



# IBM NeXtScale nx360 M4 with storage native expansion offers dense storage with up to 32 TB of disk capacity within 1U effective rack density

## Table of contents

<a href="#">2</a>	<a href="#">Overview</a>	<a href="#">7</a>	<a href="#">Publications</a>
<a href="#">3</a>	<a href="#">Key prerequisites</a>	<a href="#">8</a>	<a href="#">Technical information</a>
<a href="#">3</a>	<a href="#">Planned availability date</a>	<a href="#">13</a>	<a href="#">Terms and conditions</a>
<a href="#">3</a>	<a href="#">Description</a>	<a href="#">13</a>	<a href="#">Prices</a>
<a href="#">6</a>	<a href="#">Product positioning</a>	<a href="#">13</a>	<a href="#">Announcement countries</a>
<a href="#">6</a>	<a href="#">Product number</a>		

## At a glance



IBM® NeXtScale System is a powerful chassis-based solution and comprised of compute, storage, and GPU/Phi nodes. The compute node is the nx360 M4 and the chassis is the n1200 Enclosure. The chassis can house up to 12 half-wide nx360 M4 compute nodes or six GPU/Phi nodes or six storage nodes. You can mix compute, GPU/Phi, and storage nodes within the chassis.

The IBM NeXtScale nx360 M4 is a half-wide, dual-socket server designed for data centers that require high performance, yet are constrained on floor space, power, and cooling infrastructure. The nx360 M4 is equipped with the latest Intel Xeon™ E5-2600 V2 Series processors and is ideal for clients who need a dense, flexible solution with low total cost of ownership.

In the refresh 1 of nx360 M4 server, a storage native expansion tray is being added to the base compute node, thus allowing clients to create an ultra-dense storage node with up to 32 TB capacity within 1U effective rack density.

New features of the NeXtScale nx360 M4 Refresh 1 server include:

- Seven additional 3.5-inch HDDs by way of a storage native expansion tray with up to 32 TB capacity per storage node (new in refresh 1)
- Support for ServeRAID M1100 series adapter
- Support for 4 TB HDD
- Support for 32 GB memory DIMM with up to 256 GB capacity per node (new in refresh 1)
- Support for high-speed QDR/FDR10 InfiniBand networking (new in refresh 1)

The N1200 Enclosure is a light chassis without integrated networking or built-in switching. As a result, no chassis-level management is required. The nodes in the chassis with front-access cabling would connect to top-of-rack switches installed in the same rack or another rack.

Features of the n1200 Enclosure include:

- Ten 80 mm high-power fans (hot swap)
- Six 900 W power supplies (nonredundant, N+1, or N+N)
- Fan and power controller

Easy-to-order dual-socket compute nx360 M4 standard models and CTO (build your own) models are now available in Standalone Solutions Configurator Tool (SSCT), IBM Hardware Configurator (Blue Horizons), and IBM System x® and Cluster Solutions configurator (x-config).

**IBM service options:** Three-year customer replaceable unit (CRU) and on-site<sup>1</sup> limited warranty.

---

## Overview

---

IBM NeXtScale System is the next generation of dense computing. It is an open, flexible, and simple data center solution for users of technical computing, grid deployments, analytics workloads, and large-scale cloud and virtualization infrastructures.

IBM NeXtScale system is built with industry-standard components to create flexible configurations of servers, chassis, and networking switches that integrate easily in a standard 19-inch rack. It is a general purpose platform that provides flexibility, creating unique and differentiated solutions leveraging off-the-shelf components, such as standard PCIe adapters, networking switches, and cables. Front-access to servers, networking cables, and switches enable ease of serviceability and reduces chances of miscabling. Additionally, front access allows users to stay at the front of racks in the cold aisle instead at the back in hot aisle.

Customized solutions for your applications can be configured to meet your specific business needs for optimum compute power, GPU or co-processor acceleration, and storage with your choice of I/O and networking. Since NeXtScale platform is optimized for standard racks, it allows the mixing of high-density NeXtScale server offerings and non-NeXtScale components within the same cluster rack.

You can purchase a fully integrated NeXtScale solution from IBM or order piece part or procure through your preferred Business Partner.

If purchased through Intelligent Cluster™, IBM manufacturing sites will fully integrate the components on site and test them as a complete solution before shipping the rack to your location. When you receive the rack, it is removed from the packaging, placed in its proper location, powered up, and connected to the network in minimal time. IBM personnel will confirm that the servers and network are functioning properly before acceptance.

In addition, the integrated NeXtScale solution will undergo Linpack testing on the nodes and clients who require the benchmarking results can be provided HPL output data that was obtained during the test.

IBM NeXtScale System is scalable and extendable with multigeneration upgrades to protect and maximize IT investments.

<sup>1</sup> For information on the IBM Statement of Limited Warranty, contact your IBM representative or reseller. Copies are available upon request.

---

## Key prerequisites

---

- Supported operating system
- Device drivers, as required

---

## Planned availability date

---

- December 13, 2013: For all features except 32 GB 1866 MHz LP LRDIMM
- January 27, 2014: 32 GB 1866 MHz LP LRDIMM

---

## Description

---

The NeXtScale nx360 M4 system-board tray uses the following features and technologies:

- Optional Broadcom 10GBASET PCIe adapter  
This enables low-cost migration to 10 Gb Ethernet for applications such as analytics, public or private cloud, and virtualization.
- Two PCI Express® x16 adapter capabilities  
The system-board tray has two connectors for PCI Express adapters. These connectors accept standard x16 or x8 adapters.
- Dynamic System Analysis (DSA) programs  
The DSA programs collect and analyze system information to aid in diagnosing problems. The diagnostic programs collect a large amount of information, such as:
  - System configuration
  - Network interfaces and settings
  - Installed hardware
  - Service processor status and configuration
  - Vital product data, firmware, and uEFI configuration
  - RAID controller configuration and status
  - Event logs for ServeRAID controllers and service processors
  - Operating system configuration (Online DSA only)
  - Installed device drivers (Online DSA only)
  - System services (Online DSA only)
- Online DSA  
DSA comes in both online (run under the operating system) and preboot (runs its own media) versions. Online DSA, which is a web download, collects additional software information and operating system vital product data. DSA Preboot runs additional diagnostics, such as the memory test which can help to detect faulty hardware. Both versions can transmit data back to IBM for analysis by service and support personnel or can have the results analyzed locally.
- Integrated Management Module (IMM)  
The Integrated Management Module combines the baseboard management controller (BMC) and video controller functions in a single chip that provides basic service-processor environmental monitoring functions. If an environmental condition exceeds a threshold or if a system component fails, LEDs are illuminated on the BMC to help you diagnose the problem and the error is recorded in the error log. The BMC also provides remote server management capabilities, using the Intelligent Platform Management Interface (IPMI) version 2.0 protocol.

**Note:** In messages and documentation, the term "service processor" refers to the baseboard management controller.

- Integrated network support

The system-board tray comes with an integrated Intel™ dual-port Gigabit Ethernet controller, which supports connection to a 10 Mbps, 100 Mbps, or 1000 Mbps network.

- Storage capacity

The system-board tray supports one 3.5-inch simple-swap SATA, or two 2.5-inch simple-swap SATA/SAS, or four 1.8-inch simple-swap solid-state HDDs. An optional SAS controller must be installed for specific configurations.

- Supported memory options

The nx360 M4 server system-board tray can address up to 128 GB of system memory. The memory controller supports up to eight industry-standard, registered ECC double-data-rate 3 (DDR3) -1066 DIMMs, -1333 DIMMs, and -1600 DIMMs or unbuffered ECC double-data-rate 3 (DDR3) -800 DIMMs, -1066 DIMMs, -1333 DIMMs, -1600 DIMMs, and -1866 DIMMs.

- Memory mirroring

Memory mirroring stores data in two pairs of DIMMs simultaneously.

- Redundant connection

The addition of an optional network interface card (NIC) provides a failover capability to a redundant Ethernet connection. If a problem occurs with the primary Ethernet connection, all Ethernet traffic that is associated with the primary connection is automatically switched to the redundant NIC. If the applicable device drivers are installed, this switching can occur without data loss and without user intervention.

## **IBM NeXtScale n1200 Enclosure Chassis (5456)**

This 6U enclosure offers:

- SAS, SATA, and SSD hard drive support
- Shared high-efficiency power supply (optional redundant supply)
- Shared low-power-consumption fans
- Choice of SAS, Ethernet, or iSCSI host interface

## **Power and cooling advantages**

---

NeXtScale servers help pack more processors into the same power and cooling envelope, better utilizing floor space, and "right size" data center design. With the NeXtScale solution, less power per processor means more processing capacity per kilowatt. The NeXtScale can run cooler to deliver greater reliability.

## **IBM Rear Door Heat eXchanger (175642X)**

For dense data center environments, IBM offers smart rack-level heat management solutions such as the super-efficient IBM Rear Door Heat eXchanger. The water-cooled door is designed to dissipate heat generated from the back of the rack to reduce the overall room temperature. With this combination of benefits at the server and data center level, IBM systems deliver strong power and cooling benefits to NeXtScale clients.

The Rear Door Heat eXchanger for 42U Deep Dynamic racks helps reduce the air temperature in your growing data center to approximately the same air temperature as that entering the rack, alleviating the need to add air conditioning units. This unobtrusive solution brings more cooling capacity to areas where the heat is greatest, around racks of servers with multiple, more powerful processors.

This cooling efficiency can help alleviate or possibly eliminate the need for additional air conditioning power and the associated construction cost.

## **Lab services**

---

### **NeXtScale installation planning**

Features:

- Assess the client's air conditioning and air distribution in support of NeXtScale systems
- Evaluate the need for any Rear Door Heat eXchanger installations and offer necessary guidance
- Review the NeXtScale power specifications based on the client's hardware configurations and offer necessary guidance

Typical benefits:

- Offers accurate environmental information as required for supporting NeXtScale systems most reliably
- Identifies the most efficient approach to the NeXtScale system cooling and ventilation needs
- Reduces potential installation shortfalls with open and ongoing communication with the client surrounding their specific NeXtScale system requirements

### **NeXtScale Systems Management**

---

The NeXtScale product family offers systems management support through standards-based, scriptable interfaces. This support starts with the embedded Intelligent Platform Management Interface (IPMI) baseboard management controller (BMC).

For rapid diagnosis of problems, NeXtScale supports IBM Dynamic System Analysis (DSA) preboot diagnostics and online data collection for problem determination in supported Microsoft™ Windows™ and Linux™ environments. Refer to the Dynamic System Analysis product documentation for additional detail on DSA features.

NeXtScale compute nodes support IBM Systems Director with limited function. Refer to IBM Systems Director product documentation for specific details on supported functions on NeXtScale hardware.

The compute nodes have been tested with the Extreme Cluster Administration Toolkit (xCAT), an open source community-based cluster administration tool set tailored to scale-out compute environments. You can download xCAT from SourceForge at

<http://sourceforge.net/projects/xcat/>

For additional information on xCAT, contact your IBM Sales and Support Team, or visit

<http://www.xcat.org/>

### **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.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

---

## Product positioning

---

IBM delivers innovations that meet your specific needs. The right choice depends on your business requirements, target applications, and operating environment. NeXtScale focuses on:

- Compute performance in gigaflops per dollar and performance per watt
- Rapidly scaling and large scale-out deployments
- Maximum usable compute density in the data center
- Software-resilient workloads such as HPC, grid, and cloud computing
- Optional redundant power supply for nongrid workloads

The NeXtScale hardware platform is positioned for large-scale enterprise deployments that rely on recovery-oriented architecture that primarily enables redundancy through the software layer instead of redundant hardware.

---

## Product number

---

The following are features already announced for the 3331, 5455 machine types:

Description	MT	Model	Feature
Primary Array 5 HDDs	5455	AC1 MC1	7011
Primary Array 6 HDDs	5455	AC1 MC1	7012
Primary Array 7 HDDs	5455	AC1 MC1	7013
Primary Array 8 HDDs	5455	AC1 MC1	7014
Secondary Array 3 HDDs	5455	AC1 MC1	7016
Secondary Array 4 HDDs	5455	AC1 MC1	7017
Secondary Array 5 HDDs	5455	AC1 MC1	7057
Secondary Array 6 HDDs	5455	AC1 MC1	7058
ServerRAID M1100 Series Zero Cache/RAID 5 Upgrade for IBM System x	5455	AC1 MC1	A1X1
Primary Array - RAID 5	5455	AC1 MC1	A2K9
Secondary Array - RAID 5	5455	AC1 MC1	A2KJ
Secondary Array - RAID 10	5455	AC1 MC1	A2KL
IBM 4TB 7.2K 6Gbps SATA 3.5" HDD for NeXtScale System	3331	HC1	A4GC
IBM 4TB 7.2K 6Gbps SATA 3.5" HDD for NeXtScale System	5455	AC1 MC1	
IBM NeXtScale Storage Native Expansion (NeX) Tray	3331	HC1	A4GD
IBM NeXtScale Storage Native Expansion (NeX) Tray	5455	AC1 MC1	
3.5" HDD RAID cage for nx360 M4 Storage NeX tray	3331	HC1	A4GE
3.5" HDD RAID cage for nx360 M4 Storage NeX tray	5455	AC1 MC1	
3.5" HDD Filler for 1U Internal Storage Tray	3331	AC1 MC1	A4GF
IBM 750W Redundant PSU (Optional)	3331	HC1	A51X

1U Internal Storage Tray Label GBM	5455	AC1	A4GG
		MC1	
Mellanox ConnectX-3 Dual Port QDR/FDR10 Mezz Card	3331	HC1	A4WA
Mellanox ConnectX-3 Dual Port QDR/FDR10 Mezz Card	5455	AC1	
		MC1	
IBM NeXtScale nx360 M4 with Storage NeX	5455	AC1	A51V
		MC1	
32GB (1x32GB, 4Rx4, 1.5V) PC3-14900 CL13 ECC DDR3 1866MHZ LP LRDIMM	5455	AC1	A47K
		MC1	
NVIDIA Tesla K20 Power Converter Cable	7383	AC1	A51Q
		MC1	

## Options

Description	Type	Model	Feature Code	SEO	Part Number
IBM 4TB 7.2K 6Gbps SATA 3.5" HDD for NeXtScale System	3331	HC1	A4GC	00AD025	00AD025
Mellanox ConnectX-3 Dual Port QDR/FDR10 Mezz Card	3331	HC1	A4WA	00AM476	00AM476
IBM NeXtScale Storage Native Expansion (NeX) Tray	3331	HC1	A4GD	00Y8546	00Y8546
3.5" HDD RAID cage for nx360 M4 Storage NeX tray	3331	HC1	A4GE	00Y8615	00Y8615
IBM 750W Redundant PSU (Optional)	3331	HC1	A51X	00AK884	00AK884

## Pseudo parts

**Note:** The following Pseudo part numbers cannot be ordered as stand-alone parts and can only be ordered as part of a configuration created in x-config.

Pseudo part number	Description
00Y8616	3.5" HDD Filler for 1U Internal Storage Tray
00Y8618	1U Internal Storage Tray Label GBM
00FK160	IBM NeXtScale nx360 M4 with Storage NeX
00AL795	NVIDIA Tesla K20 Power Converter Cable

---

## Publications

The *Installation and Service Guide* for NeXtScale solutions, in US English, is available from

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

Under Product Support, select NeXtScale, and under Popular links, select Publications lookup. Select the Product family and click on continue.

IBM Systems 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 information Center is at

<http://publib14.boulder.ibm.com/infocenter/systems>

The languages that are available are:

- English
- French

- German
- Italian
- Japanese
- Brazilian Portuguese
- Simplified Chinese
- Traditional Chinese

---

## Services

---

### **Global Technology Services®**

---

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

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

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

For details on education offerings related to specific products, visit

<http://www.ibm.com/services/learning/index.html>

Select your country, and then select the product as the category.

---

## Technical information

---

### **Specified operating environment**

---

#### **Standards**

#### **Equipment approvals and safety**

- CE Mark (EN55022 Class A, EN60950-1, EN55024, EN61000-3-2, EN61000-3-3)
- CISPR 22, Class A

#### **Operating environment**

The IBM NeXtScale nx360 M4 products are designed to operate in a general business environment, such as a Class A or A1, temperature and humidity-controlled room.

Power on<sup>2</sup> :

- Temperature: 5°C to 40°C (40°F to 104°F) up to 950 mm (3,117 ft). Above 950 m, derated maximum air temperature 1°C / 175 m<sup>3</sup> .
- Humidity, noncondensing: -12°C dew point (10.4°F) and 8% - 85% relative humidity<sup>4,5</sup>
- Maximum dew point: 24°C (75°F)
- Maximum altitude: 3,050 m (10,000 ft) and 5°C to 28°C (41°F to 82°F)
- Maximum rate of temperature change: 5°C/hr (41°F/hr) for tape drive, 20°C/hr (68°F/hr) for HDDs<sup>6</sup>



- Declared noise level: 7.0 bels (idling)

Power off<sup>7</sup> :

- Temperature: 5°C to 45°C (41°F to 113°F)
- Relative humidity: 8% - 85%
- Maximum dew point: 27°C (80.6°F)

Storage (nonoperating):

- Temperature: 1°C to 60°C (33.8°F to 140°F)
- Altitude: 3,050 m (10,000 ft)
- Relative humidity: 5% - 80%
- Maximum dew point: 29°C (84.2°F)

Shipment (nonoperating)<sup>8</sup> :

- Temperature: -40°C to 60°C (-40°F to 140°F)
- Altitude: 10,700 m (35,105 ft)
- Relative humidity: 5% - 100%
- Maximum dew point: 29°C (84.2°F)<sup>9</sup>

Particulate contamination

Design to ASHRAE Class A3, ambient of 40°C, with relaxed support:

- The system will support cloud-like workload with no performance degradation acceptable (Turbo-Off).
- Under no circumstance can any combination of worst-case workload and configuration result in system shutdown or design exposure at 40°C.

Specific processors supported environment:

- Processor E5-2680:
  - Temperature: 5°C to 30°C (41°F to 86°F)
  - Altitude: 0 - 950 m (3,117 ft)
- Processor E5-2690 v2:
  - Temperature: 5°C to 35°C (41°F to 95°F)
  - Altitude: 0 - 950 m (3,117 ft)
- Processor E5-2697 v2:
  - Temperature: 5°C to 35°C (41°F to 95°F)
  - Altitude: 0 - 950 m (3,117 ft)

**2** Chassis is powered on.

**3** Derate maximum allowable temperature 1°C/175 m above 950 m.

**4** The minimum humidity level for class A3 is the higher (more moisture) of the -12°C dew point and the 8% relative humidity. These intersect at approximately 25°C. Below this intersection (25°C) the dew point (-12°C) represents the minimum moisture level, while above this intersection relative humidity (8%) is the minimum.

**5** Moisture levels lower than 0.5°C DP, but not lower -10°C DP or 8% relative humidity, can be accepted if appropriate control measures are implemented to limit the generation of static electricity on personnel and equipment in the data center. All personnel and mobile furnishings and equipment must be connected to ground via an appropriate static control system. The following items are considered the minimum requirements:

- Conductive materials (conductive flooring, conductive footwear on all personnel that go into the data center) will be used, and all mobile furnishings and equipment will be made of conductive or static dissipative materials.

- During maintenance on any hardware, a properly functioning wrist strap must be used by any personnel who contact IT equipment.
- 6** 5°C/hr for data centers employing tape drives and 20°C/hr for data centers employing disk drives.
- 7** Chassis is removed from original shipping container and is installed but not in use, for example, during repair, maintenance, or upgrade.
- 8** The equipment acclimation period is 1 hour per 20°C of temperature change from the shipping environment to the operating environment.
- 9** Condensation is acceptable, but not rain.

### **Hardware requirements**

For service, the NeXtScale requires a compatible:

- Monitor
- Combination USB keyboard and pointing device, such as IBM part number 40K5372
- USB CD-RW/DVD drive, such as the IBM and Lenovo part number 73P4515 or 73P4516

**Note:** Rack must have 784.86 mm (30.9 in.) minimum clearance on the front and back sides of the rack to allow service.

### **Software requirements**

The following network operating systems are supported in the NeXtScale:

- Microsoft
  - Microsoft Windows Server 2008 R2
  - Microsoft Windows HPC Server 2008
  - Microsoft Windows Server 2012
  - Microsoft Windows Server 2012 R2
- Linux
  - Red Hat Enterprise Linux 5 Server x64 Edition
  - Red Hat Enterprise Linux 6 Server x64 Edition
  - SUSE Linux Enterprise Server 11 x64 Edition
- VMware
  - vSphere 5.0 (ESXi), vSphere 5.1 (ESXi)

**Note:** For additional support, certification, and version information on network operating systems, visit

<http://www-03.ibm.com/servers/eserver/serverproven/compat/us/>

### **Compatibility**

All components of the System x NeXtScale are compatible when purchased as a supported NeXtScale solution.

### **Limitations**

NeXtScale options are supported only when ordered and deployed in a NeXtScale solution. They will not be supported when ordered without a corresponding order for a NeXtScale configuration.

Regarding the use of solid-state disk drives, solid-state memory cells have an intrinsic, finite number of write cycles that each cell can incur. As a result, each solid-state device has a maximum amount of write cycles to which it can be subjected, documented as Total Bytes Written (TBW). IBM is not responsible for

replacement of hardware that has reached the maximum guaranteed number of write cycles. This limit may be revealed as the device failing to respond to system-generated commands or becoming incapable of being written to. Additional information is available at

<http://www-03.ibm.com/systems/x/options/storage/solidstate/index.html>

## **Planning information**

---

### ***Customer responsibilities***

Customer setup. Customers are responsible for installation on the NeXtScale according to the instructions IBM provides with the machine.

Clients are responsible for preparing their site for installation.

You are expected to review the *Installation Planning Guide* before the delivery of your NeXtScale product. Clients' responsibilities must be verified as complete before scheduling an IBM installer to come on site. Visit

<https://www-304.ibm.com/systems/support/>

To service your NeXtScale or obtain IBM service, the NeXtScale requires a compatible:

- Monitor
- Combination USB keyboard and pointing device, such as IBM part number 40K5372
- USB CD-RW/DVD drive, such as the IBM and Lenovo part number 73P4515 or 73P4516

**Note:** Rack must have 784.86 mm (30.9 in.) minimum clearance on the front and back sides of the rack to allow service.

### ***Cable orders***

All cables are supplied with the NeXtScale. Depending on the applications, the cables may be fully installed, partially installed (plugged at one end and packaged for shipping), or included as part of a shipment group.

### ***Installability***

Customer setup. Customers are responsible for installation on the NeXtScale according to the instructions IBM provides with the machine.

## **Security, auditability, and control**

---

This offering uses the security and auditability features from standard IBM offerings and supported Linux distributions.

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

## **Global Technology Services**

---

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

Electronic Service Agent™ and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX® 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa\_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

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

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

---

### Benefits

---

**Increased uptime:** The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

**Security:** The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer's business applications or business data is never transmitted to IBM.

**More accurate reporting:** Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

**Customized support:** Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support website at

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

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent . Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

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

---

## Terms and conditions

---

### ***Field installable feature***

Yes

### ***Warranty period***

One year.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

### ***Customer setup***

Yes

### ***Machine code***

Same license terms and conditions as base machine.

### ***Optional features warranty period***

One year.

---

## Prices

---

For all local charges, contact your IBM representative.

---

## Announcement countries

---

All European, Middle Eastern, and African countries.

**Trademarks**

Intelligent Cluster and Electronic Service Agent are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, System x, Express, Global Technology Services and AIX are registered trademarks of IBM Corporation in the United States, other countries, or both.

Intel Xeon and Intel are trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

**Terms of use**

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Reference to other products in this announcement does not necessarily imply those products are announced, or intend to be announced, in your country. Additional terms of use are located at

<http://www.ibm.com/legal/us/en/>

For the most current information regarding IBM products, consult your IBM representative or reseller, or visit the IBM worldwide contacts page

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