

IBM Electronic Services

IBM Electronic Service Agent™

Service automation for your IBM system

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Agenda

- Electronic Service Agent™
- Benefits
- 2008 Initiatives
- IBM Electronic Services overview
- Security
- Reference material
- Activation demo



IBM Electronic Service Agent™

Electronic Service Agent™: secure tool resides on Customer systems and automatically reports problems to IBM Support. Also transmits system information to IBM upon installation and as the environment changes.



Reports errors and system inventory

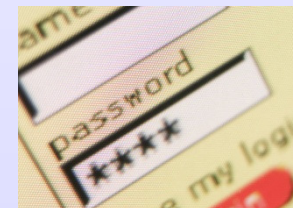
IBM Support Center: analyzes problem details and inventory information and creates an action plan. If an onsite service call is required, the engineer will arrive with the necessary parts to quickly resolve the issue.



Superior support and service

Customer: Using the IBM ID entered during activation, Customers can view and search system information in the secure “My Search” section of the Electronic Services website at:

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



Customer can view systems data online

Why IBM Electronic Service Agent™

High availability

- Secure, 24x7 proactive monitoring: downtime avoidance
- Less personnel time gathering information and reporting problems

Ease of use

- No charge tool. Integrated in **HMC, AIX, i5/OS**; download for other OS
- Supports all IBM Systems **x i p z; BladeCenter; DS8000; NSeries**

Secure routing

- Outbound only; Secure data transmission and storage
- Knowledge base filter, routes problems to the experts

Accurate fixes

- Faster on-site response with parts, location, and problem info known before arrival
- Solutions not requiring parts are handled remotely, eliminating travel

Customer self help

- Faster self-help problem resolution via personalized My Search

HMC



AIX L

i5OS



Customer Value from IBM Electronic Service Agent™

Proactive Support

- IBM warns me of potential problems **before** they cause unplanned downtime
- When I call IBM, I no longer hear, “we’ve seen that before”

Results:

Less unplanned downtime means higher availability

Reactive Support

- IBM responds faster to my system problems and solves them faster

Results:

Faster access to key IBM resources
Faster problem resolution means higher availability

Customized Web Experience

- IBM’s web site only shows me information relevant to the systems I have installed

Results:

Less time spent reading through data not relevant to me and more time finding what I need

Client Self Assist

- I have access to knowledge and Intellectual capital based on systems I have installed

Results:

I can solve problems on my own because IBM’s tools know what I have installed

IBM Electronic Service Agent™

Continued 2008 focus on security, acceptance, usability

- 9117-MMA ongoing initiative: 70% US, 53% WW
- Add future high end complimentary installation
- Integrated with AIX 5.3 TL6 and AIX 6.1 and later
- Business Partners communication
- HMC install wizard improvements
- Documentation updates
- Improved e-Svcs website navigation
- Whitepapers—AIX, HMC security & connectivity >>*translation*<<

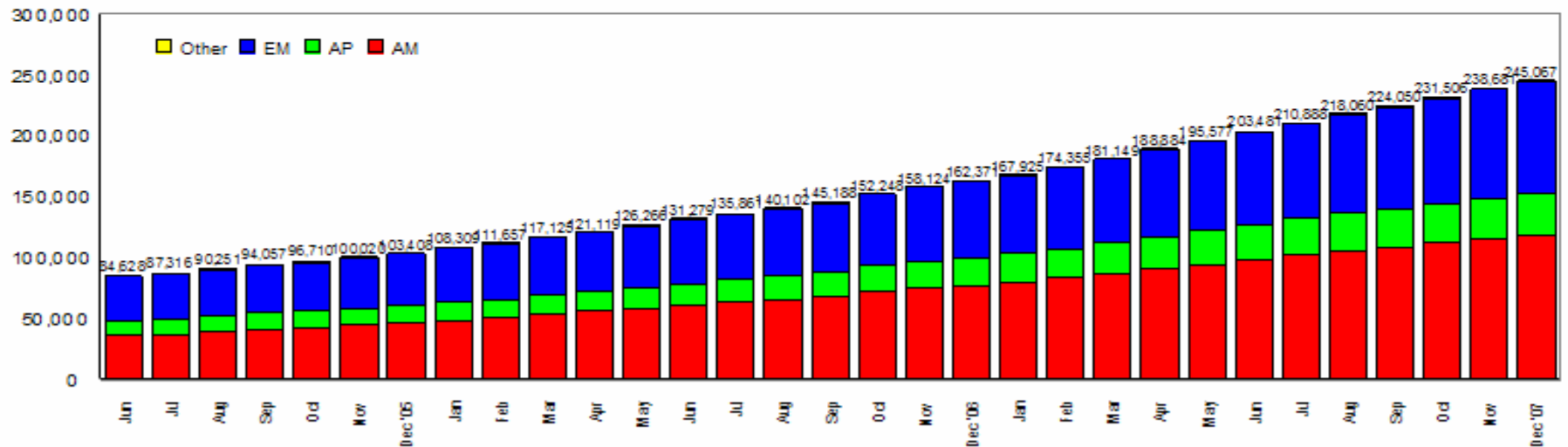


Electronic Service Agent Customer Acceptance

	2005	2006	2007
New Installations	32,947	58,963	82,696
YTY % Growth	34%	79%	40%
New PMR's	340,130	349,655	517,680
YTY % Growth	8%	3%	48%

YTY % Growth = Year'07-Year'06/Year'06

Service Agent Inventory All Platforms



Source: <https://esvcsp07.boulder.ibm.com/support/electronic/itsa/metrics/bcale.wss>
 Includes total images of Service Agent data, program to date, test images removed
 Excludes Goldwing (minimal System p)

IBM Electronic Services

Customer systems



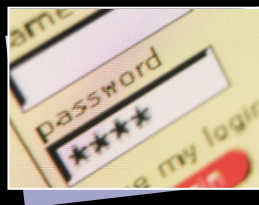
IBM Electronic Service Agent™

Automated hardware problem reporting
Secure outbound communication



IBM e-Service Database

Customer accessible



Electronic Services Web

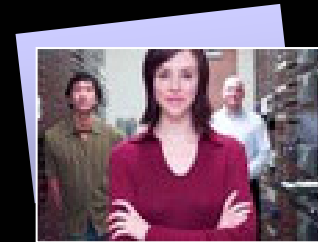
Secure viewing via My Systems and
My Search at:
<http://www.ibm.com/support/electronic>

IBM Support



Customer Service and Call
Management System
Faster, more accurate
problem resolution

IBM Engineering



Capacity Upgrade on Demand
Product improvement
Proactive recommendations
Performance offerings

Electronic Service Agent components



■ Hardware problem reporting

- Indicates and prevents hardware errors by early detection of potential problems and automatically calls IBM Service when necessary.
- Once inside IBM, a problem error data is run through TSKBS and knowledge articles are appended to the PMR.

■ System service information

- Collects and electronically sends system information to IBM to provide improved service.
- The categories of information collected are:
 - Customer contact information
 - System utilization
 - Performance
 - System failure logs
 - Feature codes
 - Part numbers, serial numbers
 - Part locations
 - Software inventory
 - Operating system applications
 - Program temporary fix (PTF)
 - Maintenance levels
 - Configuration values

*System inventory information is stored in a **secure** database which is protected behind IBM firewalls.*

*System inventory information is treated as **confidential** information. It is viewable only by the Customer and IBM.*

Customer's Business Applications or Business-Data are never collected or transmitted.

Connectivity & Security

- **Internet SSL**

Standalone p and HMC 5.2.0 and later

- **Internet SSL (with Proxy)**

Standalone p and HMC 6.1.0 and later

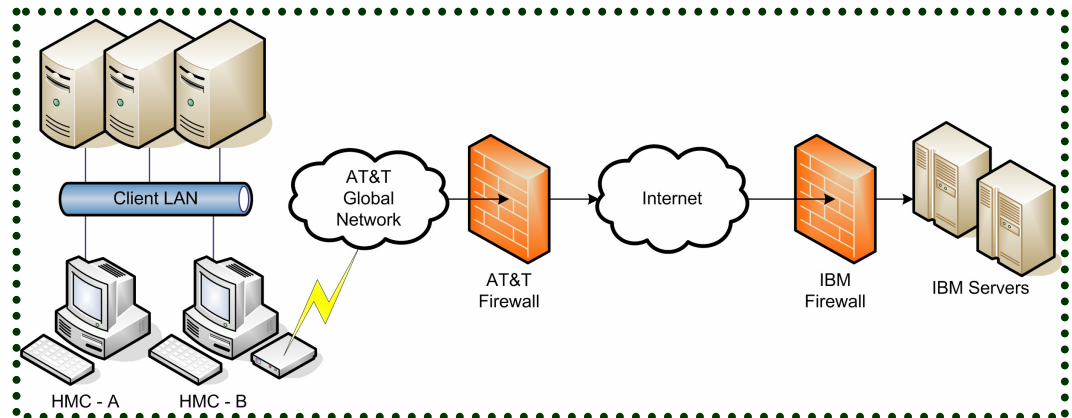
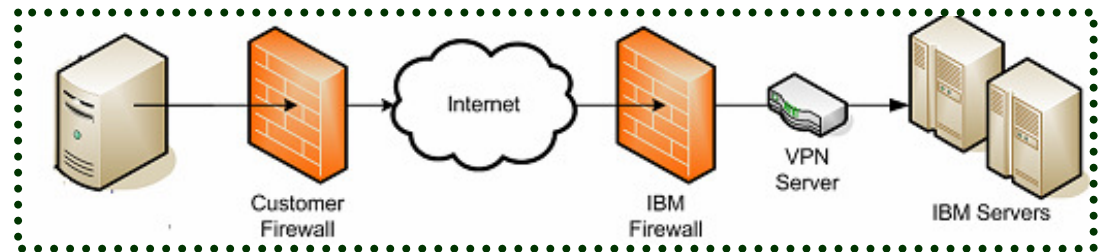
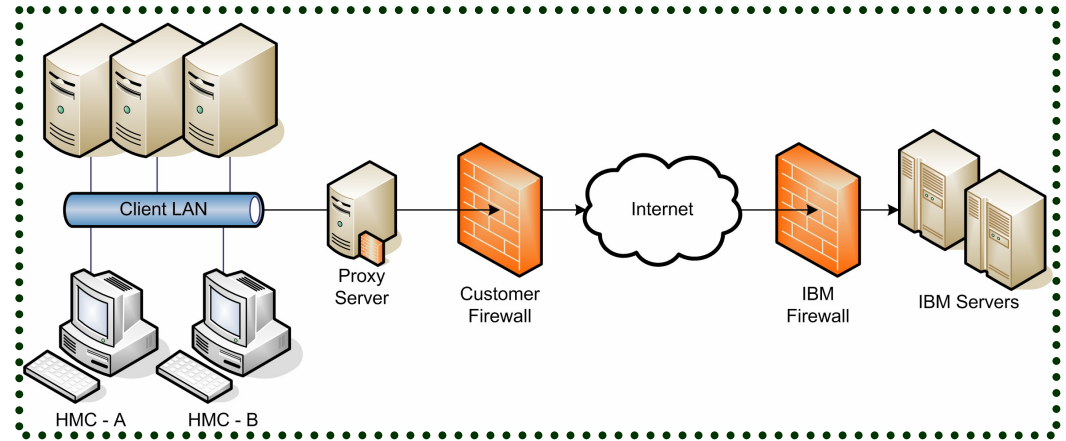
- **Internet VPN**

Standalone p and HMC

- **Modem**

Standalone p and HMC

- Standalone servers or partitions can be connected directly and/or with the HMC
- The HMC can use an internet connection to connect to IBM. Communications are handled through TCP sockets and use Secure Sockets Layer (SSL) to encrypt the data.
- The HMC can also be enabled to connect to the internet through a proxy server.



Connectivity & Security FAQ

- Choice of internet or modem configurations
- Access to business data is not permitted
 - No customer data is every transmitted or viewed by IBM
- Secured connections through our VPN are the only connections permitted
 - With Internet connections, you have the choice of:
 - Without Proxy Server
 - With Proxy Server
 - VPN
 - HTTPS
- With both modem and internet connectivity, ESA adopts and supports the most current security standards
 - AT&T Global Network
 - Fenced Internet Remote Access Dial Service
 - SSL
 - SSLv4
 - VPN
 - IPsec in tunnel mode over a UDP socket using L2TP+PPP encapsulation.
 - HTTPS
 - HTTP with encryption/authentication

Electronic Service Agent Security Policy

- IBM Electronic Services is dedicated to ensuring privacy and security for our clients and IBM for electronic communications
- Service Agent communications are governed by IBM InterEnterprise Solutions (IES) Security Guidelines and Policies
 - IES is missioned to protect IBM's network from unauthorized electronic access.
 - Designed to protect both IBM and its clients.
 - Based on establishing a unique ID and password using a protected algorithm for Service Agents requesting electronic access to the IBM network.
 - All electronic access requests must be authenticated by the unique ID for each communication session.
 - Passwords are electronically changed at least every six months by the Service Data Receiver. Authentication and password resets are transparent to the user.
 - Passwords cannot be changed by users. Manual password resets must be requested and are initiated by the Service Data Receiver.

Electronic Service Agent security design

■ Enrollment

- The first Service Agent communication to IBM after installation is to request a unique ID and password from the Service Data Receiver (SDR) for each machine to be monitored.
- The ID is generated by an algorithm using machine specific information, such as the machine type, model and serial number.
- Every subsequent communication is authenticated by the SDR using this ID and password.

■ Electronic Service Agent sends **outbound** transmissions only and does not allow any inbound connection attempts.

■ Only machine or error information is transmitted. Electronic Service Agent does not access or transmit any other data on the monitored systems.

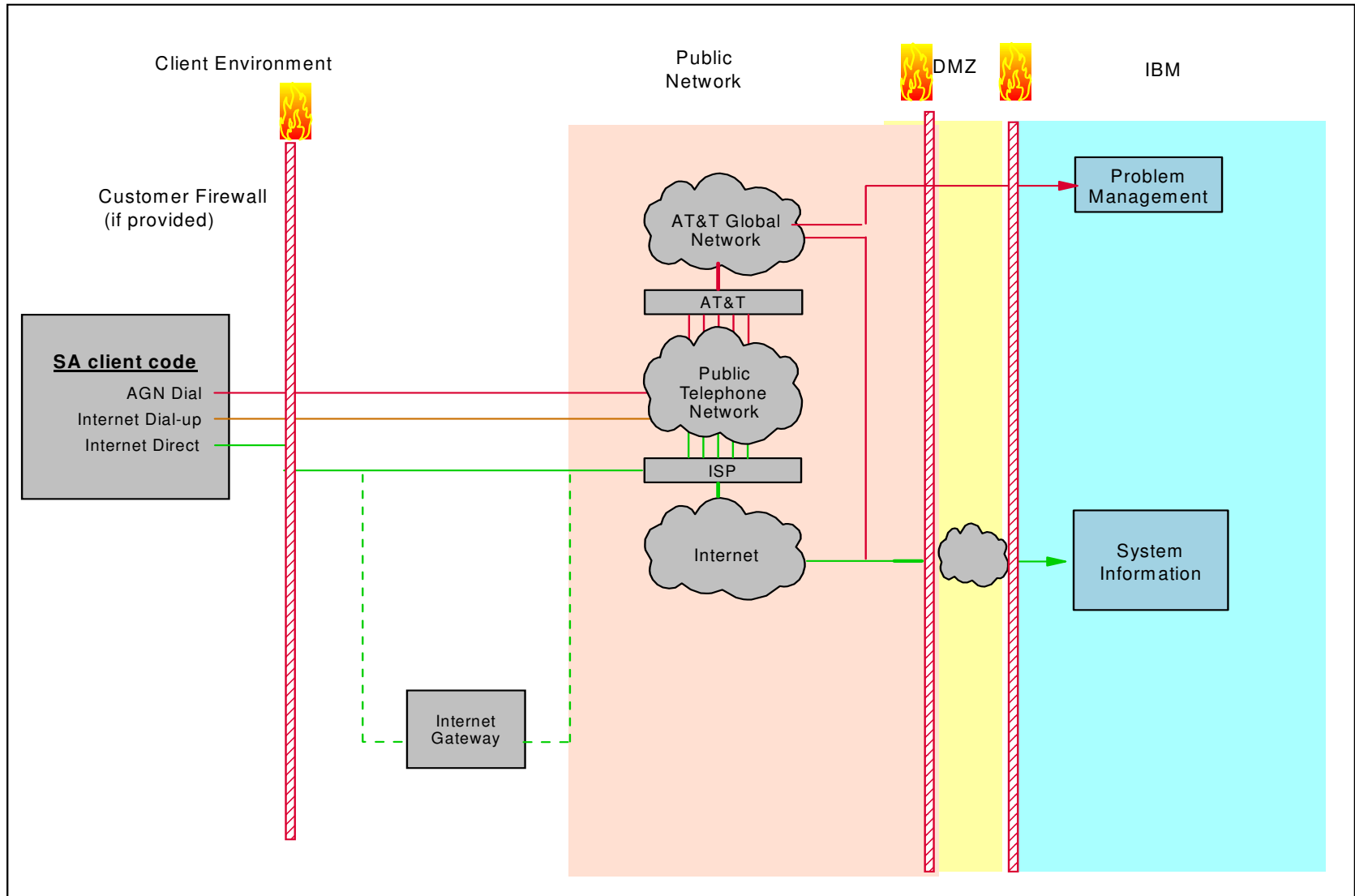
Electronic Service Agent data transmission

■ Internet

- Electronic Service Agent transmissions use HTTPS, which uses SSL 128-bit encryption and TCP/IP protocols
- Electronic Service Agent can be configured to work with firewalls and authenticating proxies.
- Only initiates HTTPS communications, does not respond to any.

■ Modem

- Electronic Service Agent uses the AT&T Global Network dialer for modem access.
- Access to AT&T requires a logon id and password, which is supplied electronically by Service Agent.
- Access control limits these userids to communication only with SDR.
- Dynamic IP address is assigned for each logon session.
- Does not accept incoming calls to modem.



Data Security inside IBM

■ **Client Access**

- Access to Electronic Service Agent data on the eService website requires an IBM userid and password.
- Two userids can be entered in Electronic Service Agent configuration. These userids are tied to all data transmitted and stored in IBM by Electronic Service Agent. Only data associated with those logons will be displayed from the eService website.
- More userids can be added on the eService website by either of the userids configured in Electronic Service Agent.

■ **IBM Personnel Access**

- Only IBM service organizations have access to the machine data.
- Service reps must log on using their IBM id as well as their RETAIN id. (Call management system used by service reps)

■ **IBM Electronic Access**

- My Search and Alerting use the data to provide more relevant search results and fix notifications.

Reference Materials

- **HMC Communications Security whitepaper:** "Reference Guide" section of <http://www.ibm.com/support/electronic>

or, directly at <http://www14.software.ibm.com/webapp/set2/sas/f/best/home.html>

- **HMC Best Practices:** <http://www14.software.ibm.com/webapp/set2/sas/f/best/home.html>
- **Product information, downloads, userguides and whitepapers:** <http://www.ibm.com/support/electronic>
- **Transaction/connection security whitepaper:** https://www-304.ibm.com/jct03004c/support/electronic/resources/2006_sa_transactionsecurity_v1.pdf
- **Additional whitepapers are available at:** <http://www.ibm.com/servers/eserver/support/unixservers/bestpractices.html>
- **Redbook - IBM Electronic Services: Support for Business in an On Demand World**
<http://www.redbooks.ibm.com/abstracts/sg246323.html?Open>

Backup

Environments

- Electronic Service Agent for HMC managed System p
 - HMC managing POWER5 and POWER6 systems
 - HMC managing POWER4 systems
- Electronic Service Agent for non-HMC managed System p
 - ESA v6 for AIX 5.3 TL6+, AIX 6.1+
 - ESA v3.3 for AIX 4.3.3 TL11+, AIX 5.1, 5.2, 5.3

Notes:

- For HMC controlled environments, ESA must be activated on the HMC for hardware error reporting.
- For system inventory reporting, Resource Management and Control (RMC) must be configured to the partition.
- Activation of ESA on the partitions will send back OS-specific and software inventory data.
- For non-HMC controlled systems, activating ESA on the AIX or Linux system will send back hardware errors, hardware inventory, *and* OS-specific and software inventory information.
- To obtain an IBM ID for use on many IBM Web sites including to view and use Service Agent inventory, go to: <https://www.ibm.com/account/profile/us?page=req>

Demo:

Setting up **Electronic Service Agent™** on HMC v7

Note:

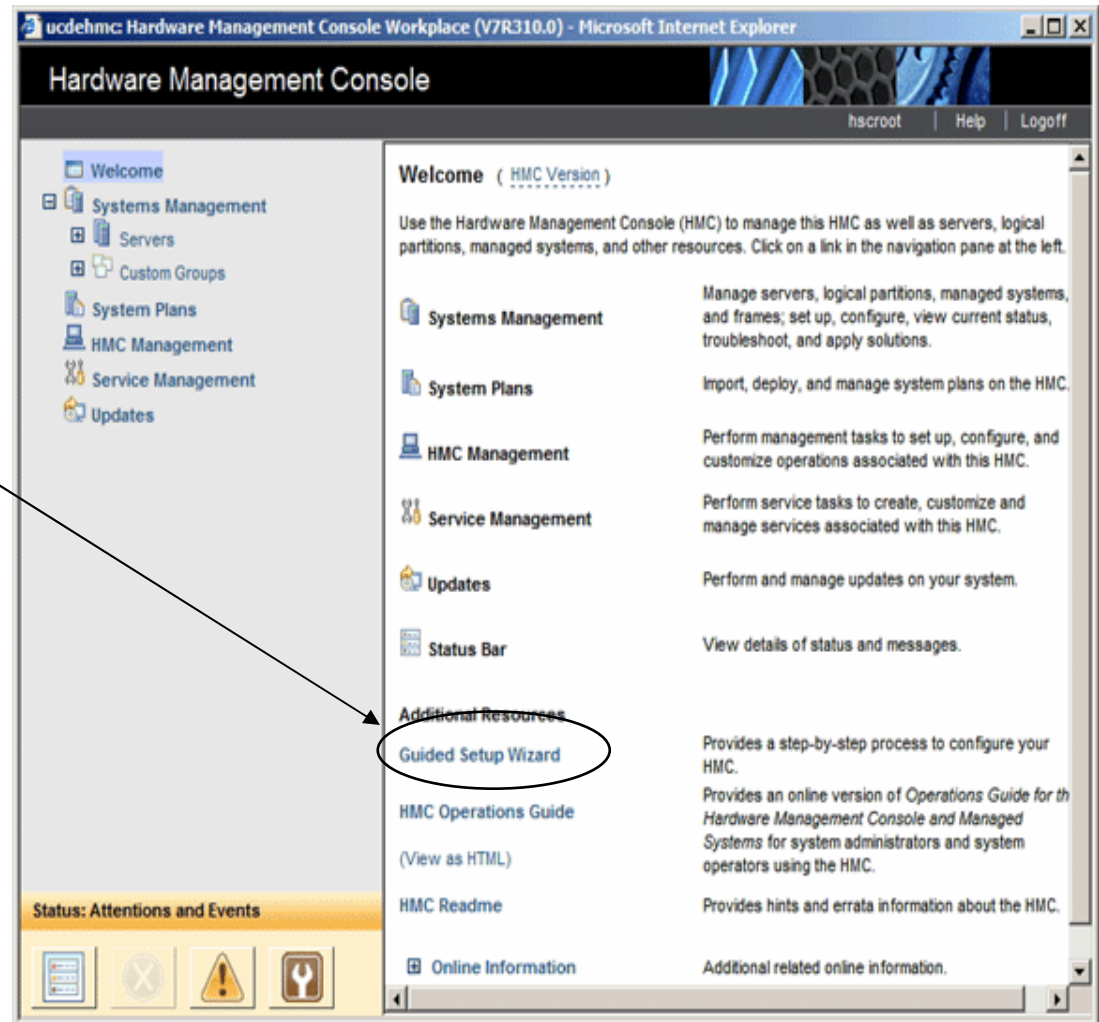
For HMC controlled environments, ESA **must** be activated on the HMC for hardware error reporting. For system inventory reporting, **RMC** must be configured to the partition. Additional activation of ESA on the partitions will send back OS-specific and software inventory data.

For **non**-HMC controlled systems, activating ESA on the AIX system will send back hardware errors, hardware inventory, **and** OS-specific and software inventory information.

Electronic Service Agent for HMC V7 supporting System p POWER 5 & 6

Activating Electronic Service Agent for hardware problem reporting

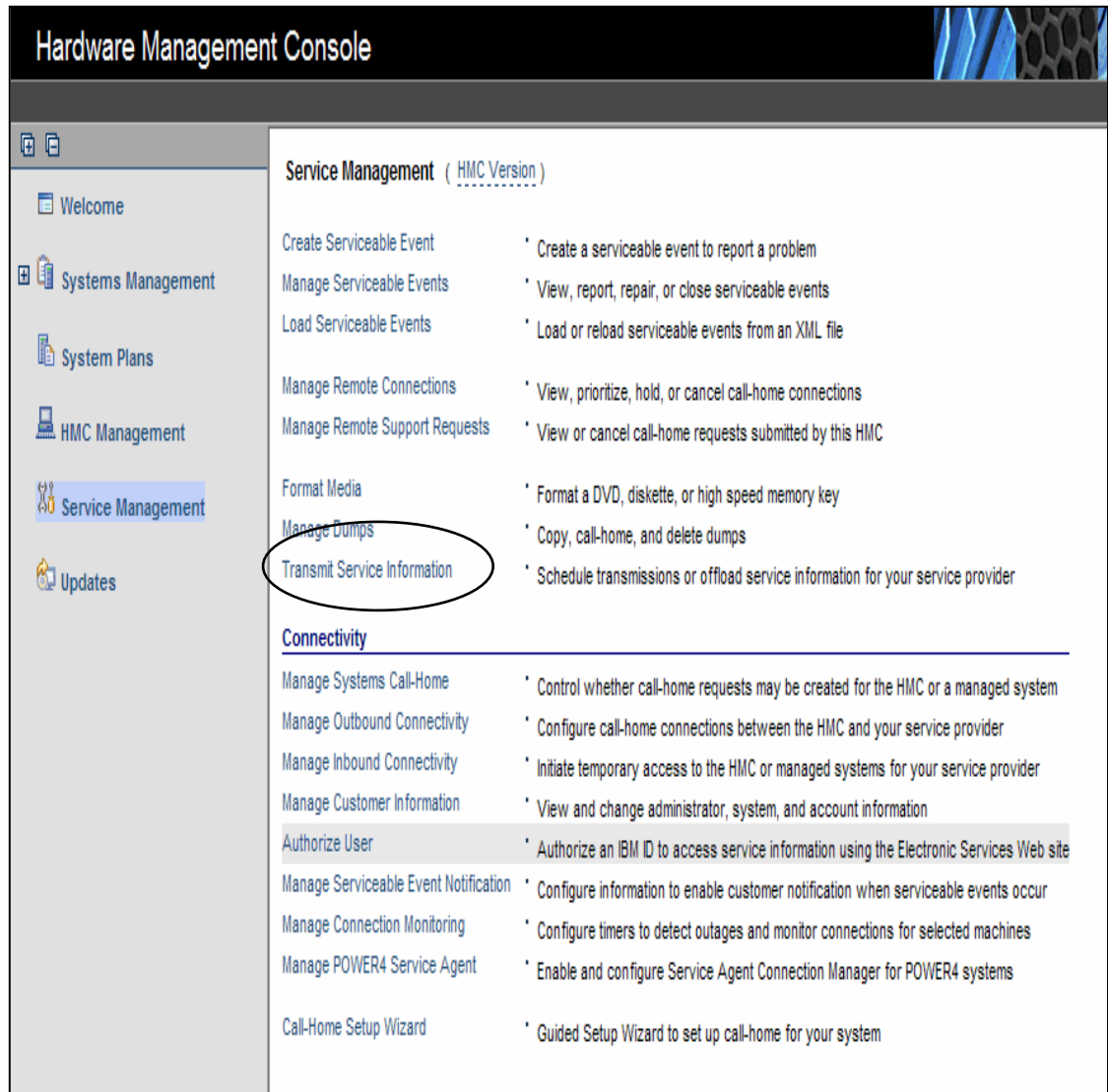
- Log in to the HMC interface and click the Guided Setup wizard.
- The wizard enables automatic hardware problem reporting for all AIX and Linux partitions managed by the HMC (i5OS partitions use unique call home connectivity)



Electronic Service Agent for HMC V7 supporting System p POWER 5 & 6

Configuring hardware inventory submittal

- Select Service Management on the HMC Menu
- Select Transmit Service Information
- Screen is pre-populated with default settings. Press OK to confirm settings and enable periodic transmittal.



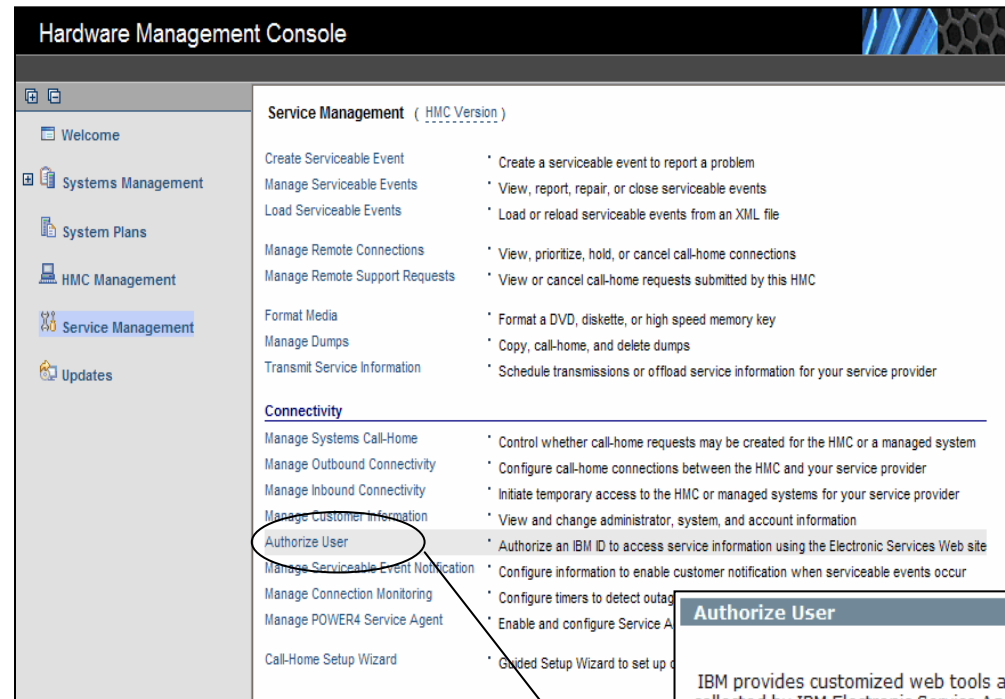
The screenshot displays the Hardware Management Console (HMC) interface. The title bar reads "Hardware Management Console". On the left is a navigation menu with the following items: Welcome, Systems Management, System Plans, HMC Management, Service Management (highlighted in blue), and Updates. The main content area is titled "Service Management (HMC Version)" and lists several options with their descriptions:

Option	Description
Create Serviceable Event	* Create a serviceable event to report a problem
Manage Serviceable Events	* View, report, repair, or close serviceable events
Load Serviceable Events	* Load or reload serviceable events from an XML file
Manage Remote Connections	* View, prioritize, hold, or cancel call-home connections
Manage Remote Support Requests	* View or cancel call-home requests submitted by this HMC
Format Media	* Format a DVD, diskette, or high speed memory key
Manage Dumps	* Copy, call-home, and delete dumps
Transmit Service Information	* Schedule transmissions or offload service information for your service provider

Below this section is a "Connectivity" section with the following options:

Option	Description
Manage Systems Call-Home	* Control whether call-home requests may be created for the HMC or a managed system
Manage Outbound Connectivity	* Configure call-home connections between the HMC and your service provider
Manage Inbound Connectivity	* Initiate temporary access to the HMC or managed systems for your service provider
Manage Customer Information	* View and change administrator, system, and account information
Authorize User	* Authorize an IBM ID to access service information using the Electronic Services Web site
Manage Serviceable Event Notification	* Configure information to enable customer notification when serviceable events occur
Manage Connection Monitoring	* Configure timers to detect outages and monitor connections for selected machines
Manage POWER4 Service Agent	* Enable and configure Service Agent Connection Manager for POWER4 systems
Call-Home Setup Wizard	* Guided Setup Wizard to set up call-home for your system

Electronic Service Agent for HMC V7 supporting System p POWER 5 & 6



Add IBM ID

- Select Service Management, on HMC Menu
- Select Authorize User, under Connectivity
- Complete the field(s) with at least one IBM ID
- Press 'OK'

The 'Authorize User' dialog box provides instructions for associating IBM IDs with service information. It includes the following text: 'IBM provides customized web tools and functions that use information collected by IBM Electronic Service Agent. The access to these functions is managed by an association between your IBM IDs and the Electronic Service Agent information from your systems. The association is made using this panel. To obtain an IBM ID, which is used by many IBM web sites, go to <https://www.ibm.com/account/profile>. Provide the IBM IDs to be associated with information sent by Electronic Service Agent.'

Below the instructions, there is a section titled 'Authorize users' with two input fields: 'IBM ID 1' (required, marked with an asterisk) and 'IBM ID 2 (optional)'. At the bottom of the dialog box, there are three buttons: 'OK', 'Cancel', and 'Help'.

Demo:

*Setting up **Electronic Service Agent™** v6
integrated with AIX 6.1, AIX 5.3 TL6 and later*

Note:

For HMC controlled environments, ESA **must** be activated on the HMC for hardware error reporting. For system inventory reporting, **RMC** must be configured to the partition. Additional activation of ESA on the partitions will send back OS-specific and software inventory data.

For **non**-HMC controlled systems, activating ESA on the AIX system will send back hardware errors, hardware inventory, **and** OS-specific and software inventory information.

Accessing the Electronic Service Agent™ main screen in AIX



Electronic Service Agent relevant filesets

```
bos.esagent          6.1.0.0  COMMITTED Electronic Service Agent
bos.ecc_client.rte   5.3.0.70  COMMITTED Electronic Customer Care
Java5.sdk            5.0.0.100 COMMITTED Java SDK 32-bit
```

```
# smit esa_main
```

*to access main
screen, type command
"smitty esa_main"*

Configuring Electronic Service Agent™

AIX L



- *Simplified, 1-step process*

Electronic Service Agent

Move cursor to desired item and press Enter

Configure Electronic Service Agent

Configure Service Connectivity

Start Electronic Service Agent

Stop Electronic Service Agent

Configuring Electronic Service Agent™



*enter required
contact
information and
press Enter*

Configure Electronic Service Agent

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

	[Entry Fields]
* Company name	[IBM Corp.]
* Name of the contact person	[Kent Eastley]
* Telephone number of the contact person	[512-838-8636]
* Email address (myuserid@mycompany.com)	[eastley@us.ibm.com]
* Country or region of contact person	United States
* Telephone number where the system is located	[512-838-8636]
* Country or region where the system is located	United States
IBM ID	[kent@email.com]
Operational setting	
* Port number on which to receive connections	[5024]

*for web user
interface*

Electronic Service Agent™ activated!



- *Verifies connectivity by sending “heartbeat” to IBM via internet connection*

COMMAND STATUS

```
Command: OK      stdout: yes      stderr: no
```

```
Before command completion, additional instructions may appear below.
```

```
Performing Connectivity Test ... SUCCESS
```

```
0513-071 The IBM.ESAGENT Subsystem has been added.
```

```
0513-059 The IBM.ESAGENT Subsystem has been started. Subsystem PID is 401548
```

Setup and registration is complete!

ESA v6 web user interface

AIX L



View and administer:

- *Service request status*
- *Problem information*
- *Settings*
- *Logs*
- *Automated inventory collection/submission*
- *On demand collection/submission*

Electronic Service Agent - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://gwtest08.rchland.ibm.com:5024

Electronic Service Agent

Electronic Service Agent

Electronic Service Agent

[Status details](#)
Display the status of Electronic Service Agent and information about the system or logical partition on which Electronic Service Agent is running.
Current status of Electronic Service Agent on this system or logical partition is: Active

Suspend/Resume Electronic Service Agent
Suspend or resume Electronic Service Agent.

[Problem information](#)
Work with problems related to system hardware.

[Service information](#)
View information about the service information collections and collect service information related to hardware, software, system configuration, and performance.

[Activity log](#)
View Electronic Service Agent activity.

[Settings](#)
Work with detailed settings for Electronic Service Agent.

[SRC filters](#)
View the list of filters which will be applied to Electronic Service Agent problem reporting activities.

Export/Import
Export or import the Electronic Service Agent configuration.

- ◆ [Export](#)
- ◆ [Import](#)

[IBM ID](#)
Provide an IBM ID to be associated with information sent by Electronic Service Agent for this system or logical partition.

[IBM Electronic Support](#)
Display and manage service requests to IBM Electronic Support.

Done gwtest08.rchland.ibm.com:5024