Technical White Paper

ZENworks

Exploring the Competitive Strengths of ZENworks 11

MICRO FOCUS®

Find the Best Endpoint Management Solution for Your Mixed-computing Environment

Over the last decade, Micro Focus® ZENworks® has developed a reputation as one of the industry's most complete and capable solutions for centrally configuring and managing endpoints in complex and heterogeneous networking environments.

With ZENworks, thousands of organizations have discovered the benefits of using a policy and user-based approach to simplify and automate software and patch deployment, asset tracking, endpoint security, OS migration and a long list of other routine endpoint management tasks. ZENworks allows IT organizations to perfectly align their desktop environments with established business policies and shift more time, money and resources away from mundane, repetitive tasks and toward strategic IT initiatives.

ZENworks represents another major step toward completely automated and nearly effortless endpoint management—by bringing the family of ZENworks products together under a single integrated ZENworks 11 platform and then extending all those capabilities to a wider range of Windows and Linux platforms and devices.

ZENworks 11 includes:

- An identity-based, heterogeneous endpoint management platform that consists of a unified ZENworks Control Center console, a single ZENworks Adaptive Agent and ZENworks server software
- Integrated configuration, asset, patch and endpoint security management for Windows and Linux endpoints, including Windows 7
- Location-awareness capabilities that add a new dimension to the ZENworks identity-based approach to management
- Power management and reporting for Green IT initiatives
- The use of standards-based protocols

- Full manageability over the Internet using secure communication channels
- Simple and speedy installation, deployment and updates
- The ability to integrate seamlessly with your choice of user directory and database platforms
- Support for 64-bit hardware and operating systems

Choosing the Best Management Paradigm for Your Business

Every feature found in ZENworks 11 flows from our vision of the Open Enterprise, which embraces the value of creating a simple, secure, productive and integrated IT environment that works across heterogeneous systems. ZENworks 11 empowers IT organizations to manage systems in ways that support real users—with all their various security, location, device and other needs—while still maintaining simple, centralized control over the entire end user environment. As an essential corollary to this philosophy, ZENworks 11 also gives IT departments the freedom to manage their systems according to the paradigm that best reflects their organization's business policies—and the IT staff's preferred working style.

With ZENworks 11, IT departments can choose to manage systems tactically (on a device-by-device basis) or strategically (in synchronization with business policies) using any combination of three distinct management paradigms: management by exception, device-based management and user-based management.

Management by Exception

When you evaluate any configuration management solution or paradigm, you should carefully consider two important criteria. First, how well does the management paradigm scale? And second, how large a burden does it place on your IT staff as they continually update the solution to accommodate changing business policies? ZENworks 11 can provide the right answers to both of these questions. Novell (now part of Micro Focus) pioneered the "management by exception" paradigm, and ZENworks 11 continues to offer it as a powerful tool for continuously adapting to changing business policies and practices with minimal IT effort.

In most situations, management by exception serves as a complement to policy-driven management paradigms. It allows for the strict, high-level enforcement of general configuration management rules across user or device groups, while still permitting exceptions at a more granular level to accommodate specialized needs.

For example, normal business policies may allow employees to remotely access the corporate network. However, applying this policy across the board to all desktops—including PCs in the finance and legal departments—could expose the company to regulatory penalties and corporate spies. Exception-based management allows IT departments to create and automatically enforce general access policies across the whole company, and then apply more restrictive policies to PCs and users in specific groups or departments. In this case, the additional stricter policy would restrict access to normal business hours, on-site, by authorized users. Exception-based management allows for complete flexibility, without requiring IT to manage separate policy silos for each type of user and machine.

Device-Based Management

Many organizations base their configuration management practices on the devices they manage. In fact, this is the default method used by most competing configuration management products on the market today.

ZENworks 11 places more emphasis on user-based management than device-based management. User-based systems management–which leverages user identities, group roles and business policies–is the gold standard for automation, security and IT control. User-based management has always been our specialty.

In the absence of user-based and exception-based policy management, products that only target specific device configurations typically end up treating actual business policies and the needs of users as an afterthought, because they essentially link a specific user to a specific device. By tying applications, policies and other configuration parameters to a specific managed device or set of managed devices, this approach often forces users into rigid roles instead of supporting them as dynamic participants in ever-evolving business processes. Because of these limitations, ZENworks 11 places more emphasis on user-based management than device-based management.

However, to keep the solution as flexible as possible, ZENworks 11 does offer device-based management capabilities that can be used in conjunction with other management paradigms to fill specialized needs. For example, call centers where multiple users share a single PC in shifts, manufacturing-floor PCs and public kiosks can all create situations where device-based management may be more appropriate than user-based management. In addition, companies that normally rely on user-based management may need the ability to quickly set up a device for ad hoc, tactical purposes. For example, quickly configuring a device to auto-run a presentation in a conference center might make more sense than creating a new "user" for that single instance.

With the ZENworks 11 architecture, you have the option of using device-based management whenever it suits your specific needs. Because device-based management is very familiar to most IT professionals, and because it offers the fastest way to configure a machine before you create long-term user-based policies, device-based management is presented as the default management paradigm when you first install ZENworks 11.

User-Based Management

User-based systems management—which leverages user identities, group roles and business policies—is the gold standard for automation, security and IT control. User-based management has always been our specialty. And even though the underlying architecture of ZENworks has been dramatically enhanced, the full power and complete range of ZENworks user-based management capabilities has been preserved.

True user-based configuration management disassociates users from the specific devices they use. This makes it possible to treat users as the company's most valuable managed asset and relegate devices to their proper role as tools that must serve the needs of users. Allowing people—rather than machines—to be managed as first-class configured entities means that policies, applications and other configuration details

can "follow" users from machine to machine. User-based management also ties IT policies directly to business policies, which increases responsiveness to changing business conditions. Finally, a user- based approach leverages identity stores and business systems across the enterprise to eliminate errors, increase security, standardize workflows, document regulatory compliance and support effective decision making.

The user-based paradigm represents a truly strategic approach to systems management, while device-based management is almost purely tactical. With ZENworks 11, you can mix and match both approaches—based on your changing business and IT requirements—by using the management by exception paradigm. For example, ZENworks 11 allows you to apply a policy to a specific device and then selectively override that policy based on the identity information of the user who is currently logged on. Conversely, you could choose to override a general user- and role-based policy based on a specific machine and its context, such as when a mobile device attempts to access the network from outside the firewall.

Comparing ZENworks 11 to the Competition

ZENworks can offer your business a long list of unique benefits and advantages. It is based on a new ZENworks 11 platform that combines and integrates configuration, asset, patch and endpoint security management for Windows and Linux desktops. It offers a single, modular architecture that maximizes flexibility and scalability, simplifies and speeds management throughout the device lifecycle, minimizes processing demands on managed clients, reduces bandwidth consumption for management processes and uses standards-based protocols to seamlessly integrate with your choice of user directory and object database. It lets you manage systems based on users identities, roles, groups and locations, so IT can work hand-in-glove with the company's business priorities and policies. Finally, it gives you a secure, web-based console for unified control over all your management tasks—from virtually anywhere.

Of course, ZENworks 11 is not the only endpoint and configuration management solution on the market. Now that you understand the basics of how ZENworks 11 works and some of the benefits it can offer,

we'll examine where it fits in the marketplace how it stacks up against other similar solutions.

Configuration Management Market Groupings

In the configuration management tools market, solutions are typically grouped into two distinct segments:

- **Point Solutions.** Products that focus on a particular aspect of configuration management. These solutions typically include agent deployment capabilities and general auditing in addition to their main function (e.g., remote control).

- **Configuration Management Suite.** Products that offer a broader range of functions—all administered through a single console.

ZENworks falls squarely into the Configuration Management Suite category. It provides a proven foundation for a complete range of essential configuration management capabilities, and the ZENworks 11 platform makes it easy to add additional integrated capabilities in the future.

The following table outlines the general advantages ZENworks 11 can offer—both as a complete systems management suite and as a point solution.

The Strengths of ZENworks 11 as a Point Solution and System Management Suite

Point Solutions	Systems Management Suites
■ Incorporates point solution functionality as part of a wider offering	→ Offers easier, faster and less costly implementation and administration
■ Offers a full set of integrated configuration, asset, patch and endpoint security management	→ Provides more complete configuration management capabilities (because of focus in this problem area)
■ Provides deeper integration with Directory Services	→ Delivers enhanced web reporting for business users.
	→ Offers directory services integration
	→ Provides policy-driven automation
	→ Manages device and end-user configurations
	→ Provides location awareness

The user-based paradigm represents a truly strategic approach to systems management, while device-based management is almost purely tactical. With ZENworks 11, you can mix and match both approaches–based on your changing business and IT requirements–by using the management-by-exception paradigm.

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ZENworks 11 Feature and Function Comparison

ZENworks 11 offers a comprehensive list of features that compare favorably with any solution on the market. The following series of tables highlights many of the key differences, although they do not represent a comprehensive list of all features or capabilities ZENworks 11 offers.

Installation and Administration

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Installation	**ZENworks 11:** With a simple wizard-based installation routine, you can have a primary server up and running in just over 30 minutes, less if you use the free virtual appliance.
	Competition: Many competitive offerings can take up to several hours to install and require multiple reboots.
Flexible installation options	**ZENworks 11:** Allows you to install only the components you need, perform post-installation evaluations and activate additional capabilities quickly when you need them. ZENworks 11 also includes a fast, convenient virtual appliance deployment option.
	Competition: Most competitive solutions cannot offer the same range of flexible installation and evaluation options.
Deployment readiness	**ZENworks 11:** Works out of the box without any changes. You can fine-tune the configuration at any point to meet your specific requirements.
	Competition: Other solutions require multiple steps and the selection of many different options before agents can be deployed.
Console layout	**ZENworks 11:** A clear, intuitive layout with logically grouped configuration options makes learning and working with the ZENworks 11 console (commonly called the ZENworks Control Center) a pain free experience.
	Competition: Multiple menus with many layers can make locating the functionality you require difficult and time consuming.
Configuration and maintenance	**ZENworks 11:** Offers many different ways to configure and schedule common tasks (including software updates). As a result, most companies generally dedicate the equivalent of one staff person, working part time, to keep the system running.
	Competition: Many competitive solutions require dozens of people for management and maintenance.
At-a-glance status	**ZENworks 11:** The ZENworks Control Center home page shows the status of all your devices, bundles and policies using a traffic light system. This enables you to instantly identify, prioritize and investigate critical issues.
	Competition: Many competitive solutions require you to dig into multiple reports, making it difficult to gain a clear, logical big-picture view of your overall situation.
Access control	**ZENworks 11:** Leverages information contained in Micro Focus eDirectory™ or Microsoft Active Directory to control access to the ZENworks Control Center. If existing directory data is not available, you can also define users within the ZENworks 11 system.
	Competition: Many competitive offerings force you to create and define users within the solution itself, which often duplicates information stored in an existing directory service.
Roles	**ZENworks 11:** Allows you to combine a series of predefined rights to provide various degrees of access to different console operators.
	Competition: Many competitive solutions either lack access control capabilities altogether or only provide very granular control, which can be difficult and time consuming to use.
Message summary	**ZENworks 11:** Provides convenient message summaries for Individual bundles, devices and policies, so you always receive an instant, easy-to-understand overview of the situation.
	Competition: Most competitive solutions force you to spend time searching through numerous reports to find the information you need.
Device quick tasks	**ZENworks 11:** Makes it easy to select any device and a list of appropriate tasks and have them appear on the device home page. Simply clicking on a task performs the action without having to navigate through nested menu structures.
	Competition: Functionality is often buried beneath multiple menus.
Wizards-based approach	**ZENworks 11:** Step-by-step wizards are waiting to walk you through all major tasks. This simplified approach makes it possible to be productive quickly and take control of your managed device estate with complete confidence.
	Competition: Many competitive solutions bombard users with tick boxes and drop-down lists that make it easy to miss critical tasks and functions.
Web console	**ZENworks 11:** Allows you to use Firefox or Internet Explorer to connect to a ZENworks 11 primary server and instantly access the complete ZENworks Control Center.
	Competition: Traditional thick clients take time to install and are only available on certain machines inside your network. Even after clients are installed, you have to worry about constantly maintaining and updating them to keep them operational.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Grouping devices to ease management	**ZENworks 11:** Group devices together to reflect organizational charts, virtual teams or other organizational structures. The ZENworks Control Center also features an easy search function that makes it easy to locate specific devices quickly.
	Competition: Many competitive systems force you to search through long flat lists to find the device you need. This translates directly into lost time and wasted effort.
	ZENworks 11: Allows you to manage devices directly, although this approach is inefficient when large numbers of devices are involved. In these situations, ZENworks also offers you the ability to manage devices by groups.
	Competition: Many competitors only offer direct device management, which does not scale well to environments with large numbers of devices.
	ZENworks 11: Provides advanced grouping capabilities, which dramatically simplifies the process of organizing and managing devices. ZENworks 11 automatically places devices into groups either by using registration rules or by leveraging Dynamic Grouping capabilities. Both of these grouping methods save you time by moving devices into their correct groups instantly and automatically.
	Competition: Many solutions require the creation of complex SQL-based queries that place devices into groups using audit information. Some solutions even force administrators to move devices manually using the console, which wastes time and opens the door to human error.
Assigning directory groups as ZENworks administrative groups	**ZENworks 11:** Allows you to leverage Micro Focus eDirectory and Microsoft Active Directory groups as ZENworks administrative groups.
	Competition: Most competitive products require you to create and maintain separate directory and configuration management administrative groups.
Retired devices	**ZENworks 11:** By retiring a device, you can keep a record of the asset after it is no longer in use. This automatically frees up a license you can use for devices that are still in active service. At any point, you can bring devices back from retirement, begin managing them again and maintain a complete history of the asset.
	Competition: With many competing solutions, every device in the database requires a license—whether it's in active use or not. That means you end up paying to store information about retired devices that are no longer in use.
Console or command line	**ZENworks 11:** In most cases, administrators will use the ZENworks Control Center to manage their device estates. But in some cases, administrators like to execute scripts that initiate common tasks from a separate workflow or helpdesk system. ZENworks 11 makes this possible by providing command line utilities for both agents and servers.
	Competition: In certain situations, scripting common tasks can save significant time for administrators. Many competitive tools do not provide any scripting capabilities, which leaves administrators to perform repetitive tasks manually.

Architecture and Platform Support

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Integrated platform	**ZENworks 11:** Provides integrated configuration, asset, patch and endpoint security management. The ZENworks 11 platform includes a unified ZENworks Control Center Console, a single ZENworks Adaptive Agent and ZENworks server software.
	Competition: Most competitors require a number of different consoles, endpoint agents, and/or server software for configuration, asset, patch and endpoint security management.
Multi-platform support	**ZENworks 11:** Provides full management capabilities for all major Windows and Linux operating systems, along with auditing capabilities for Mac and several UNIX flavors. ZENworks 11 also fully supports server-class operating systems across this spectrum.
	Competition: Some competitors support the complete range of client and server operating platforms, but many are limited to Windows only.
Multi-database support	**ZENworks 11:** Ships with a free Sybase relational database for sites up to approximately 2,000 computers and fully supports Microsoft SQL Server 2005 and Oracle 10g.
	Competition: Many competitors require an external database. Some only support Microsoft SQL.
Scalability	**ZENworks 11:** With its distributed architecture (collection services, database server, web reporting server, etc.), ZENworks 11 can support up to 40,000 managed devices.
	Competition: Some competitors, especially point solutions, do not provide enterprise-level scalability.
Virtual machine support (server components)	**ZENworks 11:** All server components (Primary Server, database server, ZENworks Satellite, etc.) can be run within virtual machines on all three major platforms (Microsoft, Xen and VMware).
	Competition: Many competitors only offer limited (or non-existent) support for running software components in virtual machines.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
High availability Disaster recovery Load balancing	**ZENworks 11:** Gives you the ability to distribute functionality across many ZENworks 11 servers to provide high availability, disaster recovery and load balancing. **Competition:** Many competing solutions are limited to a single main server, which creates a single point of failure, scalability issues and un-responsiveness under high demand.
Runs on Linux or Windows	**ZENworks 11:** With ZENworks 11, you can run your primary server on SUSE Linux Enterprise Server or Red Hat Enterprise Linux to minimize costs. If money is available, you can also choose to run the primary server on Windows Server 2003 or 2008. **Competition:** Most competing solutions must be run on a Windows server, which translates directly into higher hardware and software costs.
Full 64-bit support	**ZENworks 11:** Fully supports 64-bit operating systems and 64-bit hardware, which allows you to fully leverage todays hardware . **Competition:** Some competing solutions do not provide full support for 64-bit hardware and software.
Use of the nearest management point	**ZENworks 11:** With ZENworks 11, managed devices automatically find their closest primary server based on pre-defined rules that reflect your network infrastructure. This keeps network traffic across expensive WAN connections to a minimum. **Competition:** Most competing solutions will attempt to contact the main server directly, regardless of the underlying network topology. This can result in WAN congestion, slower performance and higher costs.
Web console	**ZENworks 11:** Allows you to access the ZENworks Control Center from any computer with Firefox or Internet Explorer. **Competition:** Many competing solutions require you to install and maintain a thick client with a long list of prerequisites. In some cases, these clients can't communicate with the configuration management system unless the latest release is installed.
System update	**ZENworks 11:** Like any other software application, we issue frequent patches and updates for ZENworks 11. You always receive automatic notifications of updates through the ZENworks Control Center console, and you can choose when and how to download, stage deployments to selected devices and roll out updates across the entire managed estate. **Competition:** Other solutions lack this automated update approach. This means you can expect to spend extra time checking for updates manually, downloading files and visiting each managed device to install new software.
Content store	**ZENworks 11:** Holds all applications, policies, images, patches etc. that could be deployed to managed devices in a central data store and makes it easy to replicate copies of this store to all primary servers and satellites. You control exactly what gets replicated, how often and the speed at which replication occurs. **Competition:** Too often, competing solutions expect you to move content manually or use a completely separate replication solution. This creates a situation where important files may or may not get distributed to managed devices near the edges of your organization.
Easy migration	**ZENworks 11:** Uses a convenient utility to import workstations, application snapshots, user mapping and relationships from previous versions of ZENworks. This includes migrating asset inventory from ZENworks Asset Management. **Competition:** Many competing solutions offer no data migration help and expect you to start from scratch.
Management via the web	**ZENworks 11:** Managed devices check in and send user credentials over Port 443 allowing users and devices to be managed anywhere in the world. **Competition:** No competing solution offers the ability to manage users via the web. Some offer device management only and others require the user to initiate a VPN connection before management can take place.

Discovery and Deployment

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Balance, speed and thoroughness	**ZENworks 11:** Provides multiple flexible search methods for both quick searches and detailed inquiries. **Competition:** Many competitors only offer limited, inflexible search options, which may not align with your requirements.
Agentless searching	**ZENworks 11:** Offers agentless network discovery as a fast, low-touch way to identify all IP-based devices (computers, routers, hubs, printers, etc.) on your network. Agentless searching can be used for initial and ongoing discovery and as a way to automatically generate lists of devices that agents can be deployed to. **Competition:** Some, but not all competing tools include agentless discovery. In many cases, even those that offer agentless discovery do not tie the results to an automated agent deployment tool that can facilitate agent-based inventory.
IP	**ZENworks 11:** Specifies an IP address range and uses up to six discovery technologies (WMI, WinAPI, MAC Address, ZENworks, SNMP, SSH). Each discovery technology returns varying levels of information (OS version, DNS name and so forth) about each discovered device. **Competition:** Many competing solutions use only basic technologies, such as IP pings, which only confirm the presence of a device, rather than returning sufficient information to enable agent deployment.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
LDAP	**ZENworks 11:** Allows you to specify an LDAP directory context, so you can search for all device-type objects (workstations, servers, etc.). Device objects that are found are queried for well-known attributes (dnsHostName, OperatingSystem, wmNameDNS, wmNameOS, etc.) to attempt to determine the OS version and DNS name of the device. ZENworks 11 also supports multiple LDAP servers for a given user source, which improves fault tolerance.
	Competition: Most solutions lack LDAP query techniques or only return device names. This translates into insufficient details for planning agent deployment.
Import from CSV	**ZENworks 11:** If you already have device information stored in a CSV file, or if you have the ability to export from another system into this format, you can quickly import that data into your ZENworks 11 system.
	Competition: In most solutions, this feature is completely non-existent or poorly implemented.
Refine results	**ZENworks 11:** Although you can use many different query methods to find details about devices, complete accuracy is not always possible. ZENworks Control Center makes it easy to fill in any missing or incorrect details.
	Competition: Many competing solutions don't allow you to edit information returned by automated discovery. This can create uncertainty about whether a device can support an agent or not.
Delegated query agent	**ZENworks 11:** Uses existing managed devices to search networks at remote sites.
	Competition: Relies on centralized searching that is prone to network disruption or is blocked by firewalls.
Single adaptive agent	**ZENworks 11:** Consolidates a wide range of configuration, asset, patch and security management functions into a single endpoint agent, so you no longer have to worry about deploying and updating multiple agents for different ZENworks products.
	Competition: Most competing products require separate agents that perform different endpoint functions.
Flexible agent installation	**ZENworks 11:** With ZENworks 11, you can push agents out to devices, pull agents down from the management website, manually install agents, put them on removable media, use a login script or leverage active directory group policies.
	Competition: Most competing solutions provide limited agent installation options which may not meet your requirements.
Self-configuring agents	**ZENworks 11:** Adaptive agents automatically check with the system to make sure they are up-to-date. Agents can also apply further functionality as soon as it has been licensed.
	Competition: Many competing solutions require you to manually keep agents up-to-date—or redeploy new agents—every time a configuration setting changes or new features are enabled.
Control reboots	**ZENworks 11:** Allows you to choose when the system should reboot after a new agent is installed. You can delay the reboot, reboot immediately or prompt the user.
	Competition: Competing solutions typically require an immediate reboot after every agent installation, which can create end user disruptions and data loss.
Self-organization	**ZENworks 11:** With ZENworks 11, managed devices register automatically into defined folders as part of the installation process.
	Competition: With many competing products, deployed agents must be manually placed into folders to organize them into logical groups for configuration management tasks.

Reporting

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Web-based reporting	**ZENworks 11:** Presents all reporting and analysis capabilities through an easy-to-use web interface that can be accessed from any location. The web interface naturally offers numerous drill-down and "what-if" scenarios that can be explored with a few clicks.
	Competition: Many solutions require a "fat" Windows client for all advanced reporting. These reports are typically "flat," which means they return a static set of results with no drill-down capabilities. Some solutions also charge for every reporting client or console.
Cross-product BusinessObjects reporting engine	**ZENworks 11:** Features an enhanced reporting service—built on the latest version of the BusinessObjects Reporting Engine—that provides a single cross-product reporting universe for configuration management, asset and license management, patch management and more.
	Competition: Few competing products can offer a single, unified reporting engine that spans all these different areas.
IT and business reporting	**ZENworks 11:** Features a reporting service designed with both the core IT manager and the business unit professional in mind. Users can generate meaningful and understandable results with little or no knowledge of the overall system.
	Competition: Many competing solutions use a "report factory" approach that requires peripheral IT and business users to submit requests to a report factory queue where highly trained staff members have to create reports to spec. This process typically requires a lot of time and numerous cycles to achieve the desired results.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Standard (canned) reports	**ZENworks 11:** Ships with hundreds of standard reports that typically meet 80 percent of common IT and asset management reporting requirements across inventory, usage, software licenses and contracts.
	Competition: Most solutions include a limited set of standard reports and rely on more of a "report factory" approach.
Custom reporting	**ZENworks 11:** Uses an intuitive custom reporting engine, which is accessed through the web console, to expose and mine information from the database. This reporting engine offers predefined routes to data through themes, focus areas and even suggested fields. No SQL language skills are needed to use the custom reporting engine.
	Competition: Competing solutions typically require database administrator (DBA) level skills to generate meaningful reports and may require high-level designer software add-ons to achieve results.
Power-management reporting	**ZENworks 11:** Provides detailed reporting on what your power-management policies are and what power-management capabilities various devices possess.
	Competition: Most competing solutions do not provide this level of detailed power management reporting.
Alerts and notifications	**ZENworks 11:** Makes it easy to run custom reports on a set schedule—and then either store results for later viewing or automatically e-mail them to designated staff members.
	Competition: Alert setups can be complicated. And because alerts are not triggered by native custom reports, the universe of conditions is much more limited.
Report options	**ZENworks 11:** Offers numerous reporting options, including several levels of grouping, tabular and graphical displays, output to HTML, spreadsheet, CSV and formatted PDF, and more.
	Competition: Few competing solutions can offer the breadth and depth of reporting options provided by ZENworks 11.

Software Identification

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Knowledgebase approach	**ZENworks 11:** The ZENworks Knowledgebase, which is embedded in every ZENworks product, contains references, tests, attributes and metadata about tens of thousands of IT hardware and software products. Combined with multiple data collection methods, the Knowledgebase delivers the information IT managers need to make informed decisions that influence the way they carry out tasks, complete projects and keep management informed. An expert team of analysts uses numerous tools, techniques and physical examination methods to build and maintain this world-class collection of accurate and up-to-date information.
	Competition: While some competitors have reference lists to help you positively identify software, these lists are usually employed after the collection process has already gathered data from file properties and sent it over the network. One of the primary problems with this approach is that it does not allow the scanning process to further interrogate the file system, registry or other locations where 'markers' may be located. This makes it difficult to make distinctions between versions, editions and components that may use the same file—or identify where the file properties may not contain accurate or complete information.
Breadth and depth	**ZENworks 11:** The ZENworks 11 Knowledgebase contains entries for more than 80,000 software titles, where each title entry may correlate to multiple versions of the software. Depending on the average number of versions per title, the total number of title/version combinations may reach into the hundreds of thousands.
	Competition: Even when competitors use some kind of software list (library, register, etc.), they are either very limited in scope and not updated very often, or they are simply vast collections of file-based data that does little to add to the accuracy or metadata associated with your discovered products.
File-based identification	**ZENworks 11:** Uses multiple sources—not just the file properties—to identify and corroborate the findings of every software identification scan.
	Competition: Most competing tools use a file-based system as the sole (or predominate) method for software identification. This method extracts manufacturer, product and version data directly from the software's .exe file headers. This method presents a number of problems, starting with the fact that the data in file headers is notoriously inaccurate (or missing altogether in some cases). Even worse, this method has no way to account for the one-to-many relationship between files and applications. As a result, relying on file-based identification systems often results in:
	■ Significant over-counting (many files per application) ■ Pervasive false positives ■ No suite recognition ■ Missing product edition information ■ Overly detailed version information ■ Inconsistent manufacturer and product nomenclature

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Data normalization	**ZENworks 11:** The ZENworks 11 Knowledgebase, maintained by expert analysts, contains only one consistent expression of every manufacturer (of which there are thousands) and every product name (of which there are tens of thousands) to ensure consistent results. This prevents users from having to: ■ Account for all the varied expressions of a given string when searching or reporting ■ Perform ongoing data scrubbing and cleanup **Competition:** In the rare cases where any data normalization is done at all, most competing products only include manufacturer names (not products) from a few top manufacturers.
Extensive attributes	**ZENworks 11:** Because of ZENworks 11's unique Knowledgebase approach, it can deliver both comprehensive and accurate software inventory, as well as extensive attribute information and metadata about installed software. This includes: ■ Normalized manufacturer names ■ Normalized product names ■ Software suites and related suite components ■ Standalone suite components ■ Distinct product editions ■ Distinct product versions ■ Distinct run-time versions ■ Service releases and service packs ■ Microsoft OS hotfixes ■ Guest virtual machine images/from scan of host (VMware ESX and GSX Server and Workstation, Microsoft Virtual Server and Virtual PC) ■ Guest virtual machine (VM)-installed software (from scan of guest) ■ Language editions (Chinese [simplified and traditional], English, French, German, Italian, Japanese, Portuguese [Brazilian], Spanish) ■ Serial numbers ■ Category and subcategory (e.g., graphics/drawing) ■ Virus and spyware definitions and engines (V= Antivirus, S= Spyware) – Symantec (V,S) – McAfee (V,S) – CA (V,S) – Command – Sophos (V,S) – Trend Micro (V,S) – F-Secure (V,S) – Panda Software – Microsoft (S) – Tenebril (S) – PC Tools (S) – Webroot Software (S) – Omniquad (S) – Safer Networking – Sunbelt Software (S) – Infoworks Technology (S) – Earthlink (S) – ParetoLogic (S) ■ Malware identification: (e.g., Hacker tools, Spyware) ■ Other suspicious software ■ Other software that represents productivity or security risks (e.g., Games, P2P applications)

Hardware Identification

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Knowledgebase approach	**ZENworks 11:** While the ZENworks 11 approach to hardware identification relies less on the Knowledgebase and more on mature hardware self-reporting standards like SMBIOS and WMI, our analysts are always watching to ensure accurate and consistent results. This includes keeping a close eye on: ■ Normalized manufacturer names ■ Normalized product names ■ Serial numbers ■ Models ■ Memory slot details In addition, Knowledgebase analysts work with hardware manufacturers to continually improve and extend hardware identification and data collection to address specialized issues, such at laptop battery recalls. **Competition:** Most competing products rely exclusively on self-reporting standards. As a result, they have no way to correct for inconsistencies among different manufacturers, including basic issues involving non-normalized names (e.g. IBM, IBM Corp, IBM Corporation, etc.).
Full discovery and inventory of Linux devices	**ZENworks 11:** Provides full discovery of Linux devices using Secure Shell (SSH), together with full Linux hardware and package inventories, device change tracking and the ability to map purchases to installed packages. **Competition:** Few competitors offer the same breadth of hardware discovery and inventory for both Windows and Linux hardware.
Manual device creation and reconciliation	**ZENworks 11:** Allows you to pre-create devices and then have them reconcile based on Serial number, MAC address and/or Hostname. **Competition:** Few competing products provide these types of manual device creation and reconciliation capabilities.

Remote Management

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
More than remote control	**ZENworks 11:** Offers a full range of remote management tools for managed devices, including file transfer, application launch, run scripts and reboot or shutdown. All of these capabilities are available through the ZENworks Control Center. **Competition:** Many competing products only offer remote control capabilities, which leaves holes in their remote management toolset and reduces their effectiveness.
Dynamic bandwidth optimization	**ZENworks 11:** Automatically adjusts compression ratios and other factors to maximize responsiveness, regardless of the connection bandwidth. **Competition:** Most competitors either lack this type of bandwidth optimization or leave you to find settings buried deep inside multi-layered menus.
Get more eyes on a problem	**ZENworks 11:** Allows an end user's remote control session to be viewed by several people at the same time. This makes it possible to collaborate with colleagues and resolve issues quickly, so users can return to full productivity as soon as possible. **Competition:** Most competitors' remote control solutions only allow one set of eyes at a time to view a user's screen, which hampers collaboration and leads to longer issue-resolution times. This limitation also creates longer periods of downtime for end users.
Scale remote view	**ZENworks 11:** Scales remote control views to fit your display without affecting the end user's display settings. This makes it easy to instantly see the end user's entire desktop, so you can pinpoint problems quickly. **Competition:** Many competing solutions require you to change the end user's display settings to match yours, making a mess of their layout. Other solutions offer a cumbersome and inefficient scrolling feature that makes it more difficult to view the user's screen and fix problems.
Security features	**ZENworks 11:** Uses a variety of different measures to address privacy and security concerns. First, ZENworks 11 offers intruder detection capabilities that repel unauthorized attempts to access the system. Next, the solution only allows authorized users to perform remote management operations, and end users can monitor remote operations and instantly disconnect if they become concerned. Finally, all ZENworks 11 communications are encrypted using public/private keys. **Competition:** Most competing products only offer basic access controls and lack a holistic, multi-layered approach to security.
Remote management through NAT	**ZENworks 11:** Allows you to remotely manage devices on the other side of a network address translation (NAT) using a "meet-in-the-middle" approach. **Competition:** Many competing products don't offer remote management through a NAT.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Built on reliable VNC technology	**ZENworks 11:** Created in the Olivetti & Oracle Research Lab in the late 1990's, VNC has been downloaded 100 million times and has become the *de facto* tool for remote control access across multiple platforms. ZENworks 11 takes this solid foundation and adds access control with encryption, creating the most reliable and secure remote control feature in any configuration management solution. **Competition:** Most competing solutions use proprietary in-house tools that, unlike VNC, have not been proven and tested over years of extensive use. This lack of field testing translates directly into reduced reliability and security.
Remote management for Linux devices	**ZENworks 11:** Enables remote management for Linux endpoints by making integrated VNC and SSH clients available from within the centralized ZENworks 11 Control Center. **Competition:** Most competing products do not offer remote control for Linux devices.

Bundles

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Bundles	**ZENworks 11:** Defines all configuration changes for managed devices in a single location in the ZENworks Control Center console. This is commonly referred to as a Bundle. **Competition:** Most competing products use multiple locations in the console to define changes. This fact, combined with heavily nested menu structures, makes the console more difficult to learn and use.
Wizard steps	**ZENworks 11:** Whenever a bundle is created, regardless of its purpose, a wizard is available to guide you through the steps. **Competition:** Competing products leave you to determine what different options mean and which options should be selected. This increases the amount of guesswork and decreases success rates.
Actions	**ZENworks 11:** Any ZENworks 11 bundle can perform a wide range of actions that go beyond its main function (e.g installing a windows application). These actions include: ■ Copy directory ■ Copy files ■ Display message ■ Edit INI file ■ Edit test file ■ End process ■ File removal ■ Install bundle ■ Install directory ■ Install file(s) ■ Launch bundle ■ Launch Java application ■ Launch URL ■ Launch Windows executable ■ Launch Windows thin-client application ■ Prompt user ■ Reboot / shutdown ■ Registry edit ■ Run script ■ Start / stop service ■ Verify bundle These actions can be sequenced together with break points to halt proceedings in the case of failure. This flexibility meets the requirements of the most demanding environments and makes your life easier. **Competition:** Many competitive offerings offer restricted capabilities that require frequent workarounds.
Organization	**ZENworks 11:** Groups bundles together according to type, function or any criteria you choose. Groups can also be nested. Many organizations develop, test and release high-level groups to show immediately where a bundle is in its release management cycle. **Competition:** Most competing products feature flat lists and require a great deal of hunting around to find the correct one. With this approach, there is no way of knowing whether something is ready for release or not.
Deploy multiple bundles in one task	**ZENworks 11:** Makes it possible to create bundle groups for some sets of applications, which makes assignments easier. Each group contains a set of bundles that belong together. These groups can be organized based on special functions or tasks. **Competition:** Competing solutions require extra time to create, assign and maintain multiple tasks.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Version control	**ZENworks 11:** Bundles can go through several modifications during their lifetime. By using version control, you can see exactly what version of a bundle managed devices have received and implemented. **Competition:** Many competing products make it difficult to see what version has been implemented, which leaves you unsure about exactly what has been done. As a result, tasks are often redeployed multiple times to make sure that every device has the latest version.
Copy and paste bundles	**ZENworks 11:** In some situations, you may need to tweak or fine tune existing bundles to perform similar tasks. With ZENworks 11, you can simply copy and paste existing bundles and make small changes to the pasted version—rather than creating each bundle from scratch. ZENworks 11 also allows for new copies of bundles or policies to be created automatically as part of the version-control process. **Competition:** Few competing products offer this type of "copy and paste" feature, which means you have to create every task manually from scratch.
User / device relationships	**ZENworks 11:** Enables true user-based configuration management by disassociating users from the specific devices they use. This allows you to treat users as your company's most valuable managed asset, while relegating devices to their proper role as tools. This is a new paradigm for many administrators, so ZENworks 11 also supports the more familiar and common device-based management method. Device-based management also provides a fast, easy way to configure machines for short-term use. **Competition:** Many competing products can only manage devices, which inevitably depreciate over time. Only ZENworks 11 can manage end users as well.
Centralized applications	**ZENworks 11:** When using bundles to deploy applications, you can place shortcuts in a single window, which saves users the time and inconvenience of hunting through start menus and sub-menus. This window is referred to as the Application Window in ZENworks 11 terminology. **Competition:** No other competitor offers an equivalent feature. This often means end users end up calling the service desk asking where to find their applications.
Bundle shortcuts	**ZENworks 11:** With ZENworks 11, end users can execute a bundle by simply clicking on a shortcut—usually to run an application that has been installed by the bundle. You can choose to place shortcuts in any or all of the following locations: ■ Application window ■ Desktop ■ Start Menu ■ Quick launch ■ System tray **Competition:** No competing product offers this capability.
Flexible deployment	**ZENworks 11:** Allows you to define separate distribution, launch and availability schedules as part of the same bundle. This gives you the ability to specify what triggers a managed device to download bundle files (distribution), how the bundle is executed (launch) and when it becomes available (availability). ZENworks 11 supports all of the following triggers: ■ Now ■ Date time specific ■ Recurring on an interval ■ Event ■ User login ■ User logout ■ Device boot ■ On device lock ■ On device unlock ■ ZENworks 11 login ■ ZENworks 11 logout ■ Device connected to network **Competition:** Competing products offer limited deployment flexibility, which results in end users being disrupted by configuration management activities.
Protected local content cache	**ZENworks 11:** When using ZENworks content stores, managed devices store copies of bundle files locally before starting the installation. These local content files are encrypted and cannot be accessed by end users. **Competition:** Other products use a similar process, but the files are not encrypted. This allows rogue end users to take copies of application files for their own purposes. **ZENworks 11:** The ability to store a local copy of bundled files on managed devices—and then perform the installation at a later date—creates two advantages for administrators: ■ **It saves time by enabling parallel roll out and testing**—If testing shows that the bundle is OK, installation takes place using files in the local cache. If testing reveals a problem, the ZENworks agent deletes the bundle after a set time period. ■ **It splits distribution and installation**—Distributing files over an extended time period helps ensure that every device has a chance to receive them. After every machine has received the files, you can initiate a mass installation at a set time and date. This provides a distinct advantage for project-based application distributions, such as an organization-wide move to the latest version of Microsoft Office. **Competition:** With competing products, applications are installed as soon as they are received by the device, which eliminates this additional flexibility.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Choose your storage location	**ZENworks 11:** Allows bundle content to be stored in the ZENworks 11 Content Repository or to a UNC file path.
	Competition: Most competing products use their own repository or no repository, which eliminates the possibility of using local file storage systems.
Content Repository	**ZENworks 11:** By default, the ZENworks 11 content repository is synchronized between all ZENworks primary servers and is downloaded by devices using HTTP. This method offers three main advantages:
	■ **File rights do not have to be managed**—Only devices or users who are assigned to the content in ZENworks 11 will have access to it. If a user manages to access a ZENworks content repository, the content files are encrypted and cannot be used.
	■ **Content is automatically synchronized to other primary servers and satellite devices**—This allows devices to download content from the most appropriate location based on their location.
	■ **The solution is firewall- and location-friendly**—Files are encrypted and delivered over HTTP. This eliminates the need to have the correct drive mapping with the necessary rights. If the user has been associated with the content, it is downloaded via HTTP from the most suitable location.
	Competition: Many competing products lack a repository system, which creates two fundamental issues:
	■ **Synchronization**—If an application needs to be made available to all users, the source content must be copied to all servers. This requires additional products and processes to manage content availability. Some competitors even rely on batch tasks using xcopy.
	■ **Rights**—As files are stored using a traditional file/print model, the rights to these locations must be managed very carefully. If users roam between sites, they potentially need access to all application repositories to ensure applications can be installed and verified at any location.
Bundle and policy-change management	**ZENworks 11:** ZENworks 11 allows for bundles or policies to be updated and for those changes to only be received by test devices or users defined by the ZENworks administrator. Once the change has been approved, the change can be published to the entire enterprise. ZENworks 11 also allows for bundles or policies to be reverted to previous versions if a problem has been found. This makes it easy to create and test the effects of configuration changes without disrupting live systems or interfering with the flow of business.
	Competition: Most competing products deploy configuration changes to devices immediately.
Action-level system requirements	**ZENworks 11:** This granular control gives you more flexibility when it comes to building bundles for software delivery.
	Competition: Most competing products do not give you direct control over action-level system requirements.

Operating System Deployment

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Leverage bundle features	**ZENworks 11:** Imaging makes use of many of the features found in bundles, including the content system. You can also leverage bundles within imaging. For example, you could deploy applications as part of a new workstation build process rather than as a follow up task.
	Competition: With most competing products, Imaging is performed in isolation and does not make use of the other capabilities found in the solution.
Full PXE support	**ZENworks 11:** Provides a centralized or decentralized pre-execution environment, which enables devices to boot into an imaging environment as needed. For single site organizations, the ZENworks 11 primary server can act as the main location for devices to do this. Satellites can also be used as local starting points, along with any images, for organizations with remote sites. This reduces excessive network traffic and eliminates the need for configuration changes.
	Competition: Many competing products lack PXE support, or they rely on a centralized approach. The latter forces changes to be made in high-impact areas, such as network routers/switches and DHCP scopes.
Removable storage	**ZENworks 11:** There are many scenarios when devices cannot be started from the network to deploy an image using PXE. In addition, this approach may not be practical for small remote offices, field-based sales forces or ad-hoc imaging tasks. ZENworks 11 gives you the option of creating bootable environments on removable storage devices, such as CD-ROMs, DVDs or even USB thumb drives, which makes it possible to deploy operating systems in these special situations.
	Competition: Many competing solutions leave this process in your hands or require you to install third-party tools.
ZENworks Configuration Management boot partition	**ZENworks 11:** Devices that are imaged frequently, including those based in training rooms, classrooms and testing centers may be better served by having a permanent area on the hard drive that starts up in the imaging environment, and ZENworks 11 makes this possible. If there is no work to do, control is handed over to the normal OS. If an image process is assigned, that process runs automatically.
	Competition: Most competing solutions do not offer this level of flexibility.
Locally stored Images	**ZENworks 11:** ZENworks 11 allows you to place a local boot partition on a hard drive that stores an OS deployment image. If an automated kiosk suffers from a corrupted OS, it can simply boot to the local partition with the OS image for fast, complete recovery—without having to wait for a large image to download.
	Competition: With most competing products, this type of automatic, hands-free recovery is not possible.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Image engine selection	**ZENworks 11:** Provides a powerful imaging engine that runs in a Linux pre-boot environment. This feature has had many years of successful field use and contains many powerful features. We also recognize that many organizations have existing images that were created using other tools, such as Microsoft's Imagex. ZENworks 11 can use the engine of your choice, protecting your image library investment.
	Competition: Competing products either do not include an imaging tool—which forces you to invest in an additional product—or they only support the use of their own tool. The latter scenario can be particularly costly, because if forces you to abandon your investment in existing images.
Linux or WinPE environments	**ZENworks 11:** Allows you to choose either a Windows- or Linux-based pre-boot environment to run imaging tasks, depending on which environment you're most comfortable with.
	Competition: Most competing solutions only support one pre-boot environment, which restricts your options.
Linux operating system deployment	**ZENworks 11:** Supports the delivery of SUSE Linux Enterprise and Red Hat Enterprise Linux through either AutoYaST or KickStart. ZENworks 11 also provides bare metal Linux provisioning to Dell PowerEdge servers, full support for ZENworks system variables within AutoYaST and Kickstart and improved Linux imaging capabilities for imaging EXT3 and ReiserFS partitions.
	Competition: Few competing products can offer the same range operating system deployment options for Linux environments.
Separation of the OS, applications and drivers	**ZENworks 11:** Allows you to separate applications from OS images. This makes it possible to reduce overall image size and eliminates the need to rebuild images every time an application update or a new version appears. In addition, the ability to maintain drivers outside of OS images eliminates the link between an OS image and the hardware you install it on, which reduces the overall number of images.
	Competition: Many competing products produce large, bloated images that are tied to specific hardware devices, all the way down to distinct model numbers. This obviously requires a large amount of storage space and is difficult to maintain.
Saving device identity	**ZENworks 11:** When a managed device is deployed with an operating system, it retains its identity in ZENworks 11. This ensures that configuration information is always retained, along with any tasks that have been assigned. Usually, the device identity is stored in a hidden area of the hard drive. ZENworks 11 also uses embedded device information on PCs with Intel vPro technology.
	Competition: Competing products often create duplicate device entries, which can impact your organization in many ways. For example, they can cause you to consume licenses unnecessarily, generate inaccurate auditing reports and expose your organization to software compliance failure.
Standardized device naming	**ZENworks 11:** Uses a standard naming methodology to facilitate more efficient device management. Organizations often use a convention that incorporates the type of device, installed OS, image build and location into the device name. For example, LTW2KUK21 shows the device is a latop (LT), running Windows 2000 (W2K), located in UK. The final number (21) is a unique identifier. In these situations, a relatively short device name conveys a great deal of important information. ZENworks 11 allows you to maintain control over device names when a new OS is installed.
	Competition: Competing products typically rely on the operating system install process to generate device names, which takes naming control away from the administrator.
Image modification	**ZENworks 11:** Rather than having to create a completely new image every time you make a minor modification, ZENworks 11 provides a convenient image editing tool. This tool enables you to update existing images, which can save you significant time and effort.
	Competition: With most competing products, any adjustments to an image require you to generate a completely new image.
Data and setting transfers	**ZENworks 11:** Deploying images to devices often destroys or damages user data, settings and other information. Rather than losing this important information, ZENworks 11 allows you to store it safely before an image deployment and then restore it after the deployment is complete. And of course, you maintain complete control over what is backed up and where it is restored.
	Competition: Most competing solutions rely on third-party backup and restore software that must be purchased at an additional cost.
High-speed multi-casting	**ZENworks 11:** OS images are often over 1GB in size. This means deploying OS images to 1,000 devices at the same time would involve moving 1TB of information around the network, which could bring your network to its knees—or at the very least cause significant performance problems. ZENworks 11 offers advanced multi-casting capabilities, which operate the same way as a radio receiver: unless you are tuned into the correct frequency, you can't hear the signal and there is only one transmission for all listeners. This means a 1GB image is only transmitted to targeted devices, which eliminates network overload and accelerates the imaging process.
	Competition: Some competing products provide multi-casting, although most do not. This can have major performance implications for any network when a large number of images are deployed simultaneously.
Non-managed devices	**ZENworks 11:** With ZENworks 11, even non-managed devices, such as those just taken out of the manufacturer's box, can still be imaged. ZENworks also makes it possible to create rules using information from the BIOS to pre-determine the correct image, which helps to further automate the process.
	Competition: Most competing products require devices to have the management agent already installed. This creates delays when new machines have to be booted into the OS to install an agent before the correct image can be sent down.
Pre-boot scripts	**ZENworks 11:** As soon as a device is running the ZENworks 11 imaging environment, it can be used to execute various tasks. For example, you could update the BIOS to a new version, change BIOS settings or even configure the RAID controller on a server as it's deployed. Many organizations use pre-boot scripts to run disk wiping tools that securely remove data before devices are retired, disposed of or re-deployed.
	Competition: Some competing products are only able to deploy images in pre-boot environments, which leaves you to perform additional tasks manually.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Immediate imaging	**ZENworks 11:** Rather than waiting for a managed device to be manually rebooted to begin the imaging process, ZENworks 11 makes it possible to trigger this event yourself from within ZENworks Control Center—assuming you have the necessary privileges. This feature can be used to rebuild lab, test and classrooms machines without having to visit the location or ask someone to manually reboot each machine. **Competition:** Most competing products must wait until machines are rebooted manually before beginning the imaging process.
Post-imaging capabilities	**ZENworks 11:** Allows you to create a series of bundles that come together to completely provision a device. This includes: ▪ Pre-OS install configuration ▪ Applying an OS image ▪ Installing applications ▪ Bringing the system to a defined patch level. This eliminates the need for manual intervention and saves your IT staff significant time and effort. **Competition:** Competing products can perform many of the individual steps, but they cannot bring all the pieces together. In most cases, this translates into time-consuming manual tasks.

Policies

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Rules for hardware and software configuration	**ZENworks 11:** Makes it easy to create policies that control a range of hardware and software configuration settings on managed devices. For example, an administrator can create policies to control which bookmarks are available in the browser, define which printers the user can access, and apply security and system configuration settings. With ZENworks 11, you can use policies to create a set of configurations that can be assigned to any number of managed devices. This facilitates completely uniform device configuration, and it eliminates the need to configure each device separately. **Competition:** Competing products do not offer they same kind of policy- and rule-based configuration management.
Power management configuration	**ZENworks 11:** Allows you to create policies that set up Windows power management settings and perform out of band power management tasks using Intel vPro technology. **Competition:** Few competing products offer support for Intel vPro's out-of-band power management capabilities.
Available rules	**ZENworks 11:** Allows you to create the following types of rules and policies and apply them to groups of managed devices: ▪ **Browser bookmarks policy**—Allows you to create the following types of rules and policies and apply them to groups of managed devices: ▪ **Dynamic local user policy**—Enables you to create new users and manage existing users created on Windows 2000, Windows XP and Windows Vista workstations, as well as Windows 2000 and Windows 2003 Terminal Server sessions, after users have successfully authenticated to the user source. ▪ **Local file rights policy**—Lets you configure rights for files or folders that exist on NTFS file systems. This policy can be used to configure basic and advanced permissions for both local and domain users and groups. It also provides the ability for an administrator to create custom groups on managed devices. ▪ **Printer policy**—Allows you to configure local, SMB, HTTP and Micro Focus iPrint printers on a Windows machine. ▪ **Remote management policy**—Allows you to configure the behavior or execution of remote management sessions on managed devices. This policy includes properties, such as remote management operations and security. ▪ **Roaming profile policy**—Allows you to create a user profile that is stored in a network path. A user profile contains information about a user's desktop settings and personal preferences, which are retained from session to session. Any user profile that is stored in a network path is known as a roaming profile. Every time the user logs on to a machine, the profile is automatically loaded from the network path. This makes it possible for the user to move from machine to machine and still retain consistent personal settings. ▪ **SNMP policy**—Makes it possible to configure SNMP services on managed devices. ▪ **Windows group policy**—Allows you to configure a group policy for Windows devices. ▪ **ZENworks explorer configuration policy**—Allows you to administer and centrally manage the behavior and features of the ZENworks Explorer. **Competition:** No competing products offer these types of pre-defined rules and policies.
Management by exception	**ZENworks 11:** Allows you to define a global policy for your enterprise and associate that policy with the top-level container that holds all your user objects. You can then override configuration items in the global policy by defining new policies and associating them to specific users or groups. These users and groups receive their configuration from the new policy. All other users receive their configuration from the global policy. For example, you could create a global remote control policy that does not allow any device to be remote controlled at the global level—and then put various overrides in place at lower levels depending on the security needs of specific workstations and servers. **Competition:** Most competing products to not offer these kinds of management by exception capabilities.

Feature/Function	ZENworks 11 Strengths/Comparison with Competitors
Assign policies to users and devices	**ZENworks 11:** With ZENworks 11, you can choose whether you want policies to function at the device level or at the user level. This creates a great deal of flexibility for IT administrators.
	Competition: Most competing products do not offer the choice between device-based and user-based policies.
Active policy determination	**ZENworks 11:** Applies policies to devices, users or a combination of both. However, this approach can result in conflicts, because policies can overwrite each other. To ensure that the desired policy is active, ZENworks 11 makes it easy to choose between the following options:
	■ **User last**—Applies associated policies to the device first, then the user. This is the default value.
	■ **Device last**—Applies associated policies to the user first, then the device.
	■ **User only**—Applies only the policies associated with the user and ignores the policies associated with the device.
	■ **Device only**—Applies only the policies associated with the device and ignores the policies associated with the user.
	Competition: Most competing products do not offer these types of policy determination options.
Clientless Dynamic Local User	**ZENworks 11:** ZENworks 11 allows for centralized management of users with or without the OES Windows Client installed on the endpoint. ZENworks 11 is able to intercept the credentials used to authenticate to Windows and take over management of that user account to control items such as local group membership and local file rights. If the user has an account in Micro Focus eDirectory, the ZENworks administrator can associate applications and polices to that user in the ZENworks Control Center, and even if the user is at a device that does not have the OES Windows Client installed, ZENworks will manage the account and provision access to the applications and policies.
	Competition: No other competitor offers the ability to manage local user accounts; all rely on Microsoft Active Directory for this.

Glossary of Terms

Bundles
A collection of actions and conditions to make configuration changes to a managed device. This may be an application installation, file copy or even an entire operating system. Bundles can be assigned to users from a directory source, such as Micro Focus eDirectory or Active Directory or devices—or even both.

CMDB
A configuration management database (CMDB) is a repository of information related to all the components of an information system. Although repositories similar to CMDBs have been used by IT departments for many years, the term CMDB stems from ITIL. In the ITIL context, a CMDB represents the authorized configuration of the significant components of the IT environment. A key goal of a CMDB is to help an organization understand the relationships between these components and track their configuration. The CMDB is a fundamental component of the ITIL framework's Configuration Management process. CMDB implementations often involve integration with other systems, such as Asset Management Systems.

ISO 19770
ISO 19770-1 is a framework of Software Asset Management (SAM) processes to enable an organization to prove that it is performing software asset management to a standard sufficient to satisfy corporate governance requirements and ensure effective support for IT service management overall. This part of ISO/IEC 19770-1 describes the life cycle processes for the management of software and related assets.

ITAM
IT asset management (ITAM) is the set of business practices that join financial, contractual and inventory functions to support life cycle management and strategic decision making for the IT environment. Assets include all elements of software and hardware that are found in the business environment.

ITIL
ITIL is a consistent and comprehensive documentation of best practice for IT Service Management. Used by many hundreds of organizations around the world, a whole ITIL philosophy has grown up around the guidance contained within the ITIL books and the supporting professional qualification scheme. ITIL consists of a series of books giving guidance on the provision of quality IT services, and on the accommodation and environmental facilities needed to support IT. ITIL has been developed in recognition of organizations' growing dependency on IT and embodies best practices for IT Service Management. The ethos behind the development of ITIL is the recognition that organizations are becoming increasingly dependent on IT in order to satisfy their corporate aims and meet their business needs. This leads to an increased requirement for high-quality IT services.

L4 Switch
An L4 switch operates at Layer 4 in the OSI model—the Transport layer. L4 switches base their switching decisions on information in the TCP header, and TCP is a protocol that resides at Layer 4 in the OSI seven-layer model. These switches determine where to pass the traffic based on the port number. Can be used with ZENworks Configuration Management for load balancing communications between managed devices and primary servers or satellites.

Primary Server
A server with ZENworks Configuration Management installed. There maybe one or more primary servers in a single ZENworks Configuration Management zone all connected to a single database.

PXE
The Preboot eXecution Environment (PXE, aka Pre-Execution Environment, or 'pixie') is an environment to boot computers using a network interface independently of available data storage devices (like hard disks) or installed operating systems.

SAM
Software asset management (SAM) is the practice of integrating people, processes and technology to allow software licenses and usage to be systematically tracked, evaluated and managed. The goal of SAM is to reduce IT expenditures, human resource overhead and risks inherent in owning and managing software assets. SAM includes maintaining software license compliance; tracking the inventory and usage of software assets; and maintaining standard policies and procedures surrounding the definition, deployment, configuration, use and retirement of software assets. SAM represents the software component of IT asset management, which also includes hardware asset management.

Satellite
A ZENworks Configuration Management managed device acting as a content repositories and inventory collection point.

VNC
Virtual Network Computing (VNC) is a graphical desktop sharing system which uses the RFB protocol to remotely control another computer. It transmits the keyboard and mouse events from one computer to another, relaying the graphical screen updates back in the other direction, over a network. VNC is platform-independent—a VNC viewer on any operating system usually connects to a VNC server on any other operating system. There are clients and servers for almost all GUI operating systems and for Java. Multiple clients may connect to a VNC server at the same time. Popular uses for this technology include remote technical support and accessing files on one's work computer from one's home computer, or vice versa.

Zone
A collection of Primary servers, satellites and managed devices configured and managed using information in a single database.

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