



IBM Systems Director Standard Edition for Linux on System z V6.3 helps efficiently manage server infrastructures

Table of contents

2	Overview	11	Publications
3	Key prerequisites	12	Technical information
3	Planned availability date	15	Ordering information
3	Description	19	Terms and conditions
9	Product positioning	22	Prices
10	Program number	22	Order now

At a glance

IBM® Systems Director Standard Edition for Linux™ on System z® V6.3 provides capabilities to:

- Simplify the management of servers, storage, and networks
 - Discovery and asset inventory
 - Monitoring and event alerting
 - Resource optimization
 - Simplified deployment, installation, and update process
 - Upward integration to enterprise service management
- Monitor and manage energy consumption
 - Provides a single view of the actual power usage across multiple platforms
 - Supports servers and power distribution units (PDUs), and integrates with infrastructure providers
 - Provides monitoring functions for power and thermal trending, energy thresholding
 - Provides management functions for power capping and power saving
 - Provides notifications for servers affected by a power or cooling failure
- Manage basic virtualization
 - Discovers and manages heterogeneous image repositories
 - Imports, captures, and catalogs new virtual images from existing systems
 - Simplifies virtual image deployment and customization
 - Dynamically provisions virtual servers and storage
 - Leverages Open Virtualization Format (OVF) open standard packaging for interoperability
- Manage networks for virtualization environments across platforms
 - Simplifies network management tasks, providing a unified view of the total IT environment, servers, storage and networks
 - Provides device-based launch in context point for IBM Data Center Fabric Manager
 - Integrates Tivoli® based technology for advanced discovery and topology
 - Provides a graphical view of L2 network connectivity using System Director topology perspective

- Provides logical views of network systems arranged by the subnetworks to which they belong
- Transmit the needed data to IBM for providing service for managed endpoints

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: YE001).

Overview

IBM Systems Director Standard Edition for Linux on System z V6.3, a new System z offering, provides an integrated, simplified solution and is designed to reduce operational complexity, improve the efficiency of your IT staff and systems, and control costs while meeting business requirements for service delivery. IBM Systems Director Standard Edition helps make it easier and more cost-effective for you to purchase the capabilities you need to manage IBM server systems. IBM Systems Director Standard Edition provides management functions that are:

- Packaged to be easier to install and configure
- Designed to help you get up and running quickly

IBM Systems Director Standard Edition includes management tools that can help reduce operational complexity by providing common tasks that include discovery, inventory, configuration, system health, monitoring, updates, event notification and automation across managed systems. IBM Systems Director Standard Edition also includes management tools that can help reduce the time and effort for workload deployment, as well as optimize energy usage and capacity. In addition to the base IBM Systems Director function, this solution also includes functions that were previously provided by IBM Systems Director Active Energy Manager™ for Linux on System z, IBM Systems Director VMControl™ Image Manager for Linux on System z, IBM Systems Director Service and Support Manager, and IBM Systems Director Network Control.

Leveraging industry standards, IBM Systems Director Standard Edition supports multiple operating systems and virtualization technologies across multiple platforms, including IBM System x®, IBM BladeCenter®, IBM Power Systems™, and IBM System z. IBM System Storage® and non-IBM x86 servers which utilize SNMP and CIM technologies are also supported. Through a single user interface, the function provided by **IBM Systems Director** presents consistent views for visualizing managed systems, determining how these systems relate to one another while identifying their individual status, thus helping to correlate technical resources with business needs. **Active Energy Manager** function can provide a single view of the actual energy usage across the systems and facilities within your data center to measure, monitor, and manage the energy to help you understand and control data center energy consumption and costs. **VMControl** function simplifies the management of virtual environments across multiple virtualization technologies and hardware platforms, freeing you from "silos of virtualization" and delivering enterprise-wide visibility and control. **Service and Support Manager** function provides the ability to collect and transmit data that IBM needs to service Power Systems and System x hardware when using IBM Systems Director Standard Edition for Linux on System z V6.3. **Network Control** function manages, monitors, and configures vendor-based network devices, enabling a unified view to simplify network management tasks and reduce complexity and costs.

As a single point of control, IBM Systems Director Standard Edition for Linux on System z V6.3 helps give your IT managers the tools and capabilities needed to perform centralized management, allowing them to control, monitor, configure, and manage all parts of the infrastructure, from servers to storage to networks - even power consumption. This type of increased visibility and control helps to create a highly integrated, optimized, and automated IT infrastructure across all platforms, helping to contribute to reduced complexity and cost. IBM Systems Director Standard Edition is designed to be easy to use, deploy, and learn for quick time to value. Staff training time is reduced by use of consistent interfaces and

task wizards. The automation of systems management tasks can reduce costs by decreasing the administrative burden of routine maintenance by creating an infrastructure that can respond to events without direct intervention.

Key prerequisites

Refer to the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

December 16, 2011

Description

IBM Systems Director Standard Edition for Linux on System z V6.3

IBM Systems Director Standard Edition for Linux on System z V6.3, a new System z offering, provides an integrated, simplified solution and is designed to deliver virtualization and energy management capabilities to help you manage your heterogeneous IT environment. IBM Systems Director Standard Edition includes the functions that were previously provided by the following products:

- **IBM Systems Director**
Systems Director is a platform-management foundation that streamlines the way you manage physical and virtual systems across a heterogeneous environment.
- **IBM Systems Director Active Energy Manager for Linux on System z**
Active Energy Manager is designed to simplify the management of energy consumption across multiple IBM and some non-IBM systems.
- **IBM Systems Director VMControl Image Manager for Linux on System z**
VMControl provides management simplification, improves system efficiencies within the data center, and leverages the flexibility and power of virtualization.
- **IBM Systems Director Service and Support Manager**
Service and Support Manager (SSM) automatically monitors and collects hardware problem information from IBM Power Systems and System x servers and sends this information to IBM support.
- **IBM Systems Director Network Control**
Network Control can lower your total cost of computing by discovering, monitoring, managing, and troubleshooting network devices within your enterprise.

IBM Systems Director Standard Edition delivers an integrated solution for all components except for Network Control. The new product installation makes it easy to use the advanced features and functions without needing to install additional products at a later date.

Systems Director

Systems Director is a platform-management foundation that streamlines the way you manage physical and virtual systems across a heterogeneous environment. By using industry standards, IBM Systems Director supports multiple operating systems and virtualization technologies across IBM platforms and non-IBM x86 platforms. Systems Director is the single-point-of-control for managing data centers. It integrates the IBM virtualization capabilities to provide new and radically improved ways to simplify the management of physical and virtual platform resources.

One of the key features of Systems Director is a consistent user interface focused on driving common tasks. Systems Director provides a unified view of the total IT environment, including servers, storage, and networks. This unified view allows end-user tasks to be driven with a single tool. Systems Director performs life-cycle administration of physical, virtual storage, and network-based resources in a data center from a single converged web-based user interface, from a command-line interface, or remotely using the Representational State Transfer (REST) interface.

Systems Director can reduce the total cost of ownership and decrease management costs by eliminating the need to maintain multiple tools, and improving the utilization of existing IT resources. With Systems Director, you can optimize the utilization of the heterogeneous hardware, including IBM System z, IBM Power Systems, IBM System x, IBM BladeCenter, IBM Storage Systems, and select non-IBM servers (x86) and systems software, such as AIX®, IBM i, Linux on IBM platforms, Microsoft™ Windows™, and Linux on x86 platforms, as well as virtualization technologies, such as z/VM®, VMware, and PowerVM™.

You have a choice of using the DB2® database provided by Systems Director as a 'managed database' for Systems Director or using a DB2 database that you have purchased as an external database. If you have purchased your own DB2 database, you are responsible for managing the database and connection to it.

Systems Director delivers a suite of management tasks for the end-to-end platform management, including discovery, inventory, configuration, system health and status, resource monitoring, updates, event notification, and automation. Systems Director supports new hardware and operating system platforms for discovery, inventory, status, configuration, and updates. This offering includes adding support for new devices and endpoint types plus enhancements to existing infrastructure support for endpoints. DB2 Enterprise Server Edition is installed with Systems Director and replaces Derby as the embedded management server database. With this inclusion, larger numbers of endpoints can be managed with better performance by the same server instance.

Systems Director is designed to offer the following features:

- Discovery manager
 - Designed to discover both virtual and physical systems in your network and collects inventory data about hardware and software
 - Designed to visualize relationships to other resources in the network
- Status manager
 - Monitors hardware status, power status, and update compliance status on discovered systems
 - Allows you to create, view, and customize resource and process monitor views and custom thresholds to generate event notifications
- Update manager
 - Notifies the user of systems that are out-of-date based on default or customized compliance policies
 - Provides simplified tasks to download and install updates without repackaging or requiring each step in the process to be performed separately
 - Supports the ability to update Linux on System z, update AIX on the IBM zEnterprise™ BladeCenter Extension (zBX) Power® blades, and update Linux on zBX System x blades
- Automation manager
 - May be configured to automatically perform custom actions in response to events that occur in your environment using event automation plans
 - Contains the Active and Scheduled jobs user interface to manage activations
- Configuration manager
 - Is designed to provide a central point and single framework for configuring physical and virtual managed resources, and operating systems or device specific configuration functions

- Is designed to allow management of configurations for BladeCenter, Storage, Power Systems, and System x devices from a single task in a web-based console via command line
- Contains configuration settings, templates, and configuration plan
- Remote access manager
 - Provides a set of integrated tools designed to support remote access including remote control tools (such as Virtual Network Computing (VNC), Remote Desktop (RDP), and web-based remote control for IBM BladeCenter and RSA), a hardware command line, a remote command line, and file transfer tools
- Data center integration with Tivoli and other third-party management solutions
 - Ability to launch some other products from the IBM Systems Director web interface
 - Systems Director Software Development Kit (SDK), which documents and externalizes the REST interface based on JAX-RS specifications and the asynchronous notification framework based on JMS specifications
 - Ability to launch Systems Director product tasks from the IBM Tivoli Enterprise Portal, thus eliminating the need to switch consoles
 - Auditing and security components to verify and set up an LDAP configuration from the web interface
- Hierarchical management of multiple Systems Director Servers and their associated resources from a single Systems Director Server

Active Energy Manager

Active Energy Manager (AEM) is designed to simplify the management of energy consumption across multiple IBM and some non-IBM systems. AEM tracks energy use over time and can assist you in determining how to reallocate energy to additional servers without adding additional energy or cooling equipment. When energy is constrained, AEM is designed to allow energy to be allocated on a server to server basis.

AEM can track and allocate energy consumption in a manner intended not to affect performance. Sensors and alerts can warn you if limiting energy to a server could affect performance.

AEM can also increase your capability to control energy consumption and improve energy use efficiency, which can potentially result in savings and cost reductions.

AEM is intended to help you:

- Increase energy use efficiency by controlling energy use across the data center
- Negotiate competitive utility rates based on accurate energy use trend assessments
- Limit server energy consumption by capping maximum energy consumption
- Perform server-to-server energy consumption comparisons

By enabling you to meter energy use and historical trend data, AEM is designed to help reduce energy costs in the data center. AEM is also designed to complement and integrate with higher-level management software such as Tivoli. AEM interfaces with IBM Tivoli Monitoring for Energy Management.

AEM can help protect your IT investment through its open design and support for industry standards that enable heterogeneous physical and virtual management with support for multiple platforms and operating systems.

AEM supports the following server endpoints:

- IBM zEnterprise System
- IBM System z10® servers
- IBM Power Systems
- IBM BladeCenter servers

- IBM System x servers

Certain non-IBM servers, legacy IBM servers, and IBM Storage Systems can be monitored through power distribution unit (PDU) support. In addition, AEM can collect information from select facility providers including Liebert's SiteScan from Emerson Network Power, InfraStruXure Central from APC, and Power Xpert and Foreseer from Eaton. Sensors from SynapSense, iButton, Sensatronics, SmartWorks, and Arch Rock are also supported, in order to provide a view of data center environmental data, and for equipment that does not have its own built-in sensors. AEM can perform monitoring and management functions for all supported systems from a single console.

AEM's monitoring and management functions are described below.

AEM monitoring functions

AEM is designed to communicate and collect power and thermal information directly from supported IBM servers.

AEM is designed to provide monitoring functions for devices that can connect to select PDUs. This enables monitoring functions for systems that do not have native support for AEM; for example, older servers and low- and mid-range storage devices. When these systems or devices are plugged into a PDU, AEM is designed to collect energy information from the PDU's outlets, providing a more complete view of energy used in the data center. Additionally, AEM provides users power management functions for some PDUs. Through AEM, users can turn off individual outlets on the PDUs. This allows administrators to prevent the plugging in of unauthorized devices. It also provides a way to quickly cut power usage in case of emergencies.

Power trending is a monitoring function that displays energy use for individual systems or groups of systems over time (in a graph or table format) to help enable you to understand energy use trends within and across your systems.

Thermal trending is a monitoring function that displays information on the inlet and exhaust temperatures for individual systems one at a time to help you understand thermal characteristics of your systems. Incorporating this data into one centralized software-based energy use offering allows finite and localized temperature adjustments within the IT shop to help reduce energy costs for cooling.

Support for facility providers is a function that retrieves information from Emerson Network Power's SiteScan application, APC's InfraStruXure Central, and Eaton's Power Xpert and Foreseer. Numerous attributes associated with the energy usage of power and cooling equipment can be collected, and made available through AEM. This provides a broader scope of energy information within the data center while including a view of facilities equipment. AEM integrates with the newest releases of these products.

Support for sensors is a function that retrieves temperature and power information via sensors. Supported vendors include Arch Rock, iButton, Sensitronics, and SynapSense. In AEM, this sensor data can be associated with IBM Systems Director-managed resources. The combination of support for IBM servers, facility providers, sensors, and devices plugged into PDUs, provides a broader scope of energy information across systems within the data center.

In addition, power and cooling relationships can be configured to servers for all of the above PDUs, sensors, and equipment discovered from the infrastructure management providers. This allows energy data and events to be associated with the servers that use them.

AEM management functions

Power capping is designed to allow you to set a maximum energy level per system. If the system starts to consume more than the maximum level set, AEM is designed to throttle the processor to use less energy, which slows down the server. Setting

the cap will ensure that the system will not use more than the cap value, thus allowing the user to allocate less power for that system.

Power saver mode is designed to allow you to manage your energy use as work activity shifts across various demands. Static power saving mode is enabled via an on/off switch, which you can schedule during times of low utilization, or a script can be written so that it can be switched automatically, based on processor utilization.

AEM provides monitoring of the IBM zEnterprise z196 (z196), IBM zEnterprise z114 (z114), IBM System z10 Enterprise Class (z10™ EC), and IBM System z10 Business Class (z10 BC), as well as monitoring of the zBX chassis. Presently, individual zBX blades can not be monitored.

AEM provides power savings for the z196 and z114 as well as for the zBX chassis. When performing power savings for the zBX chassis, the static power savings switch is set only for all Power blades. As for power capping, AEM provides the ability to show the power capping information. There is presently no ability to change it.

VMControl

VMControl simplifies management, improves system efficiencies within the data center, and leverages the flexibility and power of virtualization. The decoupling of your workload from the underlying systems and the dynamic flexibility to move resources and virtual machines allow VMControl to provide significant value in managing today's complex and heterogeneous data centers.

Features provided by VMControl include:

- Support for the Open Virtualization Format (OVF) industry-standard format for describing and packing virtual machine images
- Capabilities to allow virtual appliances to be:
 - Deployed, captured, and managed for AIX or Linux images on PowerVM, Windows or Linux on Kernel-based Virtual Machine (KVM) images hosted on System x or BladeCenter servers, and Linux images on z/VM
 - Managed in repositories including deletion, search, and version control
 - Captured from virtualized workloads

VMControl provides the user with cross-platform virtual server life-cycle management for IBM Power Systems with PowerVM, IBM System x with KVM, VMware, or Hyper-V, and IBM System z with z/VM, allowing for full integration in the Systems Director capabilities for monitoring, automation, and management. In addition, VMControl provides virtual server relocation tasks for VMware and KVM on x86 and PowerVM on Power Systems. This includes the ability to create, edit, delete, and move virtual servers from a single tool in a consistent fashion on all of the supported hypervisors and IBM platforms.

VMControl provides a set of image management tools to search, delete, and manage virtual appliances (also known as virtual machine images) on z/VM systems, IBM Power Systems, and IBM System x servers running with the KVM hypervisor. Separate charges apply for managing IBM Power Systems and IBM System x servers.

Service and Support Manager

Service and Support Manager (SSM) provides the ability to perform service and support functions for Power Systems and System x servers when they are being managed by IBM Systems Director Standard Edition for Linux on System z V6.3. The System z Hardware Management Console (HMC) currently provides similar functions for System z servers.

The call home support offered by SSM requires that the Systems Director management server have access to the Internet to be able to open problem tickets for managed endpoints and to transmit the data that IBM needs to provide service

for the managed endpoints. For systems that do not have Internet access, SSM adds new capabilities to move the data needed by support to a system that does have Internet access. SSM supports the ability to off-load the service data to a USB drive with improved file size limits, or use FTP to transmit the support files from the Systems Director management server to another system. SSM also provides support for you to download the support files from the user interface (UI) to the system that the Systems Director UI is running on. In addition, SSM has enhanced the Support Files UI to allow you to more easily collect the data that the support team requires.

SSM automatically collects the service data needed when creating a problem ticket. If the problem ticket is for IBM System x hardware (server or blade), part of the service data required is the output from running the Dynamic System Analysis (DSA) tool. SSM has implemented the ability to dynamically download the DSA tool to ensure that the correct version of DSA is run.

SSM examines hardware error events that IBM Systems Director receives and creates problem tickets as appropriate. When the managed endpoints are running virtual operating systems, the errors that Director receives from the virtual operating system often reflect the virtual hardware, not the actual hardware. With SSM implemented, Systems Director has the ability to listen to hardware errors that the service processor detects, since the service processor has visibility to the real hardware. This support is limited to the Integrated Management Module (IMM) version 1, which runs on x86 servers.

Service and Support Manager is installed along with Systems Director in a single installation step.

Network Control

Network Control can discover, monitor, manage, and troubleshoot network devices in the computing environment. By enabling network management capabilities along with existing server and storage management capabilities, you can effectively manage a computing environment with a single integrated management tool that can improve the cost of computing. Network Control is a key component of the IBM integrated data center management technologies and services, which are part of the dynamic infrastructure and cloud computing strategy. Network Control adds support for several new models of Ethernet switches and related networking devices. Network Control builds on the Systems Director base network management capabilities such as discovery, inventory, monitoring status, and network diagnostics.

Network Control software is designed to simplify and automate the management of IBM and non-IBM network environments via integrated server, storage, and network management. Network Control, along with Systems Director server management and storage management, provides a single management tool for the computing environment that can help to reduce overall IT management cost. Network Control is intended to help you:

- Simplify management of multivendor network devices
- Automate network management tasks
- Leverage new converged fabric network technology to reduce IT cost

The use of the following functions is not included in the IBM Systems Director Standard Edition license authorization. The use of these functions requires a full-use license of IBM Systems Director Network Control, which must be obtained separately.

- Network topology views
- Interface to vendor configuration tools
- Host VLAN configuration
- Ability to view systems by subnet
- Network virtualization capabilities

Other IBM Systems Director platform announcements made today

- For additional information on IBM Systems Director for IBM Power Systems, refer to:
 - IBM Systems Director Editions for Power Systems V6.3, Software Announcement [211-343](#), dated October 11, 2011.
 - IBM Systems Director for Power Systems V6.3, IBM Systems Director Active Energy Manager for Power Systems V4.4, IBM Systems Director VMControl Standard Edition for Power Systems V2.4, and IBM Systems Director VMControl Enterprise Edition for Power Systems, Software Announcement [211-342](#), dated October 11, 2011.
- For additional information on IBM Systems Director for IBM x86 Systems, refer to:
 - IBM Systems Director for IBM x86 V6.3, IBM Systems Director Active Energy Manager for IBM x86 V4.4, and IBM Systems Director Network Control for IBM x86 V1.3, Software Announcement [211-400](#), dated October 11, 2011.
 - IBM Systems Director Standard and Express® Editions for IBM x86 V6.3, Software Announcement [211-410](#), dated October 11, 2011.
 - IBM Systems Director VMControl for IBM x86 V2.4, Software Announcement [211-401](#), dated October 11, 2011.
- For additional information on IBM Systems Director Enhancements to Manage Network and Storage Resources, refer to Software Announcement [211-351](#), dated October 11, 2011.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www-03.ibm.com/able/product_accessibility/index.html

Section 508 of the US Rehabilitation Act

IBM Systems Director Standard Edition for Linux on System z V6.3 is made up of multiple components. Most components are capable as of December 16, 2011, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the US Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. For a complete compliance report, a US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website

http://www-03.ibm.com/able/product_accessibility/index.html

Product positioning

IBM Systems Director Standard Edition for Linux on System z V6.3 provides the foundation for monitoring and control of server systems. This product is composed of an integrated software stack designed to meet the varied needs of clients -- from basic hardware management to advanced cross-enterprise management. IBM Systems Director Standard Edition supports all IBM server platforms, including System z (Linux), Power Systems (AIX, IBM i, and Linux), IBM System x (Windows and Linux), as well as third-party x86 systems. IBM Systems Director Standard Edition also provides leadership heterogeneous virtualization management, including support for IBM (z/VM and PowerVM), KVM, VMware (ESX and ESXi), and Microsoft (Hyper-V) hypervisor technologies. IBM Systems Director Standard Edition is complementary and integrates seamlessly with IBM Tivoli service management solutions.

IBM Systems Director Standard Edition enables advanced management of IBM systems to increase operational efficiency. It provides you with:

- Management of physical and virtual images to reduce the time and effort required for routine system administration
- Discovery, configuration, monitoring, and event management needed to support your efforts to reduce cost and complexity through server consolidation and simplified management
- The ability to simplify the management of energy consumption across multiple IBM and some non-IBM systems
- The ability to update software, enabling you to quickly adapt to changes in capacity requirements

With IBM Systems Director Standard Edition, IBM provides the broadest scope of integrated service management for hardware, hypervisors, and operating systems as compared to other vendors who are limited in platform scope and product functionality.

Reference information

- For information on IBM Systems Director Editions for Power Systems V6.3, refer to Software Announcement [211-343](#), dated October 11, 2011.
- For information on IBM Systems Director for Power Systems V6.3, IBM Systems Director Active Energy Manager for Power Systems V4.4, IBM Systems Director VMControl Standard Edition for Power Systems V2.4, and IBM Systems Director VMControl Enterprise Edition for Power Systems, refer to Software Announcement [211-342](#), dated October 11, 2011.
- For information on IBM Systems Director for IBM x86 V6.3, IBM Systems Director Active Energy Manager for IBM x86 V4.4, and IBM Systems Director Network Control for IBM x86 V1.3 refer to Software Announcement [211-400](#), dated October 11, 2011.
- For information on IBM Systems Director Standard and Express Editions for IBM x86 V6.3, refer to Software Announcement [211-410](#), dated October 11, 2011.
- For information on IBM Systems Director VMControl for IBM x86, V2.4 refer to Software Announcement [211-401](#), dated October 11, 2011.
- For information on IBM Systems Director Enhancements to Manage Network and Storage Resources, refer to Software Announcement [211-351](#), dated October 11, 2011.
- For information on IBM Systems Director for Linux on System z V6.2, refer to Software Announcement [210-106](#), dated April 13, 2010.
- For information on IBM Systems Director Active Energy Manager for Linux for System z V4.3, refer to Software Announcement [210-090](#), dated April 13, 2010.
- For information on IBM Systems Director VMControl Image Manager for Linux on System z V2.3, refer to Software Announcement [210-101](#), dated April 13, 2010.

Program number

Program number	VRM	Program name
5648-SEZ	6.3	IBM Systems Director Standard Edition for Linux on System z
5648-SES	1.1	IBM Systems Director Standard Edition for Linux on System z Subscription and Support

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-413>

IBM Systems Lab Services and Training Offerings

Accelerator! Services for IBM Systems Director provide hands-on technical skills transfer and implementation assistance to enable you to install, configure, and exploit the capabilities of IBM Systems Director in your IBM systems server environment. Select the custom tailored offering - **Accelerator! Services for IBM Systems Director Standard Edition for System z.**

About IBM Systems Lab Services and Training

IBM Systems Lab Services and Training is comprised of highly skilled consultants dedicated to help you accelerate the adoption of new products and technologies. We leverage our relationships with the IBM Development Labs to build deep technical skills and exploit the expertise of our developers to help you maximize the performance of your existing IBM systems. This team can be deployed worldwide to assure all client needs can be fulfilled by the required technical talent.

For more information, visit

<http://www-03.ibm.com/systems/services/labservices/>

Offering Information

Product information is available via the Offering Information website

<http://www.ibm.com/common/ssi>

Publications

No licensed hardcopy publications are shipped with this program. Publications are available in US English versions from the IBM Systems Director Information Center.

The IBM Systems Director Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. The IBM Systems Director Information Center is at

<http://publib.boulder.ibm.com/infocenter/director/pubs/index.jsp>

To find information, you can search, browse the contents, follow links from one topic to related topics, and print the topics you want to read offline.

Note: The IBM Systems Director V6.3 Information Center will be published on or before December 16, 2011.

The following publications can be downloaded, viewed, and printed from the IBM Systems Director Resources and Documentation website at

<http://www.ibm.com/systems/software/director/resources.html>

IBM Systems Director documents:

- IBM Systems Director Hardware and Software Support Guide
- IBM Systems Director Planning, Installation, and Configuration Guide for Linux on System z
- IBM Systems Director Systems Management Guide
- IBM Systems Director Troubleshooting Guide
- IBM Systems Director Commands Reference

- IBM Systems Director Events Reference
- IBM Systems Director Hardware Command Line Interface User's Guide

Technical information

Specified operating environment

Hardware requirements

IBM Systems Director Standard Edition for Linux on System z V6.3 will operate on:

- IBM zEnterprise 196
- IBM zEnterprise 114
- IBM System z10 Enterprise Class
- IBM System z10 Business Class
- IBM System z9® Enterprise Class
- IBM System z9 Business Class

Although the IBM Systems Director server is supported on zEnterprise, System z10, and System z9 servers, IBM Systems Director Agents support all IBM System z servers including all IBM zSeries® servers.

Refer to the Preventive Service Planning (PSP) bucket for the minimum MCLs and any required updates for your particular server.

More detailed hardware requirements are available from documents accompanying the program and from the IBM Systems Director Information Center at

http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.plan.helps.doc/fqm0_r_hardware_requirements.html

Software requirements

- One of the following operating systems:
 - Red Hat Enterprise Linux AS, Version 5 for IBM System z
 - Red Hat Enterprise Linux AS, Version 6 for IBM System z
 - SUSE Linux Enterprise Server 10 for IBM System z
 - SUSE Linux Enterprise Server 11 for IBM System z

More detailed software requirements are available from documents accompanying the program and from the IBM Systems Director Information Center at

http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.plan.helps.doc/fqm0_r_operating_system_and_software_requirements.html

Note: The IBM Systems Director V6.3 Information Center will be published on or before December 16, 2011.

Operating systems supported by IBM Systems Director Standard Edition for Linux on System z V6.3

IBM Systems Director Standard Edition for Linux on System z V6.3 provides support for many operating systems. However, support varies depending on the selected hardware and IBM Systems Director component.

Operating system versions for 64-bit systems	IBM Systems Director Common Platform® Server Agent			IBM z/VM Manageability Access Point Agent (see note 1)
	X	X	X	X
Red Hat Enterprise	X	X	X	X

Linux AP, version 5.0, for IBM System z				(see notes 2 and 4)
Red Hat Enterprise Linux AP, version 6.0, for IBM System z	X	X	X	X
SUSE Linux Enterprise Server 10 for IBM System z	X	X	X	X (see notes 3 and 5)
SUSE Linux Enterprise Server 11 for IBM System z	X	X	X	X

Notes:

1. The IBM z/VM Manageability Access Point Agent is used by IBM Systems Director Standard Edition for Linux on System z V6.3 to monitor the virtual machines and associated resources known as a z/VM virtual system. In addition, the agent provides support that allows IBM Systems Director function to manage the life cycle of the z/VM virtual system and provide image management. The agent must be running in a virtual machine within the IBM z/VM V5.4 or V6.1 system that is to be monitored.
2. RHEL 5 Update 1 or earlier is for agents only. Update 2 and later are for both server and agents.
3. SLES 10 Service Pack 1 or earlier is for agents only. Service Pack 2 and later are for both server and agents.
4. IBM z/VM Manageability Access Point Agent requires Red Hat Enterprise Linux AP, version 5.0, for IBM System z, Update 3, or later.
5. IBM z/VM Manageability Access Point Agent requires SUSE Linux Enterprise Server 10 for IBM System z, Service Pack 2, or later.

Software requirements are available from the IBM Systems Director V6.3 documentation and from the IBM Systems Director Information Center at

http://publib.boulder.ibm.com/infocenter/director/pubs/topic/com.ibm.director.plan.helps.doc/fqm0_r_operating_system_and_software_requirements.html

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

Limitations

Limitations and work-arounds are available from the IBM Systems Director Information Center

<http://publib.boulder.ibm.com/infocenter/director/pubs/index.jsp>

Performance considerations

Performance considerations are available from the IBM Systems Director Information Center

<http://publib.boulder.ibm.com/infocenter/director/pubs/index.jsp>

Planning information

Customer responsibilities

Detailed planning information for IBM Systems Director Standard Edition is available from the web in the IBM Systems Director Information Center at

<http://publib.boulder.ibm.com/infocenter/director/pubs/index.jsp>

You can also access an interactive, dynamic planning advisor for use when building your IBM Systems Director solution.

Direct customer support

Direct customer support is provided by IBM Operational Support Services - SoftwareXcel. This fee service enhances your productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services - SoftwareXcel helps answer questions pertaining to usage and suspected software defects for eligible products.

Installation and technical support is provided by Global Services. For more information call 800-IBM-4YOU (426-4968).

For technical support or assistance, contact your IBM representative or visit

<http://www.ibm.com/support>

Packaging

The IBM Systems Director Standard Edition for Linux on System z V6.3 package includes product installation documentation and files.

Beginning with IBM Systems Director Standard Edition for Linux on System z V6.3, many advanced management capabilities are packaged together, delivering an integrated solution. Whether you are a new user interested in basic functions or are ready to exploit energy and virtualization management capabilities, a new single product installation makes it easy to use the advanced features and functions without needing to install additional products at a later date.

In addition to the base IBM Systems Director function, this solution also includes functions provided by IBM Systems Director Active Energy Manager, IBM Systems Director VMControl Image Manager for Linux on System z, IBM Systems Director Service and Support Manager, and IBM Systems Director Network Control.

Your Proof of Entitlement (PoE) for this program is a copy of a paid sales receipt, purchase order, invoice, or other sales record from IBM or its authorized reseller from whom you acquired the program, provided that it states the license charge unit (the characteristics of intended use of the program; for example, number of processors, number of users) and quantity acquired.

Information about how you may obtain program services will be provided by the party (either IBM or its authorized reseller) from whom you acquired the program.

IBM Systems Director Standard Edition for Linux on System z V6.3 supports the following languages:

- Brazilian Portuguese
- Chinese (simplified)
- Chinese (traditional)
- English
- French
- German
- Italian
- Japanese
- Korean
- Spanish

Security, auditability, and control

IBM Systems Director Standard Edition for Linux on System z V6.3 installed on systems with Linux uses the security and the auditability features of the Linux

operating system. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based Software Services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

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Ordering information

Charge metric

Program name	PID number	Charge metric
IBM Systems Director Standard Edition for Linux on System z	5648-SEZ	
Managing IBM zEnterprise central processor complex (CPC)		Per Managed Server
Managing z/VM resources		Per Managed Engine
IBM Systems Director Standard Edition for Linux on System z Subscription and Support, v1.1	5648-SES	
Managing IBM zEnterprise central processor complex (CPC)		Per Managed Server
Managing z/VM resources		Per Managed Engine

IBM Systems Director Standard Edition for Linux on System z V6.3, when managing z/VM resources, is eligible for IBM Software On/Off Capacity on Demand (On/Off CoD). If you are running On/Off CoD on your IBM servers, you can now also pay for IBM Systems Director Standard Edition for Linux on System z V6.3 on a processor per-day basis during your peak periods when managing z/VM resources on a System z server. For additional information about On/Off CoD, refer to Software Announcement [203-202](#), dated August 12, 2003 and Marketing Announcement [304-004](#), dated January 13, 2004.

Managed Server

If Licensee is managing the central processing complex (CPC) of either the IBM zEnterprise 196 or the IBM zEnterprise 114, the following terms apply:

Managed Server is a unit of measure by which the program can be licensed. A server is a physical computer that is comprised of processing units, memory, and input/output capabilities and that executes requested procedures, commands, or applications for one or more users or Client Devices. Where racks, blade enclosures, or other similar equipment is being employed, each separable physical device (for example, a blade or a rack-mounted device) that has the required components is considered itself a separate server. For the purpose of managed server-based

licensing, licensee must obtain Managed Server entitlements for each server managed by the program.

Managed Engine

If Licensee is managing z/VM resources, the following terms apply:

Managed Engine is a unit of measure by which the Program can be licensed. An Engine is a standard processor (CP) or Integrated Facility for Linux (IFL) processor on a System z server. For the purpose of managed engine-based licensing, licensee must obtain entitlements for each Managed Engine entitlements for each engine managed by the program.

Both Managed Server and Managed Engine

If Licensee is managing both a CPC and z/VM resources, a Managed Server entitlement is required for each server being managed by the program and a Managed Engine entitlement is required for each engine being managed by the program.

Basic license

To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Program name: IBM Systems Director Standard Edition for Linux on System z V6.3

Program PID: 5648-SEZ

Entitlement identifier	Description	License option/ Pricing metric
S016VBM	IBM Systems Director Standard Edition for Linux on System z for IBM zEnterprise central processor complex (CPC)	Use-based OTC, Per Managed Server
Orderable supply ID	Language	Distribution medium
S016VBV	US English	DVD

Entitlement identifier	Description	License option/ Pricing metric
S016VBJ	IBM Systems Director Standard Edition for Linux on System z for z/VM resources	Use-based OTC, Per Managed Engine
Orderable supply ID	Language	Distribution medium
S016VBX	US English	DVD

Subscription and Support PID: 5648-SES

Entitlement identifier	Description	License option/ Pricing metric
S016VBK	IBM Systems Director Standard Edition for Linux on System z S&S V1.1 for IBM zEnterprise central processor complex (CPC)	Basic ASC, Subscription and Support No charge, decline SW S&S

Orderable supply ID	Language	Distribution medium
S016VBR	US English	Hardcopy pub
Entitlement identifier	Description	License option/ Pricing metric
S016VBL	IBM Systems Director Standard Edition for Linux on System z S&S V1.1 for z/VM resources	Basic ASC, Subscription and Support No charge, decline SW S&S

Orderable supply ID	Language	Distribution medium
S016VBN	US English	Hardcopy pub

Subscription and Support

To receive voice technical support via telephone and future releases and versions at no additional charge, Subscription and Support must be ordered. The capacity of Subscription and Support must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program number (PID) referenced above and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

The combined effect of the IPLA license and the Agreement for Acquisition of Software Maintenance gives you rights and support services comparable to those under the traditional ICA S/390® and System z license or its equivalent. To ensure that you continue to enjoy the level of support you are used to in the ICA business model, you must order **both** the license for the program **and** the support for the selected programs at the same quantities.

Current S&S subscribers of AEM and VMControl

If you have a current S&S license for either IBM Systems Director Active Energy Manager for Linux on System z V4.3, or earlier, or IBM Systems Director VMControl Image Manager for Linux on System z V2.3, or earlier, you are entitled to a corresponding set of licenses for IBM Systems Director Standard Edition for Linux on System z V6.3.

If you have an active S&S license for AEM for Linux on System z, you are entitled to one or more "Per Managed Server" license(s) for IBM Systems Director Standard Edition for Linux on System z V6.3. If you have an active S&S license for VMControl for Linux on System z, you are entitled to a "Per Managed Engine" license(s) for IBM Systems Director Standard Edition for Linux on System z V6.3 as follows:

- One small server license entitles you to one Per Managed Engine license.
- One medium server license entitles you to two Per Managed Engine licenses.
- One large server license entitles you to four Per Managed Engine licenses.

Entitlement to IBM Systems Director functions

Ordering IBM Systems Director Standard Edition for Linux on System z V6.3 to manage either IBM zEnterprise central processor complexes or z/VM resources, authorizes you to utilize the base functions of IBM Systems Director as described in the [Description](#) of this announcement.

Examples

- Example 1 - You want to manage the energy of your z196.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage the energy of your z196, then you need a single "Per Managed Server" license.
- Example 2 - You want to manage the energy of your z114.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage the energy of your z114, then you need a single "Per Managed Server" license.
- Example 3 - You want to manage the energy of your two z196s and one z114.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage the energy of your two 196s and z114, then you need three "Per Managed Server" licenses.
- Example 4 - You want to manage the virtual images of your z/VM that is running on a z10 with two IFLs and z/VM is licensed to at least one IFL.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage your z/VM resources on your z10, then you need two "Per Managed Engine" licenses for your two IFLs.
- Example 5 - You want to manage the virtual images of your z/VM that is running on a z114 with four standard processors (CPs) and z/VM is licensed to at least one standard engine.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage your z/VM resources on your z196, then you need four "Per Managed Engine" licenses for your four CPs.
- Example 6 - You want to manage the virtual images of your z/VM that is running on a z196 with sixteen standard processors (CPs) and four IFLs with z/VM being licensed to at least one standard engine and one IFL.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage your z/VM resources on your z196, then you need twenty "Per Managed Engine" licenses for your sixteen CPs and for your four IFLs.
- Example 7 - You want to manage the virtual images of your z/VM that is running on a z196 with six IFLs and z/VM is licensed to at least one IFL. Additionally, you want to manage the energy of your z196.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage the energy of your z196 as well as the z/VM resources on your z196, then you need a single "Per Managed Server" license plus six "Per Managed Engine" licenses for your six IFLs.
- Example 8 - You want to manage the virtual images of your z/VM that is running on a z196 with twelve IFLs and z/VM is licensed to at least one IFL. Additionally, you want to manage the energy of your two z196s (one of which is running z/VM) and one z114.
If you will be licensing IBM Systems Director Standard Edition for Linux on System z V6.3 to manage the energy of your two z196s and z114 as well as the z/VM resources on one of the z196s, then you need three "Per Managed Server" licenses plus twelve "Per Managed Engine" licenses for your twelve IFLs.

On/Off CoD

IBM Systems Director Standard Edition for Linux on System z V6.3 is eligible for On/Off CoD with a temporary use charge calculated based on per-processor per-day usage.

Program name:

IBM Systems Director Standard Edition for Linux on System z V6.3

Program PID: 5648-SEZ

Entitlement identifier	Description	License option/ Pricing metric
S016VBJ	IBM Systems Director Standard Edition for Linux on System z for z/VM resources	Basic OTC, Per Processor-day TUC

IBM Systems Director Standard Edition for Linux on System z V6.3, when managing z/VM resources, is eligible for IBM Software On/Off Capacity on Demand (On/Off CoD). If you are running On/Off CoD on your IBM servers, you can now also pay for IBM Systems Director Standard Edition for Linux on System z V6.3 on a processor per-day basis during your peak periods when managing z/VM resources on a System z server. For additional information about On/Off CoD, refer to Software Announcement [203-202](#), dated August 12, 2003 and Marketing Announcement 304-004, dated January 13, 2004.

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and IBM Agreement for Acquisition of Software Maintenance.

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

Agreement for Acquisition of Software Maintenance

The following agreement applies for Software Subscription and Support (Software Maintenance) and does not require customer signatures:

- IBM Agreement for Acquisition of Software Maintenance (Z125-6011)

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

IBM System z Operational Support Services - SoftwareXcel is an option if you desire added services.

License Information form number

LC14-7498 - IBM Systems Director Standard Edition for Linux on System z V6.3

The program's License Information will be available for review on the IBM Software License Agreement website

<http://www.ibm.com/software/sla/sladb.nsf>

IBM Systems Director Standard Edition for Linux on System z V6.3 contains management server and agent components, and you are authorized to use the components on IBM systems. You are not authorized to run the IBM Systems Director Server on non-IBM systems.

You are authorized to manage non-IBM systems that run Common Agent and non-IBM systems without an agent. Refer to the [Hardware requirements](#) and [Software requirements](#) for more information about supported systems.

Limited warranty applies

Yes

Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the *IBM Software Support Handbook* found at

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IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

Program support

Enhanced support, called Subscription and Support, includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months' notice.

Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

Volume orders (IVO)

No

Passport Advantage applies

No

Usage restriction

Yes

IBM Systems Director Standard Edition includes a limited-use version of IBM Systems Director Network Control (Network Control). Licensee's usage of Network Control is subject to the following restrictions: Licensee is authorized to perform network device management, such as discovery, inventory, and monitoring status, and to use network diagnostics. Any other use of Network Control, including advanced network topology views, interfaces to vendor configuration tools, and configuration of host VLANs, requires a full-use license of Network Control, which must be obtained separately.

Software Subscription and Support applies

No. For operating system software, the revised IBM Operational Support Services - SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the Software Subscription and Support (Software Maintenance) offering.

This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised offering, visit

<http://www.ibm.com/services/sl/products>

IBM Operational Support Services - SoftwareXcel

Yes

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Yes. A 15% education allowance applies to qualified education institution customers.

On/Off Capacity on Demand (CoD)

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for IBM System z On/Off Capacity on Demand (Z125-7883) must be signed prior to use.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

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Prices

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