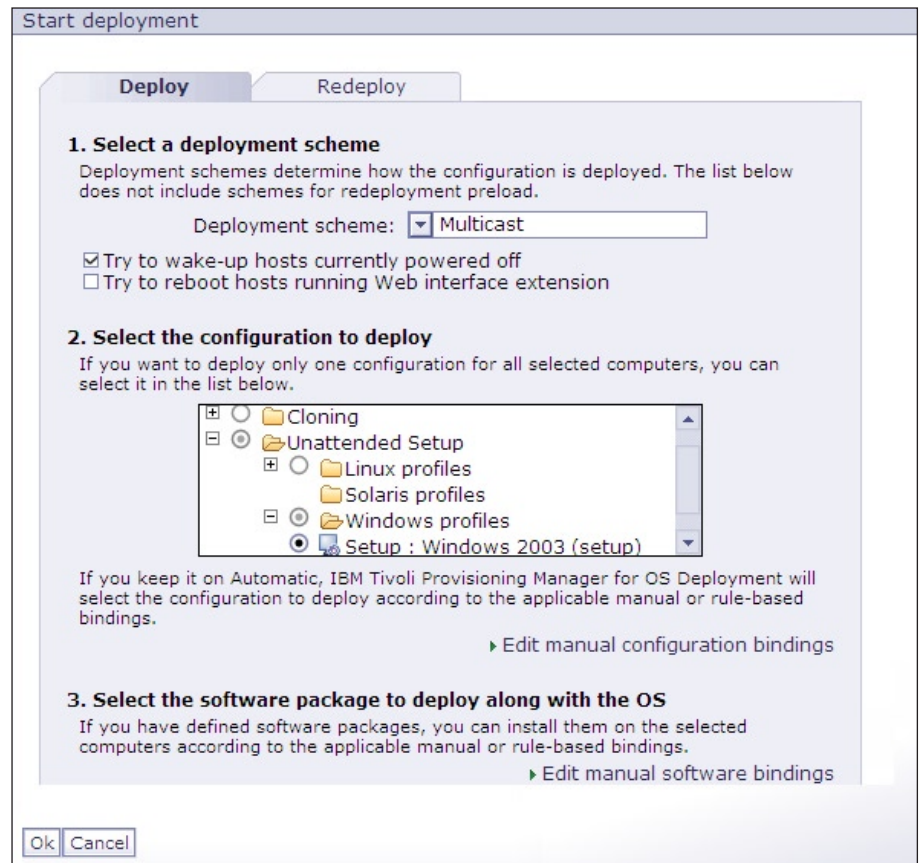


Image deployment is configured and initiated from a single, comprehensive dialog window.

Help close security loopholes in OS deployment

Tivoli Provisioning Manager for OS Deployment helps close the gap on common security risks inherent with automated OS deployments. For instance, it enables you to use the Pre-boot eXecution Environment (PXE) in a security-rich fashion by providing a specific list of allowed PXE boot

servers, which removes a discovery loophole that could allow an unauthorized boot server to take over.

It also uses leading cryptography protocols (including Advanced Encryption Standard) for all communications so that no external source can interfere with the provisioning process. Tivoli Provisioning Manager for OS

Deployment can be configured to retain a master image of any computer in a separate partition on the local hard disk, enabling your staff to fully restore a computer and undo unauthorized changes by a previous user.

Leverage scalability that is ideal for large organizations

The flexibility and scalability of Tivoli Provisioning Manager for OS Deployment offers numerous advantages for large organizations. Implementation alternatives allow a network of management servers to be linked to a central database, supporting development of a distributed database plan.

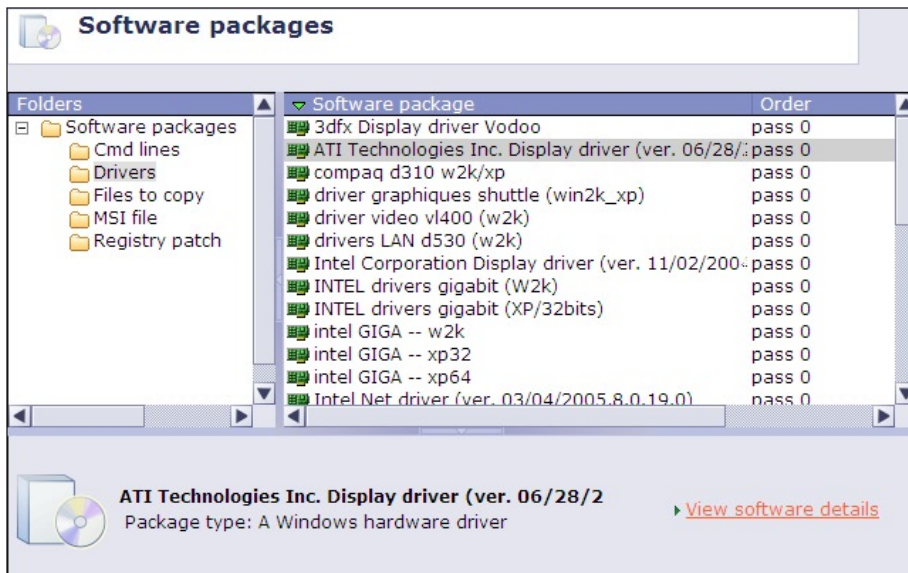
These management servers are also redundant and are able to track local versions of provisioning material, including OS images, application packages and a list of target devices. Through server synchronization, Tivoli Provisioning Manager for OS Deployment can even contact other local servers to download missing material and can replace a server experiencing a temporary outage.

A command line interface within Tivoli Provisioning Manager for OS Deployment can integrate with any existing desktop management tool, such as IBM Tivoli Configuration Manager or Microsoft Systems

Management Server. As a result, you can execute provisioning tasks through command scripts on a server or any network computer instead of the Web console.

Image management features help drive accuracy and conserve storage space

Tivoli Provisioning Manager for OS Deployment simplifies image maintenance and storage issues by separating the base image from related applications. For instance, updating an application with a new version does not require any modification on the base deployment image. Consequently, changes can be applied across the organization without any delay.



Software packages management is simplified by using a category-based view.

The Tivoli Provisioning Manager for OS Deployment imaging engine helps conserve storage space by reducing the number of images needed across your environment. Each file — rather than each image — is stored once, which means your organization spends less administrative time creating new images that have only slight variations.

Tivoli Provisioning Manager for OS Deployment also offers a universal image and driver injection feature. The software creates a universal image, then separates device-specific

drivers from the OS image and injects them at installation, enabling you to install on multiple hardware devices using a single image. You can use a single image for security patches, for instance, making that image available for all hardware installations across your platform, further conserving storage space and costs.

Integrated with Tivoli release management solutions for IT service management excellence

Tivoli software offers a number of solutions to help customers manage change to the IT environment. IBM Tivoli Release Process Manager helps manage workflow associated with planning, testing and approving releases. IBM Tivoli Provisioning Manager and Tivoli Configuration Manager (and its successor, IBM Tivoli Provisioning Manager for Software) are operational management products that are integrated into Tivoli Release Process Manager. This combination enables customers to improve the process efficiency and effectiveness, ultimately saving time and resources.

Part of the Tivoli Provisioning Manager family of solutions, Tivoli Provisioning Manager for OS Deployment focuses on provisioning Microsoft and Linux operating systems. Existing Tivoli

Configuration Manager customers can quickly and easily integrate Tivoli Provisioning Manager for OS Deployment into their environment through an integration module that ships with Tivoli Configuration Manager. This enables full software management, from bare-metal provisioning of the operating system through application updates and ongoing maintenance and security patches.

The Tivoli Provisioning Manager suite of tools takes software management to a higher level, with complete server life-cycle management and automation. The Tivoli Provisioning Manager portfolio embeds the imaging, deployment and configuration technology from Tivoli Provisioning Manager for OS Deployment to perform similar functions. Tivoli Provisioning Manager extends this function through automation packages that provide integration with key devices commonly found in data centers, including UNIX® servers, virtual servers, network and storage devices.

Conclusion

Tivoli Provisioning Manager for OS Deployment is simple and easy to use, with little training needed to become fully operational. Tivoli Provisioning

Manager for OS Deployment offers unique and powerful tools to securely and effectively manage OS deployments. It seamlessly integrates with existing software provisioning tools. You can start with Tivoli Provisioning Manager for OS Deployment and move to other Tivoli provisioning solutions for more comprehensive coverage as you require.

About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage IT resources, tasks and processes in order to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while helping to reduce costs. The Tivoli portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT lifecycle management, and is backed by world-class IBM services, support and research.

For more information

To learn more about how Tivoli Provisioning Manager for OS Deployment can help you automate provisioning and migration of Windows and Linux OS, contact your IBM representative or IBM Business Partner, or visit ibm.com/tivoli



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