AIX Version 7.2

IBM Electronic Service Agent

IBM

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IBM

This edition applies to AIX Version 6.1 and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

About this document

This book provides the information necessary to activate and manage IBM® Electronic Service Agent™ on AIX®.

Highlighting

The following highlighting conventions are used in this document:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Bold highlighting also identifies graphical objects, such as buttons, labels, and icons that the you select.
Italics	Identifies parameters for actual names or values that you supply.
`Monospace`	Identifies examples of specific data values, examples of text similar to what you might see displayed, examples of portions of program code similar to what you might write as a programmer, messages from the system, or text that you must type.

Case sensitivity in AIX

Everything in the AIX operating system is case sensitive, which means that it distinguishes between uppercase and lowercase letters. For example, you can use the **ls** command to list files. If you type LS, the system responds that the command `is not found`. Likewise, **FILEA**, **FiLea**, and **filea** are three distinct file names, even if they reside in the same directory. To avoid causing undesirable actions to be performed, always ensure that you use the correct case.

ISO 9000

ISO 9000 registered quality systems were used in the development and manufacturing of this product.

IBM Electronic Service Agent

IBM Electronic Service Agent, along with the IBM Electronic Services website, make up IBM Electronic Services.

This topic collection provides information about activating, configuring, using, and troubleshooting the Electronic Service Agent on the AIX operating system.

Related information:

➡ Electronic Services Web site

The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

What's new in IBM Electronic Service Agent

Read about new or changed information for the IBM Electronic Service Agent topic collection.

How to see what's new or changed

In this PDF file, you might see revision bars (|) in the left margin that identify new and changed information.

September 2018

The following information is a summary of the updates that are made to this release.

Dashboard

Dashboard tab provides at-a-glance views of health status and problems status of the systems that are being monitored by IBM Electronic Service Agent. For more information, see section "Viewing Dashboard" on page 20

Monitor ESS

IBM Electronic Service Agent installation package is enhanced to monitor IBM® Elastic Storage Server (ESS). ESS is a high-performance, GPFS™ network storage disk solution.

Use solution information for Entitlement

Specify to use the hardware or software solution information for entitlement. For more information, see section "Configuring application settings" on page 39.

Enable or disable the transmission of EED files to IBM

Choose to enable or disable the transmission of EED files to IBM support. For more information, see section "Configuring problem reporting" on page 36

Cli Commands

- **esacli generateToken**
- **esacli token**

| • **esacli restauth**

October 2016

The following information is a summary of the updates that are made to this release.

ESA Users
IBM Electronic Service Agent generates two types of users based on the direct or proxy connection. For more information, see section "Electronic Service Agent Users" on page 13.

IBM Electronic Service Agent overview

IBM Electronic Service Agent is a no-charge software tool that resides on your system to automatically and continuously monitor, collect, and periodically submit hardware problem information to IBM Support. Electronic Service Agent can also routinely collect and submit hardware, software, performance, and system configuration information, which might help IBM Support in diagnosing problems.

IBM Support representatives use system problem descriptions and service information to better diagnose issues with your systems. With early knowledge about potential problems that IBM Electronic Service Agent provides, IBM can proactively assist you in achieving higher availability and better performance.

IBM Electronic Service Agent does the following tasks for the PowerKVM hosts:
- Subscribes to the SNMP traps and listens the SNMP traps from IBM Serviceable Event Provider for the registered KVM hosts.
- Places service requests to IBM automatically if the server is under a service agreement or warranty.
- Collects and securely sends scheduled system and diagnostic inventory to an IBM database. This inventory information is available to IBM Support representatives when they are solving your problem.
- Communicates with IBM using a secure Internet connection using encryption and authentication.
- Includes the option to send email notifications when a serviceable problem is detected and service request is opened.

Accessing the IBM Electronic Support portal

The IBM Electronic Support portal enables you to view service information reported by IBM Electronic Service Agent, search all content using advanced search capabilities, open and manage service requests, receive support content notifications by platform or individual product, and view call home problem events.

You can access the IBM Electronic Support portal at the following web addresses:
- http://support.ibm.com: A portfolio of tools and resources to keep your systems, software, and applications running smoothly.
- http://www-01.ibm.com/support/electronicsupport/: The support portal to view contracts, inventory, heartbeat, etc of your systems.

Note: To use some of the functions that are found on the IBM Electronic Support portal, such as viewing service information or call home events, you must provide an IBM ID.

Related tasks:

"Providing IBM IDs" on page 33
An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service Agent. Service information can be viewed on the Electronic Services website.

Related information:

⮕ Electronic Services Web site

The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

Problem processing overview

Problem processing is an important capability of Electronic Service Agent. When Electronic Service Agent detects a problem, there is a specific sequence of events that occur to record the problem, report the problem, resolve the problem, and close the problem.

The following shows the problem processing sequence of events, with references to procedures, settings, and information to help you manage those events.

1. IBM Electronic Service Agent detects and records a problem. To see all problems that are recorded by IBM Electronic Service Agent, see "Displaying problem information" on page 22.

2. IBM Electronic Service Agent reports the problem to the IBM.

3. IBM Electronic Service Agent sends service information that is related to the problem to the IBM Electronic Support website. Service information includes hardware, software, system configuration, and performance information.

   To view the service information sent to the IBM Electronic Support website, go to the IBM Electronic Support website and select My systems. See "Accessing the IBM Electronic Support portal" on page 2.

4. The IBM Electronic Support website receives the problem and service information. IBM Support contacts the person that is specified as the service contact. For more information about specifying the service contact, see "Specifying service contact information" on page 14. When contacting the service contact, IBM Support either arranges an appointment to replace the part, or, if possible, attempts to resolve the problem without a visit to the customer's site.

5. After the problem is resolved, the service request is closed by IBM Support. For information about verifying that a service request assigned to a problem is closed, see "Displaying problem information" on page 22.

Related concepts:

"Accessing the IBM Electronic Support portal" on page 2
The IBM Electronic Support portal enables you to view service information reported by IBM Electronic Service Agent, search all content using advanced search capabilities, open and manage service requests, receive support content notifications by platform or individual product, and view call home problem events.

Related tasks:

"Configuring problem reporting" on page 36
You can specify that IBM Electronic Service Agent continue to attempt to report a problem if initial transmission fails. You can enable or disable the automatic transmission of extended error data (EED) to IBM. You can also configure the frequency and number of times IBM Electronic Service Agent attempts to report a problem.

"Configuring operational test settings" on page 38
You can configure operational test settings for Electronic Service Agent to perform the functions important to your service environment.

Planning for Electronic Service Agent

When planning for Electronic Service Agent, consider the operating system, browsers, security, and topology of the network you plan to support.

Operating system

Electronic Service Agent is bundled with the AIX operating system.

Electronic Service Agent is bundled with the following supported AIX operating systems:
- All versions of AIX 7.1 and 7.2
- All versions of AIX 6.1
- Virtual I/O Server (VIOS) version 2.1.1.10-FP21 and later
- AIX 5.3 Technology Level 6 (AIX 5.3 TL6) and later

Note: For the earliest versions of AIX 5.3, see the Electronic Services website for downloads and prerequisites. See "Accessing the IBM Electronic Support portal" on page 2.

Browsers for Electronic Service Agent

It is recommended that you use one of the following browsers as the Electronic Service Agent graphical user interface.

Browsers used as the Electronic Service Agent graphical interface might be on systems running different operating systems. Although other browsers may work when viewing the Electronic Service Agent graphical interface, the following browsers have been tested on the indicated operating systems:
- Mozilla 1.4.2 and 1.7.12 and later for use on AIX operating systems
- Microsoft Windows Internet Explorer 6 and later for use on Microsoft Windows operating system
- Firefox v10.0 and later for use on Microsoft Windows operating system

Security

When using Electronic Service Agent, your information is kept private and your data is securely transmitted to IBM.

The following provides more information about the privacy of your information, the security of information you transmit to IBM Support, and the security of those using Electronic Service Agent.

Information privacy
The service information you provide to IBM Support remains private. Only authorized IBM Support personnel and those people specifically authorized by you have access to this information.

The service information that is gathered by IBM Support is collected from the information you entered into Electronic Service Agent and the information Electronic Service Agent collected from the system. It is also gathered from phone calls with the IBM Support Center, pre-sales specialists, administrative clerks, and other groups within IBM. These IBM groups have electronic access to the information so that they can prepare for and perform advanced problem determination to more efficiently serve you.

The service information collected by Electronic Service Agent includes the following:
- Your support contact information, including names, phone numbers, and e-mail addresses.
- Location information about the system on which IBM Electronic Service Agent is installed, including city, geographic region, country, building, and the number for the telephone that is located nearest the system.
- System failure logs, part numbers, feature codes for parts, part serial numbers, part locations, software listing, operating system applications, program temporary fixes (PTFs), the maintenance level, firmware levels, configuration values, system utilization, and performance.

Authorized IBM employees can view all service information about the system. Service information does not include the following:
- Collection or transmission of any of your company's financial, statistical, or personnel information

- Client information
- Your business plans

In addition, Electronic Service Agent might provide a call-home mechanism for other IBM offerings. The call-home mechanism sends information specific to a particular IBM offering. The information collected by such offerings is covered in a separate agreement for each IBM offering.

Information transmission security

The problem information and service information you send to IBM Support is safe and secure.

Electronic Service Agent can collect problem and service information and send it to IBM Support on a scheduled basis. Electronic Service Agent transactions are outbound requests that are sent using the security of Hypertext Transfer Protocol Secure (HTTPS). These connection requests are always initiated from the customer system by Electronic Service Agent. Electronic Service Agent can accept incoming connections from the activator command used to activate the product, from the **esacli** command, and from the Electronic Service Agent graphical user interface. Both the activator and **esacli** commands are run only locally on the client system. The graphical user interface connection is initiated by the client only. In all three cases, only users with superuser privileges can run the commands that establish the connections, and the connections are secured, encrypted, and completely within the client local area network.

Electronic Service Agent initiates a connection with IBM Support and then IBM Support replies. IBM Support never initiates a connection to Electronic Service Agent. During the activation and setup of Electronic Service Agent, you select how Electronic Service Agent communications are set up. By default, communication configuration is a direct Internet connection. You can select to keep the default, or specify to transmit information using the Electronic Service Agent proxy server or another proxy server. Electronic Service Agent uses the client's connectivity environment, including any firewalls that the client has established.

For the authentication of transmissions, a system ID and password is used. Electronic Service Agent obtains the system ID and password from IBM Support. The password is changed periodically. A user can request that a new password be generated, if necessary.

The following figure shows a summary of the connection into IBM. The nature of maintaining a high-level security posture dictates that IBM does not divulge in-depth details regarding the management of security or its tools, processes, and audits.
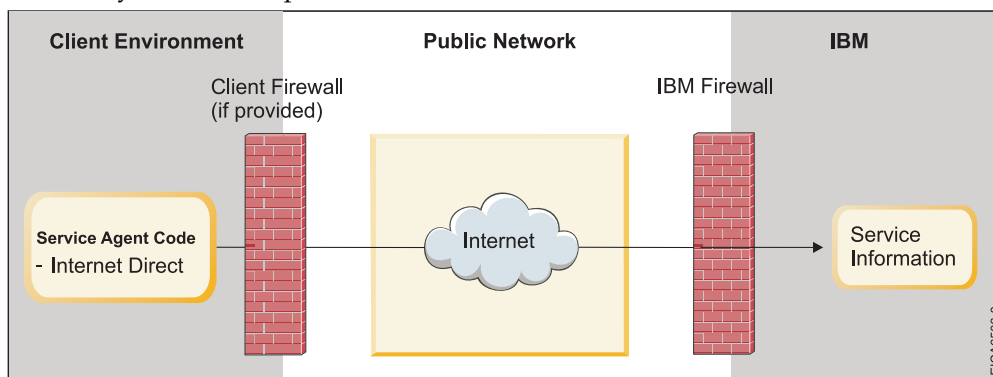
Information transmission security is important whether your connection to IBM is through a direct or proxy connection.

Internet transmission of service information

Note: The Internet provider relationship and connection are the responsibility of the client.

If you select the Internet path to send your information, then the following process applies:
1. At the scheduled time, Electronic Service Agent collects the information to be transmitted and queues it for transmission.
2. Electronic Service Agent establishes an TLS Internet connection with IBM Support using the system ID and password previously created.
3. The collected information is sent to IBM.
4. After the arrival to IBM, the information is transferred to the appropriate IBM database.

Proxy transmission of service information

The proxy can be either a client supplied HTTP proxy or the IBM Service and Support Proxy. The proxy resides on a client system.

Note: The client supplied HTTP proxy is the responsibility of the client.

If you select the proxy path to send your information, then the following process applies:
1. At the scheduled time, Electronic Service Agent collects the information to be transmitted and queues it for transmission.
2. Using the TLS connection between the system and IBM Support, Electronic Service Agent establishes an TLS internet connection between the proxy and IBM Support. This connection is authenticated using the system ID and password previously created.
3. Electronic Service Agent sends the collected information through the proxy to IBM Support.
4. After the information has arrived to IBM Support, the information is transferred to the appropriate IBM database.

IP Addresses
The following are the list of IP Addresses that are verified to report a problem to IBM from IBM Electronic Service Agent:

Domain name	IP Address	Port
www6.software.ibm.com	170.225.15.41	443
www.ecurep.ibm.com	192.109.81.20	443
eccgw01.boulder.ibm.com	207.25.252.197	443
eccgw02.rochester.ibm.com	129.42.160.51	443
www-945.ibm.com	129.42.26.224	443
www-945.ibm.com	129.42.34.224	443
www-945.ibm.com	129.42.42.224	443
esupport.ibm.com	129.42.56.189	443
esupport.ibm.com	129.42.58.189	443
esupport.ibm.com	129.42.58.189	443
www-03.ibm.com	204.146.30.17	443
esupport.ibm.com	2620:0:6c2:200:129:42:60:189	443
esupport.ibm.com	2620:0:6c1:200:129:42:58:189	443
esupport.ibm.com	2620:0:6c0:200:129:42:56:189	443
www-03.ibm.com	204.146.30.17	80

Ports: The following are the default ports that are used by IBM Electronic Service Agent:

Port number	Description
5024	Port number at which the Electronic Service Agent graphical user interface is accessible through the HTTPS protocol.
5026 **Note:** It is an optional setup.	Port number at which the Service Proxy is configured as an ECC service proxy.
5028 **Note:** It is new in Electronic Service Agent 3.0	Port number at which the firewall that must be opened for UDP traffic to receive SNMP Traps.

User security

User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

For detailed information about AIX user and file security, see "Users, groups, and passwords" in the System p and AIX Information Center.

Related concepts:

"Electronic Service Agent graphical user interface" on page 17
The Electronic Service Agent graphical user interface is an intuitive way to manage and control Electronic Service Agent. It uses standard graphical interface controls to access Electronic Service Agent functions.

Related information:

Users, groups, and passwords
See Users, groups, and passwords in the IBM System p and AIX Information Center.

Topology

Ensure that you consider your topology when planning for Electronic Service Agent.

Your topology might consist of stand-alone Electronic Service Agent clients independently connecting to IBM Support, Electronic Service Agent clients connecting to IBM Support through a common exit point, or HMC managed systems.

Stand-alone client topology

1. The Service Agent client gathers the information from KVM hosts through SSH and transmits to the IBM Electronic Support Portal.
2. The information is transmitted to IBM Electronic Support Portal in one of the following ways:
   - Through an Internet connection to IBM Electronic Support Portal. Information is protected using existing client firewalls and the IBM firewall.
   - Through a proxy. The proxy can be either a client supplied HTTP proxy or the IBM Service and Support Proxy. Information is protected using existing client firewalls and the IBM firewall.
3. The information is stored in problem management databases and service information databases and made available to the IBM Support Center and service representative to help them assist you in diagnosing problems
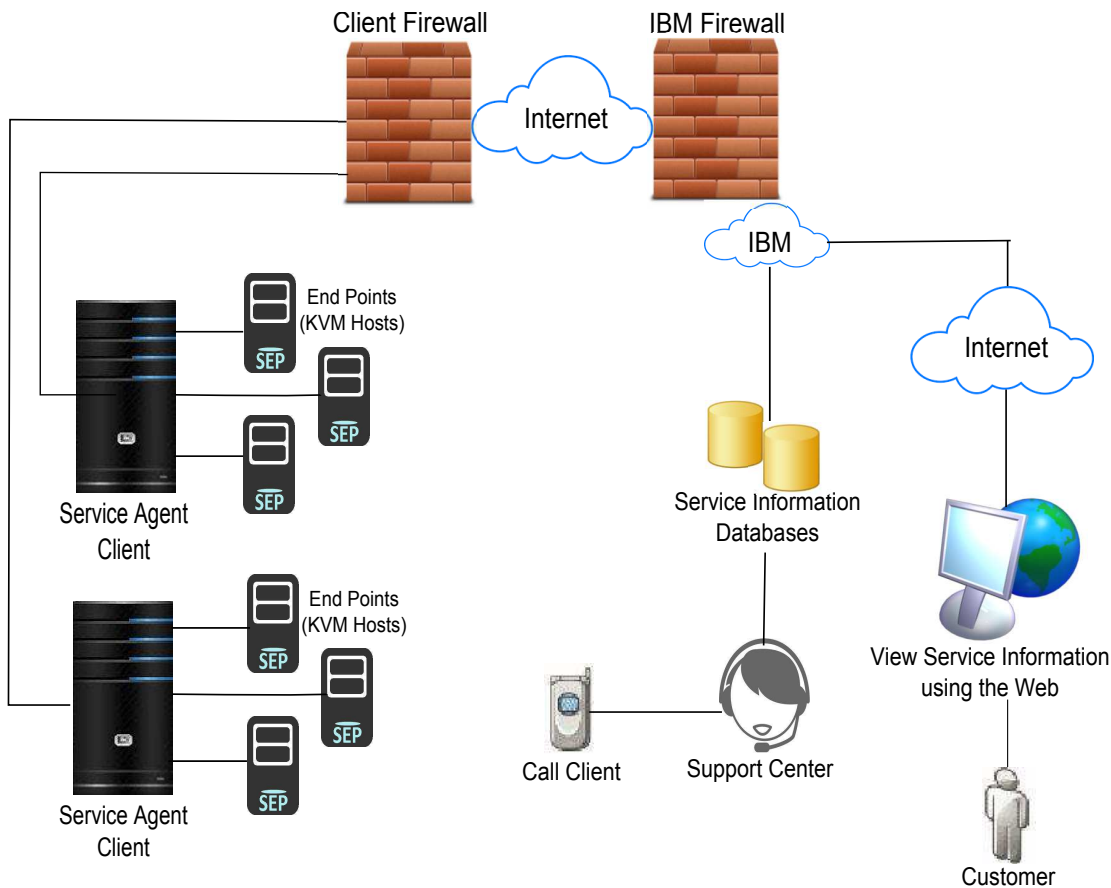
Common exit point topology

The common exit point topology consists of Electronic Service Agent clients connecting through a proxy to the service and support facilities of IBM. The proxy can be either a client supplied HTTP proxy or the IBM Service and Support Proxy. Information is protected using existing client firewalls and the IBM firewall.

Note: IBM Electronic Service Agent provides remote system support to only Power KVM and ESS devices.

1. Each Electronic Service Agent client gathers the information from the hosts (AIX, Linux, IVM, KVM) for that particular client.

   Note: Only for ESS devices, the ESS servers push the data to IBM Electronic Service Agent.
2. Each client transmits the information to IBM Electronic Support Portal through the exit point proxy.
3. The Electronic Service Agent exit point transmits the information to IBM Electronic Support Portal though the proxy.
4. The information is stored in problem management databases and service information databases and made available to the IBM Support Center and service representative to help them assist you in diagnosing problems.

Client Firewall   IBM Firewall

Internet

Exit point proxy

IBM

Internet

Service Agent Clients

Service Information Databases

View Service Information using the Web

SEP   SEP   SEP   SEP   SEP   SEP

End Points (KVM Hosts)

Call Client   Support Center

Customer
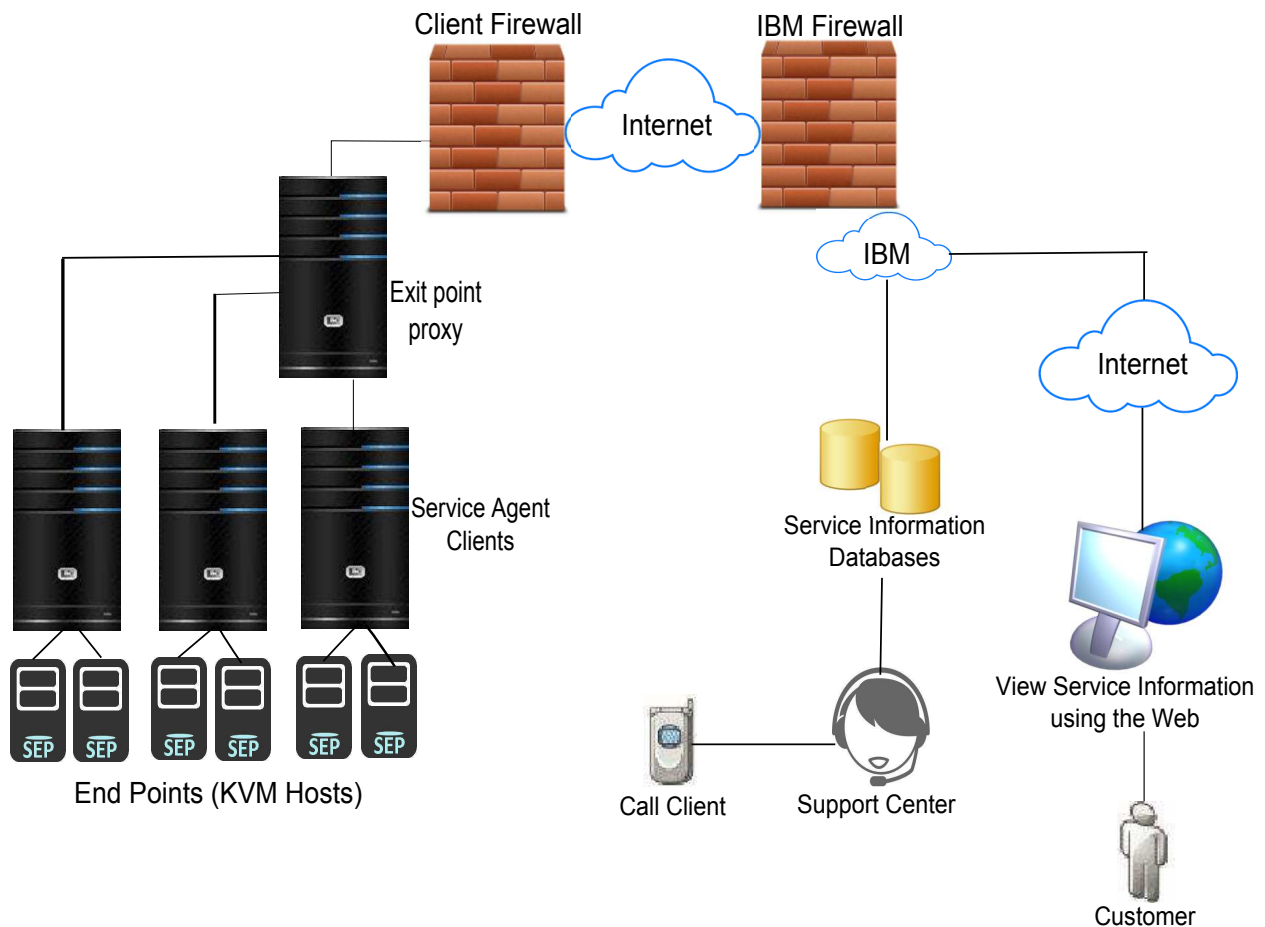
Related tasks:

"Configuring your service connection" on page 11
Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

Using Electronic Service Agent on a system with an HMC

If the system running Electronic Service Agent has an attached Hardware Management Console (HMC), there are things to consider when using Electronic Service Agent.

The HMC includes its own version of Electronic Service Agent. Electronic Service Agent on the HMC monitors the system and AIX and Linux partitions for errors, and reports those errors to IBM. It also collects and reports hardware service information and performance management information to IBM Support. Electronic Service Agent on a partition does not collect hardware information. It collects other service information such as software information.

To access the Electronic Service Agent user guide for HMC, go to the Electronic Services Web site.

Related information:

➡ Electronic Services Web site
The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

Using Electronic Service Agent in an environment with other operating systems

If the system running Electronic Service Agent is in an environment with other operating systems, there are things to consider when using Electronic Service Agent.

Electronic Service Agent is operating system specific. Each operating system needs its own compatible version of Electronic Service Agent.

To access the Electronic Service Agent user guides for different operating systems, go to the Electronic Services website.

Related information:

➡ Electronic Services Web site
The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

Installing Electronic Service Agent

To install Electronic Service Agent you install the code on your system and prepare to activate Electronic Service Agent.

AIX has the Electronic Service Agent code in the base operating system, as part of the AIX installation media. Electronic Service Agent detects any previous releases of Electronic Service Agent installed on the system. You are required to uninstall previous releases of Electronic Service Agent before you can activate the new one. Perform the following steps to install Electronic Service Agent on an AIX 5.3 TL6 or later system.

1. To determine if Electronic Service Agent is already installed on this system, enter the following on an AIX command line: `lslpp -lcq | grep -i esagent`
2. Check whether information is returned from running the command.
   - If no information is returned, then Electronic Service Agent is not installed.
   - If any information is returned, then Electronic Service Agent is installed.
3. Go to the directory that contains the Electronic Service Agent installation file.
4. Use your normal installation process to install Electronic Service Agent. The Electronic Service Agent file set is `bos.esagent`.
5. Go to Activating Electronic Service Agent to enable it to report problems and transmit service information to IBM Support.

Related concepts:

"Activating Electronic Service Agent"
You must activate Electronic Service Agent to enable problem detection, reporting, and transmission of service information to IBM Support.

Activating Electronic Service Agent

You must activate Electronic Service Agent to enable problem detection, reporting, and transmission of service information to IBM Support.

To activate Electronic Service Agent, you must perform the following tasks:

1. Configuring the service connection to IBM so that Electronic Service Agent can report problems and send service information.
2. Testing the service connection to IBM.

3. Specifying contact and location information so that IBM Support knows the location of the system running Electronic Service Agent and who to contact about a problem sent to IBM Support by Electronic Service Agent.

After activating Electronic Service Agent, problem monitoring and service information collection functions become active and reporting to IBM Support begins.

Configuring your service connection

Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

Note: If you use the default direct Internet connection, no additional configuration action is needed.

Specifying connection paths is done using the System Management Interface Tool (SMIT). These are the connection paths that Electronic Service Agent will use to report problems and send service information to IBM Support. Select **Help** from the SMIT panels if you have questions about the specific panel or the information to enter.

To specify connection path information, complete the following steps:
1. Log on to the system as `root` for AIX or `padmin` for VIOS.
2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.
3. Select **Electronic Service Agent** > **Configure Service Connectivity**.

   Tip: If you are using AIX, you can go directly to the Electronic Service Agent connectivity panel by entering `smit srv_conn` at the command prompt.
4. Select from the following:
   - **Create/Change Service Configuration** > **Create/Change Primary Service Configuration**
   - **Create/Change Service Configuration** > **Create/Change Secondary Service Configuration**
   - **Create/Change Service Configuration** > **Create/Change Tertiary Service Configuration**

   If the primary service connection is not configured, busy, or unavailable, the secondary or tertiary service connection is used.
5. Select the **Connection Type** of the service connection you are creating or changing.

   Note: A proxy connection minimizes the number of systems that are directly connected to the Internet.
6. To complete the configuration of the connection to IBM Support, see the information for the connection type that you selected.

Related tasks:

"Connecting to IBM Support through a direct Internet connection"
Connecting Electronic Service Agent to IBM Support through a direct HTTPS Internet connection is fast and efficient. This is the default configuration.

Connecting Electronic Service Agent through the IBM Service and Support proxy or your HTTP proxy can be fast and easy from your business network, and minimizes the number of systems that are directly connected to the Internet.

Connecting to IBM Support through a direct Internet connection

Connecting Electronic Service Agent to IBM Support through a direct HTTPS Internet connection is fast and efficient. This is the default configuration.

Each Electronic Service Agent client must have a separate Internet connection. You might not need to update or create new connections, unless changes have already been made to your configuration.

To specify or change a direct Internet connection type, complete the following steps:

1. Press Enter to create or change the service configuration.
2. Enter **yes** in the Test service configuration field to automatically test the connection when Enter is pressed.

Go to Specifying contact and location information to specify the location of your system and the name of the person to contact about the system.

Related tasks:

"Configuring your service connection" on page 11
Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

"Testing connectivity to IBM" on page 14
You can test your connection to IBM.

"Specifying service contact information" on page 14
Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Connecting to IBM Support through a proxy

Connecting Electronic Service Agent through the IBM Service and Support proxy or your HTTP proxy can be fast and easy from your business network, and minimizes the number of systems that are directly connected to the Internet.

If you decide to use the IBM Service and Support proxy, create the proxy on an exit point system. See Common exit point topology in the Topology topic for information about using an exit point for Electronic Service Agent. Then go to Creating the IBM Service and Support proxy before specifying the proxy connection type.

To specify a proxy connection type, complete the following steps:

1. Enter yes in the **Test service configuration** field to automatically test the connection after all information is entered and Enter is pressed.
2. In the **IP address** field, enter the IP address of the proxy server through which this system will attempt to connect.
3. In the **Port** field, enter the port number on which the proxy server accepts connections.
4. In the **Authentication userid ID** field, enter the user ID to use if the proxy server requires authentication.
5. Enter the password interactively when prompted if the proxy server requires authentication.
6. After the connection information is entered, press Enter to create or change the service configuration and to test the connection path if previously selected.

Go to Specifying contact and location information to specify the location of your system and the name of the person to contact about the system.

Related concepts:

"Topology" on page 7
Ensure that you consider your topology when planning for Electronic Service Agent.

Related tasks:

"Configuring your service connection" on page 11
Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to

connect to the IBM Electronic Support website.

"Creating the IBM Service and Support proxy"
Create the IBM Service and Support proxy as your connection to IBM Support.

"Testing connectivity to IBM" on page 14
You can test your connection to IBM.

"Specifying service contact information" on page 14
Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Creating the IBM Service and Support proxy

Create the IBM Service and Support proxy as your connection to IBM Support.

Creating the IBM Service and Support proxy is done using the System Management Interface Tool (SMIT). Select **Help** from the SMIT panels if you have questions about the specific panel or the information to enter.

To create the IBM Service and Support proxy, complete the following steps:

1. Log on to the system as `root` for AIX or `padmin` for VIOS.

2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.

3. Select **Electronic Service Agent** > **Configure Service Connectivity** > **Manage Service and Support Proxy** > **Create/change the Service and Support Proxy**

4. Enter the information appropriate to your environment and press `Enter` to create the IBM Service and Support proxy.

5. Enter `yes` in the **Enable** field

6. Go back to the **Manage Service and Support Proxy** panel and select **Start the Service and Support Proxy.**

7. After starting the IBM Service and Support Proxy, go back to Connecting to IBM Support through a proxy and complete the procedure.

Related tasks:

"Connecting to IBM Support through a proxy" on page 12
Connecting Electronic Service Agent through the IBM Service and Support proxy or your HTTP proxy can be fast and easy from your business network, and minimizes the number of systems that are directly connected to the Internet.

"Testing connectivity to IBM" on page 14
You can test your connection to IBM.

Electronic Service Agent Users

IBM Electronic Service Agent generates two types of users based on the direct or proxy connection.

1. *esaadmin* - By default, when you install and configure ESA, *esadmin* user is created. The *esadmin* user is used across all the operations that you do on ESA

2. *srvproxy* - When you create the Service and Support Proxy for ESA, the *srvproxy* user and *IBM.SRVPROXY* subsystem created.

   The *IBM.SRVPROXY* subsystem is started after you start the Service and Support Proxy. To check the status of the *srvproxy* user, use the following command -

   ```
   #  lssrc -a | grep IBM.SRVPROXY
    IBM.SRVPROXY  ibmsrv  5636164  active
   ```

   Note:

   If the proxy connection is no longer required, you can delete the *srvproxy* user by using the *smit* or by running the following script - **/usr/ecc/bin/restore_defaults**.

Testing connectivity to IBM

You can test your connection to IBM.

IBM Electronic Service Agent communicates with several IBM servers, and all connections with IBM are backed up by redundant sites. So if a primary connect point is unavailable, a connection is attempted to a backup server.

You can use the **SMIT** (for AIX) or **cfgassist** (for VIOS) interface to test connectivity to IBM. Select **Help** from the panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli test --connectivity** command to perform a connectivity test. For more information, see "esacli test" on page 82.

To test connectivity to IBM, complete the following steps:
1. Log on to the system as `root` for AIX or `padmin` for VIOS.
2. Enter **smit** at the AIX command prompt for AIX or **cfgassist** for VIOS.
3. Select **Electronic Service Agent**.
4. Select **Verify Electronic Service Agent Connectivity** and press Enter.

The system returns a report similar to the following:
```
Performing Connectivity Verification Test
success  Edge_Bulk_Data_1 esupport.ibm.com                      129.42.56.189  443
success  Edge_Bulk_Data_2 esupport.ibm.com                      129.42.58.189  443
success  Edge_Bulk_Data_3 esupport.ibm.com                      129.42.60.189  443
success  Edge_Bulk_Data_4 esupport.ibm.com 2620:0:6c2:200:129:42:60:189  443
success  Edge_Bulk_Data_5 esupport.ibm.com 2620:0:6c2:200:129:42:58:189  443
success  Edge_Bulk_Data_6 esupport.ibm.com 2620:0:6c2:200:129:42:56:189  443
6 successes
0 failures
Connectivity Verification Test Results: succeeded
```

Note: Specific IP addresses are subject to change from time to time.

If any connectivity failures are reported by the connectivity test, examine the settings of firewalls and proxy servers to ensure that a connection between IBM Electronic Service Agent and the failing connection is allowed.

Related reference:

"esacli test" on page 82
Use the **esacli test** command to perform test operations for the IBM Electronic Service Agent instance.

Specifying service contact information

Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Specify information about the company that owns or uses the system and a contact person for that system. Information that is designated with an asterisk (*) is required.

Tip: You can use the **esacli contactSettings** command to display and specify contact information. For information, see "esacli contactSettings" on page 53.

You can specify contact information during the activation stage by using the SMIT (for AIX) or cfgassist (for VIOS) interface. Select **Help** from the panels if you have questions about the specific panel or the information to enter. To specify contact information, complete the following steps:
1. Log on to the system as `root` for AIX or `padmin` for VIOS.

2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.
3. Select **Electronic Service Agent**.

   Note: If you are using AIX, you can go directly to the Electronic Service Agent main panel by entering `smit esa_main` at the command prompt.
4. Select **Configure Electronic Service Agent**.
5. Enter the contact information .
6. Press `Enter`.

After Electronic Service Agent is activated, you can use the Electronic Service Agent graphical user interface (GUI) to specify contact information. Select **Help** from the GUI panels if you have questions about the specific panel or the information to enter.

To specify contact information, complete the following steps:
1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface.
4. Click **Settings** > **Service Contact** to specify or change the contact information.
   - **Company Information**

     *Company name
     > Company or organization that owns or uses the system.

     Street Address Lines 1, 2, and 3
     > Street address of the contact person.

     City   City where the contact person is located.

     State or province
     > State or province where the contact person is located. The state or province must be specified as a valid code as defined by ISO-3166.

     *Select your country or region
     > Name of the country or region in which the contact person is located. For example: `Canada`.

     Postal code
     > Postal code where the contact person is located.

     Fax number
     > Fax number where IBM Support can reach the contact person. Valid United States and Canada fax numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other fax numbers can include any type of character but must be 5 - 30 characters in length.

     Alternate fax number
     > Alternate fax number where IBM Support can reach the contact person. Valid United States and Canada fax numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other fax numbers can include any type of character but must be 5 - 30 characters in length.

     Help desk number
     > Telephone number where IBM Support can reach the Help desk at the company. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.
   - **Primary Contact**

*Contact name
> Name of the person to be contacted if IBM Support needs access to the system.

*Telephone number
> Telephone number where IBM Support can reach the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

Alternate telephone number
> Alternate telephone number where IBM Support can reach the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

*E-mail
> Fully qualified email address for the contact person. For example: `myuserid@mycompany.com`.

Alternate email
> Fully qualified alternate email address for the contact person. For example: `myuserid@mycompany.com`.

Pager number
> Telephone number where IBM Support can reach the pager for the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

- **Secondary Contact**

*Contact name
> Name of the person to be contacted, if primary contact is not reachable and IBM Support needs access to the system.

*Telephone number
> Telephone number where IBM Support can reach the secondary contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

Alternate telephone number
> Alternate telephone number where IBM Support can reach the secondary contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

*E-mail
> Fully qualified email address for the secondary contact person. For example: `myuserid@mycompany.com`.

5. Click **Save Settings** to update the contact information.

Related tasks:

"Configuring your service connection" on page 11
Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

"Providing IBM IDs" on page 33
An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service Agent. Service information can be viewed on the Electronic Services website.

Related reference:

Using IBM Electronic Service Agent

You can specify how Electronic Service Agent monitors and collects problem information, and sends service information to IBM.

You can manage and control Electronic Service Agent and its functions by using one of the following methods:

* The Electronic Service Agent graphical user interface
* The System Management Interface Tool (SMIT) for AIX or the **cfgassist** command for Virtual I/O Server (VIOS)
* The Electronic Service Agent command line interface (esacli)

Electronic Service Agent graphical user interface

The Electronic Service Agent graphical user interface is an intuitive way to manage and control Electronic Service Agent. It uses standard graphical interface controls to access Electronic Service Agent functions.

To access and use the Electronic Service Agent graphical user interface, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system that is running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical interface. See User security for information about authorization requirements.
4. If you see a warning you about an untrusted site certificate, accept the certificate or click **Yes** to proceed to the Electronic Service Agent graphical interface.
5. After successful activation of IBM Electronic Service Agent, you can see the following menu options:

   Note: Each Electronic Service Agent panel has help. Click **Help** in the upper right corner of the panel to view the help information.

   * **Main**
     - **Dashboard**

       The IBM Electronic Service Agent Dashboard pane displays the graphical summary of system's health and problems of the systems that are being monitored by ESA.
     - **All Systems**

       The IBM Electronic Service Agent All Systems pane shows a list of systems that are discovered by IBM Electronic Service Agent. You can also view the information or list of problems for a particular system.
     - **All Problems**

       The IBM Electronic Service Agent All Problems pane displays list of problems that are identified by IBM Electronic Service Agent. You can also view the information of a particular problem in detail.
     - **Discovery**

       On the IBM Electronic Service Agent Discovery pane, you can configure single or multiple KVM hosts and view the discovery log details.
     - **Service Information**

The Service information pane displays the type of service information that is collected by IBM Electronic Service Agent and is sent to the IBM Electronic Support website. This information includes hardware, software, and system configuration information.

– **Activity Log**

The Activity log pane displays IBM Electronic Service Agent activity for a specified time period.

• **Settings**

Select from the following options to specify or modify the IBM Electronic Service Agent settings for this system or partition.

– **Service Contact**

Use the Service Contact Settings pane to specify information about the person that an IBM Support representative can contact about a problem reported by IBM Electronic Service Agent.

– **System Location**

Use the System Location Settings pane to specify information about the physical location of the system that is being monitored by IBM Electronic Service Agent.

– **IBM ID**

Use the IBM ID Settings pane to authorize users with IBM IDs to view service information that was sent to the IBM Electronic Support website by IBM Electronic Service Agent.

– **Connectivity**

Use the Connectivity Settings pane to specify multiple connections that IBM Electronic Service Agent can use to communicate with the IBM Electronic Support website.

– **Service and Support Proxy**

Use the Service and Support Proxy Settings pane to configure the system or partition to serve as a connection point through which the other systems or partitions in your network connect to the IBM Electronic Support website.

– **SNMP**

Use the SNMP Settings pane to specify the SNMP trap listener settings.

– **Problem Information**

Use the Problem Information Settings pane to set the frequency and number of retry attempts to make if automatic transmission of a service request to the IBM Electronic Support website fails.

– **Service Information**

Use the Service Information Settings pane to specify and enable the type and frequency of information to collect.

– **Performance Data**

Use the Performance Data Settings pane to enable and set the time of day at which to collect performance management information.

– **Operational Test**

Use the Operational Test Settings pane to enable and specify the frequency of automatic testing of the connection to IBM. You can also use this pane to run an operational test to test the connection to the IBM Electronic Support website.

– **Notifications**

Use the Notifications Settings pane to enable sending email notifications and SNMP traps to the locations that you specify.

– **Application**

Use the Application Settings pane to display and change information for the system, partition, and cluster that is being monitored by IBM Electronic Service Agent and to specify the port number IBM Electronic Service Agent uses.

– **Trace Level**

Use the Trace Level Settings pane to specify the message severity level that is recorded during IBM Electronic Service Agent activity.

– **Problem Filters-Resources**

Use the Problem Filters-Resources Settings pane to specify a resource or range of resources that can be ignored by the Electronic Service Agent problem reporting function.

– **Problem Filters-Error Codes**

Use the Problem Filters-Error Codes Settings pane to view or add the system reference codes (SRCs) that can be ignored during Electronic Service Agent problem reporting.

– **UAK Management**

Use the UAK Management Settings pane to specify the message severity level that is recorded during IBM Electronic Service Agent activity.

• **Tools**

– **Export Configuration**

Export IBM Electronic Service Agent configuration to use the same contact and location information and operational settings on another system, or to save the configuration for future use on the same system.

– **Import Configuration**

Import IBM Electronic Service Agent configuration to use the same contact and location information and operational settings that is used on another system.

– **Suspend/Resume**

The Display status pane shows the status of the IBM Electronic Service Agent monitoring, collecting, and reporting services. It also shows system information on which IBM Electronic Service Agent is running. You can use this pane to suspend or resume IBM Electronic Service Agent.

- **Suspend**: Problems monitoring, collecting, and sending service information is stopped when Electronic Service Agent is suspended. However, the other Electronic Service Agent graphical user interface functions continue to operate.

- **Resume**: If Electronic Service Agent is suspended, resume it to start problem monitoring, collecting, and sending service information. ESA is resumed automatically after you restart the system or can be done through this graphical user interface function.

– **IBM Electronic Support**

Use the IBM Electronic Support pane to display and manage service requests to the IBM Electronic Support website.

Related concepts:
"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

SMIT (for AIX) and cfgassist (for VIOS) interfaces

System Management Interface Tool (SMIT) is the AIX interface used to manage and control some aspects of Electronic Service Agent. The **cfgassist** command provides a menu-driven Virtual I/O Server (VIOS) interface used to manage and control some aspects of Electronic Service Agent.

Each graphical interface panel has help. Click **Help** in the upper right corner of the panel to view the help information. The text-based version requires the use of a function key to open the help information.

To access and use the interface, complete the following steps:

1. Log on to the system as `root` for AIX or `padmin` for VIOS.
2. Enter **smit** at the AIX command prompt for AIX or **cfgassist** for VIOS.

3. Select **Electronic Service Agent**.
4. Select one of the following:

   - **Configure Electronic Service Agent**

     The contact information for the person that IBM Support might contact about a problem reported by Electronic Service Agent, location information for the system, and the IBMID to enable access to the system information about the IBM Service website.

   - **Configure Service & Support Connectivity**

     Configure Electronic Service Agent to connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths.

   - **Start Electronic Service Agent**

     Problem monitoring and collecting is stopped when Electronic Service Agent is stopped, along with the Electronic Service Agent graphical interface functions. If Electronic Service Agent is stopped, it remains stopped until the system is rebooted.

   - **Stop Electronic Service Agent**

     Problem monitoring and collecting is stopped when Electronic Service Agent is stopped, along with the Electronic Service Agent graphical interface functions. If Electronic Service Agent is stopped, it remains stopped until the system is rebooted.

Viewing Dashboard

The IBM Electronic Service Agent Dashboard pane displays the graphical summary of system's health and problems of the systems that are being monitored by ESA.

The dashboard displays the health status of the various systems that are being monitored by ESA. To gauge exactly how well a system is performing overall, dashboard displays specific problems from each system, thus providing a snapshot of performance. Dashboard displays the following two types of reports:

1. **Systems Health Check Report**

   The system's health status can be in any of the following categories:

   - *Healthy* (■) - Systems that have no problems.
   - *Warned* (■) - Systems that have Non Serviceable (Held) problems.
   - *Problematic* (■) - Systems that have Open / Pending / Failed problems.

2. **Problems Status Report**

   The problems status can be in any of the following categories:

   - *Problems Identified* (■) - The problem was sent to IBM support.
   - *Opened at IBM* (■) - No action is taken on the problem.
   - *Closed by IBM* (■) - The problem is processed and closed.
   - *Failed to process* (■) - All attempts to send the problem information to IBM support is failed. No more attempts can be made.
   - *Non Serviceable (Held)* (■) - If the problem is not serviceable or the problem is in wait state for admin approval.

Displaying system information

The **All Systems** pane displays all the systems that are discovered by the IBM Electronic Service Agent

By default, the system on which ESA is installed is automatically discovered and is displayed in the list. You can also view the **System Health** and **ESA Status** of the discovered devices.

The **All Systems** table displays the following information:

- **Host Name** - Displays the name of the system that is discovered.

- To filter or search for a particular system that you require, enter the initial letters of the system in the **Search** field. A list of filtered systems is displayed.
  - Click the system name to view the information of the system.
- **System Health** - Determines the health of the discovered device. Click the health of a system to view the problems of the particular system.

  - The ![check] icon indicates that the discovered system is working fine.

  - The ![x] icon indicates that the discovered system has some problems.
- **ESA Status** - Identifies if ESA can reach the system.

  - The ![check] icon indicates that the discovered system is reachable.

  - The ![x] icon indicates that the discovered system is not reachable.
- **System Type** - Displays the type of system. For example, AIX, Linux, Power KVM, IVM, or IBM® Elastic Storage Server (ESS). The following are the various device types that ESA supports:

Table 1. Devices types

Device type	Icon
AIX	
Linux	
KVM	
IVM	
ESS Application	
Disk	
Disk Enclosure	
Management Server	
Node	
Physical Server	
Virtual Server	
Other	

To view the system details, follow these steps:

1. Click **Main** menu from left navigation.
2. Click **All Systems** tab.
3. Click **Refresh** to view the updated list of systems that are discovered.
4. Click **System Info** to view the information of the selected system. For detailed system information, see *Results*.

5. Click **View Problems** to view the problems of the selected system. For all problems or detailed problem information, see "Displaying problem information"

6. Click **Delete System** to delete the respective system.

   Note: If you delete a system, ESA runs the **unsubscribe** command on the SEP to remove the KVM host, and ESA can no longer receive SNMP traps from that particular KVM host.

The **System Info** pane displays with the following information:

* **Name** - Displays the host name of the system. For example, *llmjuno65b*.
* **Machine Type** - Displays the machine type of the system. For example, *8246*.
* **Machine Model** - Displays the model of the system. For example, *L2D*.
* **Serial Number** - Displays the serial number of the system. For example, *06BD4CA*.
* **Manufacturer** - Displays the manufacturer of the system. For example, *IBM*.
* **Operating System** - Displays the operating system that is running on the system. For example, *SUSE Linux Enterprise*.
* **OS Type** - Displays the type of operating system. For example, *Linux*.
* **OS Version** - Displays the version of the operation system that is running on the system. For example, *6.5*.
* **OS Additional version** - Displays the kernel version of the operation system that is running on the system. For example, *3.10.42-2004.pkvm2_1_1.8.ppc64*
* **IP Address** - Displays all the IP addresses that are configured to the host system. For example, *9.57.20.114*
* **Firmware** - Displays the firmware version that is installed on the system. For example, *FW770.20 (AL770_068) (t) FW770.20 (AL770_068) (P)*.
* **PM Enabled** - Displays if the Performance Management is enabled on the system or not. For example, *Yes* or *No*.
* **ESA Status** - Displays the status of the system, if it is reachable or not. For example, *Online* or *Offline*.
* **System ID** - Displays the unique identifier of the system. For example, *11741de0963ad0f4bc*.
* **HMC Controlled** - Displays if the device is controlled by HMC or not. For example, *Yes* or *No*.

Displaying problem information

The **All Problems** pane displays all the problems (service requests) for systems that are monitored by IBM Electronic Service Agent.

The System reference codes (SRCs) indicate a storage complex hardware or software problem that can originate in hardware or in Licensed Internal Code. A storage complex component generates an error code when it detects a problem. An SRC identifies the component that detected the error code and describes the error condition. The table shows the possible SRC codes -

Table 2. System reference codes

System Reference Code	Description
5xxxxxxx	Reference codes
A1xxxxxx	Service processor reference (attention) codes
AAxxxxxx	Partition firmware reference (attention) codes
B1xxxxxx	Service processor firmware reference codes
B7xxxxxx	Licensed Internal Code reference codes
BAxxxxxx	Partition firmware reference (attention) codes
DAxxxxxx	Partition firmware reference (error) codes

For a detailed list of SRC codes, see System Reference Codes.

Note: KVM guest operating systems cannot report problems, as ESA detects the environment and disables problem reporting when installed on KVM guests.

You can use the IBM Electronic Service Agent graphical user interface to view problems, delete problems, and update the service request status. Electronic Service Agent does not collect any error data or problem information for Admin_notify type of events and duplicate events. The problem information and error data is collected for the problems that are meant to be transmitted to IBM support.

Tip: You can also use the **esacli problem** command to view problems. For information, see "esacli problem" on page 71.

To view problems, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Main** menu from left navigation.
3. Click **All Problems** tab. The **Problems** table displays the following information:
    - **System Name** - Displays the name of the system that has problems. If you are viewing **All Problems**, then you can filter the problems for a particular system.
    - **Description** - Provides a short description of the problem identified.
    - **SRC** - Displays the alphanumeric system reference code (SRC) that is assigned to the problem by the system.
    - **Occured** - Displays the time stamp of the problem occurrence.
    - **Local Problem ID** - Displays an unique ID that identifies a problem.
    - **Problem Status** - Displays the status of the problem, if it is in *Opened*, *Closed*, *Detected*, *Failed*, or *Reported* state.
    - **Service request** - Displays the system request identifier (PMR number) that is assigned to the problem by the system.
    - **Service request status** - Displays the service request status (PMR status) that is associated with problem. For example, *Open*, *Processing*, or *Closed*.
4. Select a problem in the list to take one of the following actions:
    - Click **Refresh Problems** to update the service request status.
    - Click **Delete** to delete the problem.
    - Click **Details** to view the problem details. The **Problem Detail** pane displays the following information for a particular problem.

        Problem Summary
        - **Description** - Displays a short description of the problem that is identified.
        - **Error Code** - Displays the alphanumeric system reference code (SRC) assigned to the problem by the system.
        - **Local Problem Status** - Displays the reporting status of the problem. The status can be one of the following:
            - *Open* - No action is taken on the problem.
            - *Pending* - The problem is in the process of being sent to IBM support.
            - *Failed* - All attempts to send the problem information to IBM support is failed. No more attempts can be made.
            - *Reported* - The problem was sent to IBM support.
            - *Closed* - The problem was processed and closed.
        - **Problem ID** - Displays a unique ID that identifies a problem.

- **Is Test Problem?** - Identifies if the problem is a test problem or a real problem. The test problems are the simulated problems and are automatically closed.
- **Problem Occurence Date/Time** - Displays the time stamp at which the problem was occurred.
- **Resource Name** - Displays the name of the device against which the issue was opened.

Transmission Summary

- **Service information sent to IBM support** - Displays Yes or No, if the information is not sent to IBM support.
- **Last Attempt to Send** - Displays the time stamp at which ESA tried to send the service information to IBM support.
- **Number of Attempts** - Displays the number of attempts that ESA made to send the service information to IBM support.

Service request information

- **Problem Severity** - Displays the severity of the problem.
- **Service Request Number** - Displays the service request identifier that is assigned to the problem by the system.
- **Service Request Status** - Displays the service request status that is associated with problem. For example, *Open*, *Processing*, or *Closed*.
- **Last Changed** - Displays the time stamp at which the service request status was last changed.

You can also send a test problem to see whether the problem is reporting correctly. For more information, see "Sending a test problem" on page 26.

Discovering systems

You can configure or discover multiple KVM hosts on which, Serviceable Event Provider is installed and listen the SNMP traps sent by Serviceable Event Provider (SEP).

The IBM Electronic Service Agent manages multiple hosts (like AIX, Linux, Power KVM, IVM, or IBM ESS) remotely from a AIX server, which is on the same network. The Electronic Service Agent communicates with all the remote hosts through SSH protocol.

Note: The PowerKVM host must have Serviceable Event Provider that is installed on it, which can detect problems and produce events when necessary. If SEP is not installed on the PowerKVM system, you must install SEP before you discover systems. For information on installing Serviceable Event Provider, see Installing IBM Serviceable Event Provider. During the discovery of KVM hosts, the IBM Electronic Service Agent makes sure that the Serviceable Event Provider is installed on the KVM host and also activates the SEP, if not started already. Electronic Service Agent runs the **subscribe** command on Serviceable Event Provider, with the port number to which the SNMP traps must be sent and the name of the community to be used by the trap. ESA listens the SNMP traps at the default *public* community and *5028* port.

When the problems are received, ESA processes them and sends to IBM support, if it is a call home problem. The serviceable events include the hardware problems that require IBM service in resolving the problems. ESA also identifies if it is a test or a real problem. For information on problem details, see "Displaying problem information" on page 22.

To discover the KVM hosts, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Main** menu from left navigation.
3. Click **Discovery**. You can add Power KVM, single or multiple remote systems in a single instance.

Note: The ESA discovers only the PowerKVM hosts. No other types of systems are supported.

a. **Power KVM**

   Discover a remote system:

   1) Enter the **Host Name** - the KVM host name or the IP address.

   2) Enter the **User ID** and **Password** of the system.

Click **Discover Now** to add the respective system to the discovery log table and discovery. You can check the discovery log for details.During discovery, ESA performs the following steps:

a. Logs in to the host with the entered credentials.

b. Creates ESA specific user name on the host - **esaadmin**

   Note: The **esaadmin** user ID has limited admin privileges, which can run all the commands that are needed by ESA.

c. Generates public-private key pairs that are stored on ESA and are used to access the new user IDs on the remote host. These keys are configured on hosts, such that only ESA system can log in without a password. Hence the root credentials for any host system are not stored / saved at all in this process.

d. ESA uses **esaadmin** for any further communication with remote host.

Click **Clear** to clear the **Host Name**, **User ID**, and **Password** fields.

4. Click **Discover Now** to add the respective system to the discovery log table and discovery. You can check the activity log for details During discovery, ESA performs the following steps:

   a. Logs in to the KVM host with the entered credentials.

   b. Creates ESA specific user name on the KVM host - **esaadmin**

      Note: The **esaadmin** user ID has limited admin privileges, which can run all the commands that are needed by ESA.

   c. Generates public-private key pairs that are stored on ESA and are used to access the new user IDs on the remote KVM host. These keys are configured on KVM hosts, such that only ESA system can log in without a password. Hence the root credentials for any KVM host system are not stored / saved at all in this process.

   d. ESA uses **esaadmin** for any further communication with remote KVM host.

5. Click **Clear** to clear the **Host Name**, **User ID**, and **Password** fields.

6. **Advanced**

   a. **Discover multiple remote systems**:

      1) **Discover from local file**: Browse the data file from the local system.

         Note: Click **Data Format File** to download the template and make sure that your data is in the format specified.

      2) **Discover from remote file**: Enter the remote file name and path.

      3) Click **Discover Now** to add the respective system to the discovery log table and discovery. You can check the discovery log for details.

      4) Click **Clear** to clear the **Host Name**, **User ID**, and **Password** fields.

      5) Click **Verify Connectivity** to test the connectivity to the remote systems.

7. **Discover Logs**

   After you discover a system, the discovery log table is updated with the following system information:

   • **Host Name** - Displays the name of the system that is discovered. To filter or search for a particular system that you require, enter the initial letters or digits of the respective system in the **Search** field. A list of filtered systems is displayed.

   • **User Id** - Displays the user ID to log in to the system.

   • **Start Time** - Displays the time at which the discovery was started.

| • **Updated Time** - Displays the time at which the status is last updated.
| • **Status** - Displays the status of the discovery of a system.
| – **Running** - If the system is in discovery process.
| – **Success** - If ESA discovers the system successfully.
| – **Failed** - If ESA is unable to discover the system.
| • **Status Details** - Displays the details or reason for failure. For example,
| – If the discovery fails, the **Status Details** column displays - **Discovery Action Failed**.
| – If the discovery is successful, the **Status Details** column displays - **Discovery Completed Successfully**.
| • Click **Refresh Log** to update the discovery log details with the most recent discovery operations.

| **Note:** The discovery log details persist for 24 hours only, after which, the log details are deleted.

On successful discovery of KVM hosts, you can view the problems reported by each discovered system. For information on problem details, "Displaying problem information" on page 22

Sending a test problem

Send a test problem to IBM Support to see if the problem reporting function is working correctly.

Sending a test problem to IBM Support is done using the Electronic Service Agent graphical interface. Select **Help** from the graphical interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli test** command to create a test problem and check your connection and transmission of service information. For information, see "esacli test" on page 82.

To send a test problem to IBM, complete the following steps:
1. Start a browser so you can use the Electronic Service Agent graphical interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical interface. See User security for information about authorization requirements.
4. Click **Main** menu from left navigation.
5. Click **All Systems** tab.
6. Select a system and click **View Problems** or you can directly click **System Health** icon of a particular system. The **Problems** page displays.
7. Click **Send Test Problem**. The message - `Test problem was successfully sent!` displays.
8. Click **Refresh problems** to see whether the test problem shows up in the problem summary list.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:

"esacli test" on page 82
Use the **esacli test** command to perform test operations for the IBM Electronic Service Agent instance.

Running an operational test

Check to see if your connection and the transmission of service information to IBM Support is working correctly.

Checking your connection and the transmission of service information to IBM Support is done using the Electronic Service Agent graphical user interface. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli test -o** command to check your connection and transmission of service information. For information, see "esacli test" on page 82.

To check your connection and the transmission of service information to IBM Support, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface. See User security for information about authorization requirements.
4. Select **Service information**.
5. Click **Run operational test**. The results of the test are displayed. You can also view the results of the test in the activity log. See Displaying the activity log.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related tasks:

"Displaying the activity log" on page 28
Displaying the activity log allows you to see all Electronic Service Agent activity for a designated time period.

Related reference:

"esacli test" on page 82
Use the **esacli test** command to perform test operations for the IBM Electronic Service Agent instance.

Collecting and sending service information

Electronic Service Agent collects and sends service information to IBM. Service information consists of hardware, software, system configuration, and performance management information about the system being monitored by Electronic Service Agent.

Manually collecting and sending service information to IBM Support is done using the Electronic Service Agent graphical interface. Select **Help** from the graphical interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli service** command to collect and send service information to the IBM Electronic Support website. For information, see "esacli service" on page 76.

To manually collect and send service information to IBM Support, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical interface.
4. Click **Main** menu from left navigation.
5. Click **Service Information** tab. You can see what types of service information are collected, when they were last collected, and when they are collected next.
6. On the Service Information page, select the type of service information that you want to collect.

7. Select the systems for which you want to collect the service information.
8. Click **Collect Now**. The data collection starts and you get a message -**The data collection has been started, and will complete in approximately 2-15 minutes. Please check the activity log to view the results**. You can also run an operational test to determine whether your connection and the transmission of service information to the IBM Electronic Support portal is working correctly. For information, see "Running an operational test" on page 26.

If data is unchanged from the data collected in the previous collection, no data is submitted to IBM. The Activity Log panel displays when the data was sent to IBM.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:

"esacli service" on page 76
Use the **esacli service** command to immediately send inventory to IBM.

Collecting extended error data

Extended error data is collected for every serviceable event that is sent to IBM (call home events) from the KVM host. Whenever a hardware problem is identified, ESA collects all system logs, configuration, and diagnostic information that can be used for debugging.

ESA automatically retrieves the compressed error data file, saves it locally and transmits to IBM support. ESA uses **Secure copy protocol** (SCP) to retrieve the compressed file from the KVM host. For this process, SSH must be running on both KVM host and ESA.

- After retrieving the extended error data by ESA, it is removed from the KVM host.
- After transmitting the extended error data to IBM, it is removed on the ESA installed host.

The extended error data is appended to the service requests (PMR) for diagnosing the problems.

Displaying the activity log

Displaying the activity log allows you to see all Electronic Service Agent activity for a designated time period.

You can use the Electronic Service Agent graphical user interface to display the activity log. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli activity** command to display the activity log. For information, see "esacli activity" on page 50.

To display the activity log, complete the following steps:
1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface. See User security for information about authorization requirements.
4. Select **Activity log**.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:

"esacli activity" on page 50
Use the **esacli activity** command to display activity log entries for the IBM Electronic Service Agent instance.

Checking status

You can check whether IBM Electronic Service Agent is monitoring your system.

You can use the IBM Electronic Service Agent graphical user interface to check the status of IBM Electronic Service Agent.

Tip: You can also use the **esacli status** command to display the status of the IBMElectronic Service Agent instance. For information, see "esacli status" on page 80.

To use the graphical user interface to check the status of IBM Electronic Service Agent, follow these steps:

1. Access and log on to the IBM Electronic Service Agent graphical user interface.

   Note: If you cannot access the IBM Electronic Service Agent graphical user interface, log in to the system as root or sign on using a root-authorized user ID, and then enter the following command:

   ```
   service esactl status
   ```

   Running this command only displays whether IBM Electronic Service Agent is running on the system. The graphical user interface option displays additional information and gives you the option of either suspending or resuming IBM Electronic Service Agent. For more information, see "Suspending and resuming Electronic Service Agent" on page 44

2. Click **Tools** menu from left navigation.
3. Click **Suspend/Resume** tab.

   The Display status panel is displayed. The Suspend/Resume panel shows whether IBM Electronic Service Agent is monitoring this system and shows the properties of the system or partition. From this panel, you can also suspend/resume IBM Electronic Service Agent.

Accessing the IBM Electronic Support portal

The IBM Electronic Support portal enables you to view service information reported by IBM Electronic Service Agent, search all content using advanced search capabilities, open and manage service requests, receive support content notifications by platform or individual product, and view call home problem events.

You can access the IBM Electronic Support portal at the following web addresses:

• http://support.ibm.com: A portfolio of tools and resources to keep your systems, software, and applications running smoothly.
• http://www-01.ibm.com/support/electronicsupport/: The support portal to view contracts, inventory, heartbeat, etc of your systems.

Note: To use some of the functions that are found on the IBM Electronic Support portal, such as viewing service information or call home events, you must provide an IBM ID.

Related tasks:

"Providing IBM IDs" on page 33
An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service

Agent. Service information can be viewed on the Electronic Services website.

Related information:

⟶ Electronic Services Web site

The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

Managing IBM Electronic Service Agent

You can configure and manage IBM Electronic Service Agent. This includes modifying the configuration and specifying how IBM Electronic Service Agent monitors and collects problem information, and sends service information to IBM.

Specifying service contact information

Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Specify information about the company that owns or uses the system and a contact person for that system. Information that is designated with an asterisk (*) is required.

Tip: You can use the **esacli contactSettings** command to display and specify contact information. For information, see "esacli contactSettings" on page 53.

You can specify contact information during the activation stage by using the SMIT (for AIX) or cfgassist (for VIOS) interface. Select **Help** from the panels if you have questions about the specific panel or the information to enter. To specify contact information, complete the following steps:

1. Log on to the system as `root` for AIX or `padmin` for VIOS.
2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.
3. Select **Electronic Service Agent**.

   Note: If you are using AIX, you can go directly to the Electronic Service Agent main panel by entering `smit esa_main` at the command prompt.
4. Select **Configure Electronic Service Agent**.
5. Enter the contact information .
6. Press `Enter`.

After Electronic Service Agent is activated, you can use the Electronic Service Agent graphical user interface (GUI) to specify contact information. Select **Help** from the GUI panels if you have questions about the specific panel or the information to enter.

To specify contact information, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface.
4. Click **Settings** > **Service Contact** to specify or change the contact information.
   - **Company Information**

     *Company name
             Company or organization that owns or uses the system.

Street Address Lines 1, 2, and 3
Street address of the contact person.

City   City where the contact person is located.

State or province
State or province where the contact person is located. The state or province must be specified as a valid code as defined by ISO-3166.

*Select your country or region
Name of the country or region in which the contact person is located. For example: `Canada`.

Postal code
Postal code where the contact person is located.

Fax number
Fax number where IBM Support can reach the contact person. Valid United States and Canada fax numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other fax numbers can include any type of character but must be 5 - 30 characters in length.

Alternate fax number
Alternate fax number where IBM Support can reach the contact person. Valid United States and Canada fax numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other fax numbers can include any type of character but must be 5 - 30 characters in length.

Help desk number
Telephone number where IBM Support can reach the Help desk at the company. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

- **Primary Contact**

*Contact name
Name of the person to be contacted if IBM Support needs access to the system.

*Telephone number
Telephone number where IBM Support can reach the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

Alternate telephone number
Alternate telephone number where IBM Support can reach the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

*E-mail
Fully qualified email address for the contact person. For example: `myuserid@mycompany.com`.

Alternate email
Fully qualified alternate email address for the contact person. For example: `myuserid@mycompany.com`.

Pager number
Telephone number where IBM Support can reach the pager for the contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

- **Secondary Contact**

*Contact name

> Name of the person to be contacted, if primary contact is not reachable and IBM Support needs access to the system.

*Telephone number

> Telephone number where IBM Support can reach the secondary contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

Alternate telephone number

> Alternate telephone number where IBM Support can reach the secondary contact person. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.

*E-mail

> Fully qualified email address for the secondary contact person. For example: `myuserid@mycompany.com`.

5. Click **Save Settings** to update the contact information.

Related tasks:

"Configuring your service connection" on page 11
Electronic Service Agent can connect to IBM Support through direct Internet (direct HTTPS connection), service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

"Providing IBM IDs" on page 33
An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service Agent. Service information can be viewed on the Electronic Services website.

Related reference:

"esacli contactSettings" on page 53
Use the **esacli contactSettings** command to configure the service contact information.

"esacli locationSettings" on page 63
Use the **esacli locationSettings** command to configure and display the system location information.

Specifying system location information

Specifying IBM Electronic Service Agent system location information is the another step in preparing to connect to the IBM Electronic Support website.

System location information

Specify location information for the system. Information that is designated with an asterisk (*) is required.

Tip: You can use the **esacli locationSettings** command to display and specify location information. For information, see "esacli locationSettings" on page 63.

You can specify location information during the activation stage by using the SMIT (for AIX) or cfgassist (for VIOS) interface. Select **Help** from the panels if you have questions about the specific panel or the information to enter. To specify location information, complete the following steps:

1. Log on to the system as `root` for AIX or `padmin` for VIOS.

2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.

3. Select **Electronic Service Agent**.

   Note: If you are using AIX, you can go directly to the Electronic Service Agent main panel by entering `smit esa_main` at the command prompt.

4. Select **Configure Electronic Service Agent**.
5. Enter the location information .
6. Press `Enter`.

After Electronic Service Agent is activated, you can use the Electronic Service Agent graphical user interface (GUI) to specify location information. Select **Help** from the GUI panels if you have questions about the specific panel or the information to enter.

To specify location information, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from the left navigation.
3. Click **System Location** to specify or change the system location information.

   *Select your country or region
   > Name of the country or region in which the system is located. For example: `Canada`.

   *State or province
   > State or province where the system is located. The state or province must be specified as a valid code as defined by ISO-3166.

   *Postal code
   > Postal code where the system is located.

   *City   City where the system is located.

   *Street Address
   > Street address where the system is located.

   *Building, floor, office
   > Building, floor, and office of the system.

   *Telephone number
   > Telephone number for a location close to the system. Valid United States and Canada telephone numbers must be 10 - 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be 5 - 30 characters in length.
4. Click **Save Settings** to update the system location information.

Providing IBM IDs

An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service Agent. Service information can be viewed on the Electronic Services website.

Important: The first IBM ID that is sent to IBM from Electronic Service Agent becomes the administrator. The administrator has the only IBM ID that has the authority to manage IBM IDs using the IBM Electronic Services website functions.

To register for a new IBM ID, go to My IBM profile website and click **Register**.

For security and privacy reasons, it is necessary that an IBM ID be associated with a specific system. Only the specified IDs are able to view the service information for that system.

Use one of the following methods to authorize users to view service information.
- Authorize users to view service information by using the SMIT (for AIX) or cfgassist (for VIOS) interface. Select **Help** from the panels if you have questions about the specific panel or the information to enter.

  To authorize users to view service information, complete the following steps:
  1. Log on to the system as `root` for AIX or `padmin` for VIOS.

2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.
3. Select **Electronic Service Agent**.

   Note: If you are using AIX, you can go directly to the Electronic Service Agent main panel by entering `smit esa_main` at the command prompt.
4. Select **Configure Electronic Service Agent**.
5. Enter the IBM ID of the authorized user.
6. Press `Enter`.

- Authorize users to view service information by using the Electronic Service Agent graphical user interface (GUI). Select **Help** from the GUI panels if you have questions about the specific panel or the information to enter. To authorize users to view service information, complete the following steps:
  1. Start a browser so you can use the Electronic Service Agent graphical user interface.
  2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
  3. Log on to the Electronic Service Agent graphical user interface. See User security for information about authorization requirements.
  4. Select **IBM ID**.
  5. Enter the IBM ID of the authorized user in the **IBM ID to add** field.
  6. Click **Add** to add the ID to the **IBM IDs to send** list.
  7. Click **Send authorization**.
- Authorize users to view service information by using the Electronic Service Agent **esacli ibmId** command. For information, see "esacli ibmId" on page 60.

To manage your IBM IDs, which includes associating new IBM IDs with a system or removing existing IBM IDs, go to the IBM Electronic Services website and click **Services administration**.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:

"esacli ibmId" on page 60
Use the **esacli ibmId** command to add IBM user IDs that can access the Electronic Service Agent support website to view status.

Related information:

➡ Electronic Services Web site
The Electronic Services Web site provides the ability to view service information reported by Electronic Service Agent, open and manage service requests, receive support messages by platform or individual, and customize the site to your preferences. To use some of the functions found on the Electronic Services Web site, such as viewing service information, you need to supply an IBM ID.

Configuring your service connection

IBM Electronic Service Agent can connect to the IBM Electronic Support website through direct Internet (HTTPS) connection, service and support proxy, or HTTP proxy connection paths. IBM Electronic Service Agent uses these connection paths to report problems and send service information to the IBM Electronic Support website. IBM Electronic Service Agent uses IPv4 to connect to the IBM Electronic Support website.

If you use only a default direct Internet connection, no additional configuration is needed. However, if a direct connection is not always available, you can configure IBM Electronic Service Agent to communicate

with IBM using a proxy server. In fact, you can specify up to three proxy servers. IBM Electronic Service Agent uses the connections in the order they appear, so if one service connection is not configured, busy, or unavailable, the next service connection is used.

You can use the IBM Electronic Service Agent graphical user interface to configure your service connection. To configure your service connection using the graphical user interface, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Connectivity** tab.
4. Select the type of connectivity you want to create or change.
   - **Direct connect**

     Connecting IBM Electronic Service Agent to the IBM Electronic Support website through a direct HTTPS Internet connection is fast and efficient. This is the default configuration.
   - **Proxy**

     Connecting IBM Electronic Service Agent through the IBM Service and Support proxy or your HTTP proxy can be fast and easy from your business network, and minimizes the number of systems that are directly connected to the Internet.

     If you decide to use the IBM Service and Support proxy, it should be created on an exit point system. See "Topology" on page 7 for information about using an exit point for IBM Electronic Service Agent. Then go to "Creating the IBM Service and Support proxy" on page 13 before specifying the proxy connection type.
5. To specify a proxy connection type, follow these steps:
   a. In the **IP address or host name** field, enter the IP address of the proxy server through which you want this system to connect.
   b. In the **Port** field, enter the port number on which the proxy server accepts connections.
   c. In the **Destination user** field, enter the user ID to use if the proxy server requires authentication.
   d. In the **Destination password** and **Verify password** fields, enter the password to use if the proxy server requires authentication.
   e. Click **Add** to create or change the service configuration. IBM Electronic Service Agent uses the connections in the order they appear, so if one service connection is not configured, busy, or unavailable, the next service connection is used.
   f. To change the order of the connections, select a connection and click **Up** or **Down** until the connections are in the desired order.
   g. To delete a connection, select a connection and click **Remove**.
6. When you are satisfied with the connection definitions and order, click **Save Settings** to save the configuration.

Creating the IBM Service and Support proxy

IBM Electronic Service Agent can function as a proxy server for other IBM Electronic Service Agent systems or partitions. This enables you to use another IBM Electronic Service Agent server with valid connectivity to IBM instead of a third-party proxy server. You can use IBM Electronic Service Agent graphical user interface to create the IBM Service and support proxy as your connection to the IBM Electronic Support website.

You can use the IBM Electronic Service Agent graphical user interface to create the IBM service and support proxy. To create the IBM service and support proxy, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Service and support proxy** tab.
4. Select **Enable Proxy**.

a. Enable the required available **Interfaces** to listen for connections from other systems or partitions.

b. Enter the port number on which the service and the support proxy server accepts connections from other systems or partitions. The default server port number is 5026.

c. Select **Require HTTP basic authentication** option to specify whether authentication is required for the IBM Electronic Service Agent systems or for the partitions that use this service proxy. If required, enter the user name and password to use for this authentication.

5. Click **Save Settings** to save support proxy details.

Configuring SNMP Settings

IBM Electronic Service Agent listens to the SNMP traps for any hardware problem detected on remote systems that are sent by the IBM Serviceable Event Provider.

The Electronic Service Agent communicates with all the remote hosts through SSH protocol. The PowerKVM host must have Serviceable Event Provider that is installed on it, which can detect problems and produce events when necessary. If SEP is not installed on the PowerKVM system, you must install SEP before you discover systems. ESA listens to the SNMP traps at the default *public* community and at *5028* port. When the SNMP traps are received, ESA processes them and sends to IBM support, if it is a call home problem. The serviceable events include the hardware problems that require IBM service in resolving the problems.

1. Access and log in to the IBM Electronic Service Agent graphical user interface.

2. Click **Settings** menu from left navigation.

3. Click **SNMP** tab.

4. Select **Enable SNMP Trap Listener** to enable problem detection on remote systems and receive SNMP traps.

    a. Enter the **Listening Port**. By default, the listening port is **5026**. You can change to any other port, for example, **5055**.

    b. Select **Clear firewall for this port** to allow ESA to change the firewall settings for the specified port. By default, this option is enabled.

    Note: If **Clear firewall for this port** is disabled (not selected), you must change the firewall settings manually to enable problem detection.

    c. Enter the **Community** name. By default, the community is **public**.

5. Select the **Interfaces** at which ESA can listen to the SNMP traps. By default, all the interfaces are selected, but you can also select the required IP addresses.

    Note: The Electronic Service Agent tries to connect to the available IPv4 addresses and if it is unable to connect, then ESA connects to the available IPv6 addresses.

6. Click **Save Settings** to save SNMP settings.

Configuring problem reporting

You can specify that IBM Electronic Service Agent continue to attempt to report a problem if initial transmission fails. You can enable or disable the automatic transmission of extended error data (EED) to IBM. You can also configure the frequency and number of times IBM Electronic Service Agent attempts to report a problem.

You can use the IBM Electronic Service Agent graphical user interface to configure problem reporting.

Tip: You can also use the **esacli problemSettings** command to configure problem reporting. For information, see "esacli problemSettings" on page 72.

To configure this problem reporting, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.

| 2. Click **Settings** > **Problem Information** from left navigation. The Problem Information Settings pane
| displays.
| 3. To disable sending the Extended Error Data (EED) automatically to IBM, check **Do not send EED**
| **files automatically** option.
| 4. To enable IBM Electronic Service Agent to retry problem submissions, check **Retry** option.
| 5. Specify the number of minutes between attempts.
| 6. Specify the number of retry attempts.
| 7. Click **Save Settings** to save your changes.

| **Related concepts**:

| "Problem processing overview" on page 3
| Problem processing is an important capability of Electronic Service Agent. When Electronic Service Agent
| detects a problem, there is a specific sequence of events that occur to record the problem, report the
| problem, resolve the problem, and close the problem.

| "User security" on page 7
| User and file security is provided by AIX user authorizations and privileges. Users in the AIX system
| group that can remotely log in to the system can use their user IDs and passwords to log on to the
| Electronic Service Agent graphical user interface.

| "Using Electronic Service Agent on a system with an HMC" on page 9
| If the system running Electronic Service Agent has an attached Hardware Management Console (HMC),
| there are things to consider when using Electronic Service Agent.

| **Related reference**:

| "esacli problem" on page 71
| Use the **esacli problem** command to work with problems for the IBM Electronic Service Agent instance.

Configuring service information collection

You can specify the type of information that you want IBM Electronic Service Agent to collect, and the
time and frequency for the collection.

You can use the IBM Electronic Service Agent graphical user interface to configure service information
collection.

Tip: You can also use the **esacli serviceSettings** command to configure service information collection. For
information, see "esacli serviceSettings" on page 77.

To configure service information collection, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Service Information**. The Service Information Settings page is displayed.
4. Specify the information that you want IBM Electronic Service Agent to collect. You can enable IBM
   Electronic Service Agent to collect hardware, software, and system configuration information.
5. Specify the collection time and frequency for each type of information that you want IBM Electronic
   Service Agent to collect.
6. Click **Save Settings** to save your selections.

Configuring performance management data collection

You can enable IBM Electronic Service Agent to collect performance management data and specify the
collection time.

You can use the IBM Electronic Service Agent graphical user interface to configure performance
management data collection. You can collect performance management data for system on which ESA is
installed and also for all the discovered KVM host systems.

Note: To collect the performance management data, the PM must be available on the KVM host system.

Tip: You can also use the **esacli serviceSettings** command to configure performance management data collection. For information, see "esacli serviceSettings" on page 77.

The table displays all the systems that are discovered by IBM Electronic Service Agent with the following details:

- **Host Name** - Displays the name of the host system that is discovered.
  - To filter or search for a particular system that you require, enter the initial letters of the system in the **Search** field. A list of filtered systems is displayed.
- **PM Configured** - Determines whether a particular system is enabled for performance management data collection.

  - The ✅ icon indicates that the discovered system is enabled for collecting performance management data.

  - The ❌ icon indicates that the discovered system is not enabled for collecting performance management data.

To configure performance management information collection, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Performance Data** tab. The Performance Data Settings window displays.
4. Select **Enable Performance Data Collection** option to enable IBM Electronic Service Agent to collect performance management data for all the systems.
5. Specify the **Collection time** that you want IBM Electronic Service Agent to collect performance management data daily.
6. Click **Save** to save your selections.
7. Click **Collect Now** to collect the performance management data of a particular system at the current time.
8. Click **Refresh** to view the updated list of systems that are discovered.

When you click **Collect Now**, you get a message - **The performance management collection has been started, and will complete in approximately 2-15 minutes. Please check the activity log to view the results.**

Configuring operational test settings

You can configure operational test settings for Electronic Service Agent to perform the functions important to your service environment.

You configure operational test settings using the Electronic Service Agent graphical interface. Select **Help** from the graphical interface panels if you have questions about the specific panel or the information to enter.

To configure operational test settings, complete the following steps:
1. Start a browser so that you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Click **Settings** menu from left navigation.
4. Click **Operational Test** tab. The Operational Test Settings page is displayed.
5. Click **Enable** to automatically test the connection to the IBM Electronic Support website from IBM Electronic Service Agent.

6. Specify the frequency and time of day that you want IBM Electronic Service Agent to run these operational tests.
7. Click **Save Settings** to save your selections.
8. Click **Run operational test** to run an operational test to test the connection to the IBM Electronic Support website.

   Tip: You can also use the **esacli test -o** command to check your connection and transmission of service information. For information, see "esacli test" on page 82.

Related concepts:

"Electronic Service Agent graphical user interface" on page 17
The Electronic Service Agent graphical user interface is an intuitive way to manage and control Electronic Service Agent. It uses standard graphical interface controls to access Electronic Service Agent functions.

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Configuring notifications settings

You can configure notifications settings to send email and SNMP traps about IBM Electronic Service Agent activity to the locations you specify.

You can use the IBM Electronic Service Agent graphical user interface to specify these notifications.

Tip: You can also use the **esacli notificationSettings** command to specify notifications. For information, see "esacli notificationSettings" on page 66.

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Notifications** and enter the information for the email notifications and SNMP traps you want to send.
4. Click **Save Settings**. If you click **Send Test Notification** before applying the changes by clicking **Save Settings**, the previous settings are used.

Configuring application settings

Using the Application Settings pane you can change hardware solution information or software solution information for the system or partition that is being monitored by Electronic Service Agent. You can also alter the port number.

To specify application settings, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface.
4. Click **Settings** > **Application** to specify or change the contact information.

   Use Solution information for Entitlement
   > Specify to use the solution information for entitlement. If you specify to use solution information, you must specify the Type, Model, and Serial number for hardware solution or component ID, Division, and product ID for software solution.

   Port number
   > Port number on which IBM Electronic Service Agent listens for requests from the browser for the graphical user interface or for requests that are entered at the command prompt. The default value is 5024.

5. Click **Save Settings** to update the contact information.

Setting the trace level

Trace level determines the message severity recorded during Electronic Service Agent activity.

Setting the trace level is done using the Electronic Service Agent graphical user interface. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli logSettings** command to set the trace level. For information, see "esacli logSettings" on page 64.

To set the trace level, complete the following steps:
1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface. See "User security" on page 7 for information about authorization requirements.
4. Select **Settings**.
5. Select **Trace level**.
6. Select the trace level for the message severity you want recorded during Electronic Service Agent activity. The least detailed amount of data is logged with the setting Severe, and the most detailed amount of data is logged with setting Trace.

Related concepts:
"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:
"esacli logSettings" on page 64
Use the **esacli logSettings** command to set and display information for the current logging level.

Configuring resource filters

Use the Problem Filters-Resources Settings page to set and display the range of resources that are ignored by ESA.

You can configure resource filters by using the IBM Electronic Service Agent graphical user interface.

Tip: You can also use the **esacli resourceFilters** command to set and display the range of resources that are ignored by IBM ESA. For more information, see "esacli resourceFilters" on page 74.

To specify the range of resources that are ignored by IBM ESA, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click the **Settings** menu from left navigation.
3. Click the **Problem Filters-Resources** tab. The Problem Filters-Resources Settings page is displayed.
4. Enter the starting resource from the range of resources that needs to be ignored in the **Start** field.
5. Optional: Enter the ending resource from the range of resources that needs to be ignored in the **End** field.
6. Select the **Platform** (*PPC* or *ALL*).
7. Select the **Operating System** (*AIX*, *IVM*, *Power KVM*, or *Linux*).

8. Click **Add** to add the range of resources. The resource range is saved to the table and you get a message - `Resource filters saved successfully`.

9. Click **Clear** to reset the fields.

10. To a delete a specific resource range, select the resource and click **Delete**. On confirmation, the selected resource filters are removed and you get a message - `Resource filters were successfully removed!`.

    For information about IBM ESA settings that you can change, see "Electronic Service Agent graphical user interface" on page 17.

Configuring error codes

Use the Problem Filters-Error Codes page to add and display the system reference codes that are ignored for problem reporting.

You can configure error code filters by using the IBM Electronic Service Agent graphical user interface.

Tip: You can also use the **esacli srcFilters** command to add and display the error codes that are ignored by IBM ESA. For more information, see "esacli srcFilters" on page 79.

To specify the system reference codes that are ignored by IBM ESA, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.

2. Click the **Settings** menu from left navigation.

3. Click the **Problem Filters-Error Codes** tab. The Problem Filters-Error Codes Settings page is displayed.

4. Enter the system reference code that needs to be ignored in the **Error Code** field.

5. Select the **Platform** (*PPC* or *ALL*).

6. Select the **Operating System** (*AIX*, *IVM*, *Power KVM*, or *Linux*).

7. Click **Add** to add the error code. The error code is saved to the table and you get a message - `Added successfully`. The Error codes table displays the following information:

   - **Error Code** - Displays the specified error codes that are to be ignored by ESA. Following are the pre-defined error codes or that are generated by ESA:

Ignored error codes	Ignored error codes
762-996	968-136
762-998	973-300
801-102	990-136
802-890	991-135
803-890	991-150
803-971	991-160
803-972	991-180
803-973	991-185
803-994	991-200
844-405	899-000
850-902	704-128
950-999	704-130
968-110	A10-200

   - **Operating System** - Displays the operating system of the ESA installed system.
   - **Platform** - Displays the platform that is specified (*PPC* or *ALL*).

- **Defined by** - Displays if the error codes are ESA generated (*IBM*) or defined by you (*User*).
8. Click **Clear** to reset the fields.
9. To delete a specific SRC, select the code and click **Delete**. On confirmation, the selected error codes are removed and you get a message - `Removed successfully!`.

   Note: You can delete only the error codes that are added by you. You cannot delete the default error codes that are generated by ESA.

   For information about IBM ESA settings that you can change, see "Electronic Service Agent graphical user interface" on page 17.

Configuring UAK Management settings

You can configure UAK Management settings for IBM ESA to verify and update the access keys for POWER8 systems.

POWER8 (and later) servers include an "update access key" (UAK) that is checked when system firmware updates are applied to the system. The access keys include an expiration date. If the calendar date is beyond the expiration date of update access key, the system firmware updates are not processed. IBM Electronic Service Agent updates these keys either manually or automatically.
- While checking manually, the IBM ESA checks the expiration date, downloads, and uploads the latest access keys.
- For automatic updates, the IBM ESA checks the expiration date of the access keys periodically, and updates with the latest access keys, only if the expiration date is less than 30 days.

Note: The UAK Management settings feature is applicable only for POWER8 systems with firmware 840.

You can configure UAK management settings by using the IBM Electronic Service Agent graphical user interface. To configure UAK management settings, follow these steps:
1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click the **Settings** menu from left navigation.
3. Click the **UAK Management** tab. The UAK Management Settings page is displayed.
4. The **Enable Update Access Key Checks** option is enabled by default. When this option is enabled, ESA automatically checks for the expiration date of the access keys.
5. Specify the frequency to for the check expiration of the keys. By default, it is 7 days.
6. Click **Save Settings** to enable automatic update of access keys. The table displays the POWER8 server on which ESA is installed.
   - **Host Name** - Displays the host name of the POWER8 system.
   - **Processor Type** - Displays the type of processor of the POWER8 system.
   - **Access Key Expiration Date** - Displays the expiry date of the access key.
   - **Last Checked** - Displays the time stamp at which the expiration date is checked.
7. Click **Perform Check** to manually check the expiration date of the access key. It also downloads and updates the latest access key.

Exporting a configuration

The export configuration function allows you to export Electronic Service Agent configuration information to a file so you can use the same contact and location information and operational settings on another system.

You can use the Electronic Service Agent graphical user interface to export a configuration. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli export** command to export a configuration. For information, see "esacli export" on page 56.

Note: The export function of the Electronic Service Agent graphical user interface creates a configuration file and provides a means to download the file. The **esacli export** command only creates a configuration file.

To export a configuration, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface. See User security for information about authorization requirements.
4. Select **Export**.
5. Click **Export settings** to export the configuration information to a file.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related reference:

"esacli export" on page 56
Use the **esacli export** command to export the configuration settings for the IBM Electronic Service Agent instance.

Importing a configuration

The import configuration function allows you to import an Electronic Service Agent configuration file so you can use the same contact and location information and operational settings as used on another system.

For information about creating a configuration file, see "Exporting a configuration" on page 42.

You can use the Electronic Service Agent graphical user interface to import a configuration. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli import** command to import a configuration file. For information, see "esacli import" on page 62. You can only use the **esacli import** command to import a local configuration file.

To import a configuration, complete the following steps:

1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical user interface. See User security for information about authorization requirements.
4. Select **Import**.
5. Select **Import local file** or **Import remote file**.
6. Enter the name of the configuration file you want to import.
7. Click **Import** to import the configuration information.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related tasks:

"Exporting a configuration" on page 42
The export configuration function allows you to export Electronic Service Agent configuration information to a file so you can use the same contact and location information and operational settings on another system.

Related reference:

"esacli import" on page 62
Use the **esacli import** command to import the configuration settings for the Electronic Service Agent instance.

Stopping and starting Electronic Service Agent

Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to stop or start Electronic Service Agent.

Problem monitoring and collecting, and sending service information is stopped when Electronic Service Agent is stopped, along with the Electronic Service Agent graphical interface functions. Electronic Service Agent must be started again to activate these functions. If Electronic Service Agent is stopped it will stay stopped after rebooting the system. If you want to stop problem monitoring and collecting and sending service information but continue to use the other Electronic Service Agent graphical interface functions, you should suspend Electronic Service Agent rather than stopping it.

Stopping and starting Electronic Service Agent is done using SMIT (System Management Interface Tool). Select **Help** from the SMIT panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli stop** and **esacli start** commands to stop and start Electronic Service Agent. For information, see "esacli stop" on page 81 and "esacli start" on page 80.

To stop or start Electronic Service Agent, complete the following steps:
1. Log on to the system as root or sign on using a root-authorized ID.
2. Enter **smit** for AIX or **cfgassist** for VIOS at the command prompt.
3. Select **Electronic Service Agent**.
4. Select **Stop Electronic Service Agent** or **Start Electronic Service Agent**.

Related tasks:

"Suspending and resuming Electronic Service Agent"
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to suspend or resume Electronic Service Agent.

Related reference:

"esacli stop" on page 81
Use the **esacli stop** command to stop Electronic Service Agent.

"esacli start" on page 80
Use the **esacli start** command to start Electronic Service Agent.

Suspending and resuming Electronic Service Agent

Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to suspend or resume Electronic Service Agent.

Problem monitoring and collecting and sending service information is stopped when Electronic Service Agent is suspended. However, the other Electronic Service Agent graphical interface functions continue to operate.

Suspending and resuming Electronic Service Agent is done using the Electronic Service Agent graphical user interface. Select **Help** from the graphical user interface panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli suspend** and **esacli resume** commands to suspend and resume Electronic Service Agent. For information, see "esacli suspend" on page 82 and "esacli resume" on page 75.

To suspend or resume Electronic Service Agent, complete the following steps:
1. Start a browser so you can use the Electronic Service Agent graphical user interface.
2. In the browser address field, enter `https://hostname:5024/esa`, where `hostname` is the name or IP address of the system running Electronic Service Agent.
3. Log on to the Electronic Service Agent graphical interface. See User security for information about authorization requirements.
4. Click **Tools** menu from left navigation.
5. Click **Suspend/Resume** tab.
6. Click **Suspend** or **Resume**.

   Note: If IBM Electronic Service Agent is suspended, only the Resume option is available. If IBM Electronic Service Agent is running, only the Suspend option is available.

Related concepts:

"User security" on page 7
User and file security is provided by AIX user authorizations and privileges. Users in the AIX system group that can remotely log in to the system can use their user IDs and passwords to log on to the Electronic Service Agent graphical user interface.

Related tasks:

"Stopping and starting Electronic Service Agent" on page 44
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to stop or start Electronic Service Agent.

Related reference:

"esacli suspend" on page 82
Use the **esacli suspend** command to suspend Electronic Service Agent.

"esacli resume" on page 75
Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

Testing connectivity to IBM

You can test your connection to IBM.

IBM Electronic Service Agent communicates with several IBM servers, and all connections with IBM are backed up by redundant sites. So if a primary connect point is unavailable, a connection is attempted to a backup server.

You can use the **SMIT** (for AIX) or **cfgassist** (for VIOS) interface to test connectivity to IBM. Select **Help** from the panels if you have questions about the specific panel or the information to enter.

Tip: You can also use the **esacli test --connectivity** command to perform a connectivity test. For more information, see "esacli test" on page 82.

To test connectivity to IBM, complete the following steps:

1. Log on to the system as `root` for AIX or `padmin` for VIOS.

2. Enter **smit** at the AIX command prompt for AIX or **cfgassist** for VIOS.

3. Select **Electronic Service Agent**.

4. Select **Verify Electronic Service Agent Connectivity** and press Enter.

The system returns a report similar to the following:

```
Performing Connectivity Verification Test
success  Edge_Bulk_Data_1 esupport.ibm.com                     129.42.56.189  443
success  Edge_Bulk_Data_2 esupport.ibm.com                     129.42.58.189  443
success  Edge_Bulk_Data_3 esupport.ibm.com                     129.42.60.189  443
success  Edge_Bulk_Data_4 esupport.ibm.com  2620:0:6c2:200:129:42:60:189  443
success  Edge_Bulk_Data_5 esupport.ibm.com  2620:0:6c2:200:129:42:58:189  443
success  Edge_Bulk_Data_6 esupport.ibm.com  2620:0:6c2:200:129:42:56:189  443
6 successes
0 failures
Connectivity Verification Test Results: succeeded
```

Note: Specific IP addresses are subject to change from time to time.

If any connectivity failures are reported by the connectivity test, examine the settings of firewalls and proxy servers to ensure that a connection between IBM Electronic Service Agent and the failing connection is allowed.

Related reference:

"esacli test" on page 82
Use the **esacli test** command to perform test operations for the IBM Electronic Service Agent instance.

Checking system heartbeat

Operational tests of Electronic Service Agent help you check the heartbeat of your system. You can schedule a system heartbeat test to run automatically by using both CLI commands and the graphical user interface. You can also manually check the system heartbeat, when required.

Scheduling a system heartbeat test

To schedule a system heartbeat test to run automatically by using the Electronic Service Agent graphical user interface, complete the following steps:

1. Access and log on to the Electronic Service Agent graphical user interface.

2. Click **Settings**.

3. Click **Operation Settings**

4. Modify as necessary.

   Tip: You can schedule a system heartbeat test to run automatically by using the CLI commands with the options specified in **esacli opTestSettings**. See, esacli opTestSettings

Testing the system heartbeat manually

To test the system heartbeat manually by using both the CLI and the graphical user interface, complete the following steps:

1. Access and log on to the Electronic Service Agent graphical user interface.

2. Click **Service information**

3. Click **Run operational test**

   Tip: To test the system heartbeat manually, run the **esacli test –o** command.

Enable email notification

The **esacli opNotificationSettings** command must be run only when directed by IBM service. This command is disabled by default.

To enable email notification for manual or automatic heartbeat (operational) tests, specify an SMTP server host name and port an email address that ends in `ibm.com`.

For example: `esacli opNotificationSettings -e true -h smtp.gateway.com -p 25 -m email@ibm.com`. See, "esacli opNotificationSettings" on page 69

Unconfiguring Electronic Service Agent

You should not unconfigure IBM Electronic Service Agent unless directed to do so by a customer service representative.

Attention: Unconfiguration is a destructive operation that returns IBM Electronic Service Agent to an unconfigured state. Unconfiguration discards configuration data on the local system. If possible, you should attempt to export the configuration so that the customer contact and system location information can be restored. When Electronic Service Agent is activated following unconfiguration, a new entity ID is associated with the system. Information that is associated with the previous entity ID and system is no longer updated. To access the system's data, you must again associate an IBM ID with the system.

To unconfigure Electronic Service Agent, complete the following steps:
1. Log on to the system as `root` for AIX .
2. Enter **smit** at the AIX command prompt.
3. Select **Electronic Service Agent**.
4. Select **Unconfigure Electronic Service Agent**.

Uninstalling Electronic Service Agent

Uninstalling removes the Electronic Service Agent code and configuration information. The configuration information contains contact and location information, and operational settings. Before you uninstall Electronic Service Agent, consider whether you want to use the same configuration information for another system or later on this system.

If you plan to install Electronic Service Agent again later and want to use the same configuration information, or use the same configuration information about another system, you should export the configuration information for later use.

Uninstalling Electronic Service Agent and saving configuration information

Uninstalling Electronic Service Agent and saving configuration information enables you to reuse the configuration for the next installation or another system.

The configuration information contains contact and location information, and operational settings. To save the configuration information and uninstall Electronic Service Agent, complete the following steps:
1. Export the configuration information from Electronic Service Agent and save the file. For information about how to export the configuration information, see Exporting a configuration.
2. Use your normal procedure for uninstalling software to uninstall Electronic Service Agent, fileset `bos.esagent`.

Related tasks:

The export configuration function allows you to export Electronic Service Agent configuration information to a file so you can use the same contact and location information and operational settings on another system.

Uninstalling Electronic Service Agent without saving configuration information

If you uninstall Electronic Service Agent without saving configuration information, you will not be able to reuse the configuration for the next installation.

If you do not save the configuration information, you will have to reconfigure Electronic Service Agent if you reinstall it on this system.

To uninstall Electronic Service Agent without saving the configuration information, use your normal procedure for uninstalling software to uninstall Electronic Service Agent, fileset `bos.esagent`.

Related tasks:

Uninstalling Electronic Service Agent and saving configuration information enables you to reuse the configuration for the next installation or another system.

Electronic Service Agent commands

Most Electronic Service Agent operations can be performed from an AIX command line.

The basic command to run is `/usr/esa/bin/esacli`. The **esacli** command was introduced in AIX version 6.1.6.15 and 7.1.0.15 and is not available in earlier versions. Except where otherwise noted, **esacli** subcommands can only be used following activation of Electronic Service Agent. Not all subcommands can be used on every system. For example, on HMC-controlled systems, subcommands related to problem reporting are disabled, since Electronic Service Agent HMC controls problem reporting.

esacli

Use the **esacli** command to control the locally running Electronic Service Agent instance.

Synopsis

`esacli` *subcommand subcommand-options*

Description

The **esacli** command enables you to control the locally running Electronic Service Agent instance.

Operands

subcommand
    Specifies the specific subcommand to be performed.

Options

subcommand-options
    Specifies the options specific to the subcommand to be performed. See the specific subcommand documentation for the options specific to the command.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **5**: An unsupported command was specified.
- **9**: Unexpected error. Contact your support.
- **10**: Unsupported option was specified. Option: {option}.
- **13**: An invalid host name was specified for a subcommand host option.
- **14**: A required option was not provided. Option: {option}.
- **16**: The export operation failed. Reason: {Reason}
- **17**: The import operation failed. Reason: {Reason}
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **20**: An output file could not be created. Reason: {Reason}
- **21**: An input file could not be read. Reason: {Reason}
- **22**: An invalid email address was specified. Email: {email} for option {option}.
- **23**: An invalid country was specified. Country: {country}.
- **24**: An invalid phone number was specified. Phone: {Phone}
- **25**: An invalid state or province was specified. State: {State}
- **26**: An invalid postal code: {code} for country code {country code} and state/province {state/province}
- **27**: An invalid IBM ID was specified. IBM ID: {id}
- **28**: Activation failed. Reason: {Reason}.
- **29**: The IBM Electronic Service Agent instance has not been activated.
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **31**: An integer value was not provided when required. Option: {name} Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **33**: Connectivity test failed.
- **34**: Notification test failed. Reason: {Reason}
- **35**: Operational test failed
- **36**: Test problem creation failed.
- **37**: Invalid problem ID specified.
- **38**: Problem deletion failed.
- **39**: Problem update failed.
- **40**: IBM Electronic Service Agent instance is not currently suspended.
- **41**: Invalid value specified: {value}. Value should be specified like {date format} for option {option}.
- **42**: Invalid value {value} specified for the {option} option.
- **43**: IBM Electronic Service Agent is already active.
- **44**: IBM Electronic Service Agent did not start.
- **45**: Mutually exclusive arguments used together.
- **46**: Can not delete required information.
- **47**: Unable to update connection settings. Reason: {reason}
- **49**: The {collector} collector did not start. Reason: {Reason}
- **50**: The primary and secondary contacts can not be the same.
- **51**: The help subcommand {command} is not supported.
- **52**: Administrator privileges needed to run this command.
- **55**: Option {option} is not a valid option when {option} is set to {value}.
- **56**: Interface {interface} not valid. Reason: {reason}.
- **59**: The backup operation failed. Reason: {reason}.
- **60**: The restore operation failed. Reason: {Reason}.
- **61**: Not a valid option value. Option: {option}.
- **62**: Token already exists.

Examples

- No command specified

  This example illustrates running the **esacli** command without specifying a subcommand to run.

```
Usage: esacli <subcommand> <subcommand-options>
Subcommands:
  activity            Show activity log entries.
  contactSettings     Sets and lists contact information for the monitored
                      system.
  export              Export configuration settings.
  help                Provides command help.
  ibmId               Sets IBM IDs associated with this ESA
                      system.
  import              Import configuration settings.
  locationSettings    Configures and displays system location information.
  logSettings         Sets and lists logging level.
  notificationSettings Configures notification settings.
  problem             Work with problems.
  problemSettings     Configures frequency of notification retries in case
                      of failure and displays settings.
  resume              ESA resumes monitoring of the system.
  service             Displays inventory collection settings and
                      collects inventory.
  serviceSettings     Configures the frequency of inventory collection.
  start               Starts ESA.
  status              Display agent status.
  stop                Stops ESA.
  suspend             ESA suspends monitoring of the system.
  test                Performs test operations for
                      connectivity, notification,
                      operations, and problem generation.
```

Related reference:

"How to read syntax diagrams" on page 89

Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli activity

Use the **esacli activity** command to display activity log entries for the IBM Electronic Service Agent instance.

Synopsis

esacli activity [[-m *count*] | [{-b *start-date-time*} {-e *end-date-time*}]]

Description

The **esacli activity** command enables you to display activity log entries for the IBM Electronic Service Agent instance.

Options

-m | --max *count*
   Specifies the maximum number of entries from the end of the activity log to be displayed. You must specify a positive integer value. The entire activity log is displayed if this option is not specified.

-b | --begin *date-timestamp*
   Specifies a date and time for the earliest entry from the activity log to be returned. The date and time may be specified using local conventions for specifying a date and time. Use help for this command to see a sample format for specifying a date and time value. The date and time can also be specified using ISO 8601 an international system for specifying dates and times. An ISO 8601 date and time should be expressed with the following format: YYYY-MM-DD HH:MM. The time is expressed using a 24-hour clock.

-e | --end *date-timestamp*

Specifies a date and time for the latest entry from the activity log to be returned. The date and time may be specified using local conventions for specifying a date and time. Use help for this command to see a sample format for specifying a date and time value. The date and time can also be specified using ISO 8601 an international system for specifying dates and times. An ISO 8601 date and time should be expressed with the following format: YYYY-MM-DD HH:MM. The time is expressed using a 24-hour clock.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: The IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **29**: IBM Electronic Service Agent instance has not been activated.
- **31**: An integer value was not provided when required.
- **32**: An integer value was not in the valid range.
- **41**: Invalid value specified: {value}. Value should be specified like {date format} for option {option}.
- **42**: Invalid value {value} specified for the {option} option.
- **45**: Mutually exclusive arguments used together.

Examples

- List the last six entries in the activity log

  This example illustrates running the **esacli activity** command to list the last six entries in the activity log.

  ```
  esacli activity -m 6
  Activity log entries:
    Jul 23, 2010 5:43:39 PM:  Operational test successful.
    Jul 22, 2010 8:59:28 PM:  Software service information sent.
    Jul 22, 2010 8:58:34 PM:  Software service information collection initiated.
    Jul 22, 2010 8:57:39 PM:  Software service information sent.
    Jul 22, 2010 8:55:40 PM:  Hardware service information collection initiated.
    Jul 22, 2010 8:56:34 PM:  Software service information sent
  ```
- List the activity entries between two dates using a locale format.

  This example illustrates running esacli activity to list the activity between two dates and times using a locale specific format.

  ```
  esacli activity -b "Jul 22, 2012" -e "Jul 24, 2012"
  Activity log entries:
   Jul 23, 2012 5:43:39 PM:  Operational test successful.
   Jul 22, 2012 8:59:28 PM:  Software service information sent.
   Jul 22, 2012 8:58:34 PM:  Software service information collection initiated.
   Jul 22, 2012 8:57:39 PM:  Software service information sent.
   Jul 22, 2012 8:55:40 PM:  Hardware service information collection initiated.
   Jul 22, 2012 8:56:34 PM:  Software service information sent.
  ```
- List the activity entries between two dates

  This example illustrates running esacli activity to list the activity between two dates using an ISO 8601 format.

  ```
  esacli activity -b 2012-07-21 -e 2012-07-24
  Activity log entries:
   Jul 23, 2012 5:43:39 PM:  Operational test successful.
   Jul 22, 2012 8:59:28 PM:  Software service information sent.
   Jul 22, 2012 8:58:34 PM:  Software service information collection initiated.
  ```

```
Jul 22, 2012 8:57:39 PM:  Software service information sent.
Jul 22, 2012 8:55:40 PM:  Hardware service information collection initiated.
Jul 22, 2012 8:56:34 PM:  Software service information sent.
```
Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli clusterInformation

Use the **esacli clusterInformation** to set and display cluster information.

Synopsis

```
esacli clusterInformation {[ -d ]}
```

```
esacli clusterInformation { [ -e  false]}
```

```
esacli clusterInformation [-e true] {-t type} {-m model} {-s serialVersion}
```

Description

The **esacli clusterInformation** command sets and displays cluster information. This command indicates that it completed successfully with a message: `This command completed successfully`. When the display option is specified, the new settings are displayed. This command also displays the current settings when run with only the display option or when no option is specified.

Options

-d | --display
    Specifies the setting values are to be displayed.

-e | --enable *true or false*
    Specifies to enable or disable the cluster

-t | --type *Machine Type*
    Specified the type of the machine.

-m | --model *Machine Model*
    Specified the model of the machine.

-s | --serial *serial Number*
    Specifies the serial number of the machine.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.

Examples

- Display the cluster information.

  esacli clusterInformation [-d]
  ```
  Machine is part of cluster: true
   Type: 9110
   Model Number: 51A
   Serial Number: 10607EA
  ```
- Set the cluster information.

```
esacli clusterInformation -e true -t 9110 -m 51A -s 10607EA
esacli clusterInformation -e false
```

esacli contactSettings

Use the **esacli contactSettings** command to configure the service contact information.

Synopsis

```
esacli contactSettings [-d [script]]
```

```
esacli contactSettings [-d [script]] {-o organization} [-a address]
[-b address] [-h address] [-m city] [-s state] {-c country}
[-z postal-code] [-f phone] [-g alt fax] [-q help] {-n contact name}
{-p contact phone} [-i alt phone] {-e contact email} [-j alt email]
[-y pager] {-w secondary name} {-k secondary contact phone}
[-r secondary contact alt phone] {-x secondary contact email}
```

Description

The **esacli contactSettings** command configures the service contact information. The **esacli contactSettings** command displays and sets the configuration information for IBM Electronic Service Agent instance associated with the service contact information. All required fields must be entered to run this command. All optional fields not specified will be cleared. This command will indicate that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Options

-d | --display
Specifies the setting values are to be displayed.

The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify contactSettings values, follow these steps:

1. Display the current contactSettings values by running the following command:

   ```
   esacli contactSettings -d
   ```

   Tip: You can display the help for the contactSettings command by running the following command: esacli help contactSettings.

2. Save the output of the contactSettings command to a file by running the following command:

   ```
   esacli contactSettings -d script > contacts.script
   ```

3. Edit the contacts.script file to specify the wanted values.
4. Change the contacts.script file to an executable script file.
5. Run the contacts.script file to set the contactSettings values on this or other systems.

-o | --organization *organization*
Specifies the name of the organization or company responsible for the system.

-a | --organization.address1 *address*
Specifies the address line 1 where the organization is located.

-b | --organization.address2 *address*
Specifies the address line 2 where the organization is located.

-h | --organization.address3 *address*
Specifies the address line 3 where the organization is located.

-m | --organization.city *city*
Specifies the name of the city where the organization is located.

-s | --organization.state *state*
Specifies the name of the state or province where the organization is located. If the organization country is set to the United States or Canada, then a valid state or province setting must be a valid 2 character state or province abbreviation.

-c | --organization.country *country*
Specifies the name of the country or region for the organization. The country must be specified as a valid two letter code as defined by ISO-3166. This setting cannot be cleared.

-z | --organization.postal *postal_code*
Specifies the postal code where the organization is located.

-f | --organization.fax *phone*
Specifies the facsimile (fax) number where the organization is located. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length.

-g | --organization.altfax *phone*
Specifies the alternate facsimile (fax) number where the organization is located. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length.

-q | --organization.help *phone*
Specifies the telephone help desk number for the organization. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length.

-n | --contact.name *name*
Specifies the name of the primary person responsible for the system. This setting cannot be cleared.

-p | --contact.phone *phone*
Specifies the telephone number where the primary contact person can be reached. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length. This setting cannot be cleared.

-i | --contact.altphone *phone*
Specifies the telephone number where the primary contact person can be reached. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length.

-e | --contact.email *email*
Specifies the email address for the primary contact person. This setting cannot be cleared.

-j | --contact.altemail *email*
Specifies the alternative email address for the primary contact person.

-y | --contact.pager *phone*
Specifies the pager number where the secondary contact person can be reached. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length. This number can contain a PIN number.

-w | --sec.contact.name *name*
Specifies the name of the secondary person in the organization responsible for the system. This setting cannot be cleared.

-k | --sec.contact.phone *phone*
Specifies the telephone number where the secondary contact person can be reached. Valid United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length. This setting cannot be cleared.

-r | --sec.contact.altphone *phone*
Specifies an alternative telephone number where the secondary contact person can be reached. Valid

United States and Canada numbers must be between 10 and 30 alphanumeric characters in length. Other telephone numbers must be between 5 and 30 characters in length.

-x | --sec.contact.email *email*
Specifies the email address for the secondary contact person. This setting cannot be cleared.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **22**: An invalid email address was specified. Email: {email} for option {option}.
- **23**: An invalid country or region was specified. Country: {country}.
- **24**: An invalid phone number was specified. Phone: {Phone}
- **25**: An invalid state or province was specified. State: {State}
- **26**: An invalid postal code: {code} for country code {country code} and state/province {state/province}
- **42**: Invalid value {value} specified for the {option} option.
- **50**: The primary and secondary contacts cannot be the same.

Examples

- Display the current contact settings

  This example shows how to use **esacli contactSettings** to display the current settings.

  ```
  esacli contactSettings -d
   Company Information
      Company name:           IBM
      Street address Line 1:  2455 South Rd
      Line 2:
      Line 3:
      City:                   Poughkeepsie
      State or province:      NY
      Country or region:      US
      Postal code:            12603
      Fax number:             9296307095
      Alternate fax number:   0016024545
      Help desk number:       4777736840
   Primary Contact
      Contact name:           Primary Contact
      Telephone number:       0312810438
      Alternate telephone number: 6724959392
      E-mail:                 email1@ibm.com
      Alternate e-mail:       email2@ibm.com
      Pager number:           5638578295
   Secondary Contact
      Contact name:           Secondary Contact
      Telephone number:       4233691129
      Alternate telephone number: 7173103933
      E-mail:                 email3@lotus.com
  ```

- Set several values

  This example shows how to use **esacli contactSettings** to set several values.

  ```
  esacli contactSettings –o IBM
  –a "2455 South Rd."
  –m "Poughkeepsie"
  –s "NY"
  –c "US"
  –z "12601"
  –n "John Primary"
  ```

```
–p "8455559464"
–e "jd@ibm.com"
–w "Joe Backup"
–k "8455551212"
–x "jbackup@us.ibm.com"
```

Related tasks:

"Specifying service contact information" on page 14
Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli export

Use the **esacli export** command to export the configuration settings for the IBM Electronic Service Agent instance.

Synopsis

```
esacli export {-f file_name} [-r]
```

Description

The **esacli export** command enables you to write the configuration settings for the IBM Electronic Service Agent instance to a file.

Options

-f | --file *file_name*
> Specifies the name of a file to which the configuration settings are to be written.
>
> The file can specify either an absolute path or a path relative to the current working directory. The file cannot already exist unless the replace option is specified.

-r | --replace
> Specifies the file to which the configuration settings are to be written can replace an existing file.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **16**: The export operation failed. Reason: {Reason}
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **20**: An output file could not be created. Reason: {Reason}

Examples

- Successful export

  This example illustrates running the **esacli export** command.
  ```
  esacli export -f export.file
  ```
Related tasks:

"Exporting a configuration" on page 42
The export configuration function allows you to export Electronic Service Agent configuration information to a file so you can use the same contact and location information and operational settings on another system.

Related reference:

Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli generateToken

Use the **esacli generateToken** command to generate token for the IBM Electronic Service Agent.

Synopsis

```
esacli generateToken {[-f ]}
```

Description

The **esacli generateToken** command enables you to generate an access token that can be used to update the settings of ESA, once the ESA is activated.

Options

-f | --force
    Generates token, even if token already exists.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **5**: An unsupported command was specified.
- **10**: Unsupported option was specified. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **62**: Token already exists.

Examples

This example illustrates running the **esacli generateToken** command.

esacli generateToken -f
Token generated successfully.

esacli generateToken
0062: Token already exists.

esacli help

Use the **esacli help** command to receive information about using the various **esacli** functions.

Synopsis

```
esacli help <subcommand>
```

Description

The **esacli help** command enables you to display the syntax and a brief description of the specified subcommand.

Operands

subcommand
    Specifies the specific subcommand for which help is requested.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **51**: The help subcommand {command} is not supported.

Examples

- No command specified

   This example illustrates running the **esacli help** command without specifying a subcommand.

   Note: Some subcommands are not available for HMC-controlled systems. The output of the **esacli help** command shows only available subcommands.

   ```
   esacli help
   Provide command help.
   Usage: esacli help [subcommand]
   Subcommands:
     activity             Show activity log entries.
     contactSettings      Sets and lists contact information for the monitored
                          system.
     export               Export configuration settings.
     help                 Provides command help.
     ibmId                Sets IBM ids associated with this ESA
                          system.
     import               Import configuration settings.
     locationSettings     Configures and displays system location information.
     logSettings          Sets and lists logging level.
     notificationSettings Configures notification settings.
     problem              Work with problems.
     problemSettings      Configures frequency of notification retries in case
                          of failure and displays settings.
     resume               ESA resumes monitoring of the system.
     service              Displays inventory collection settings and
                          collects inventory.
     serviceSettings      Configures the frequency of inventory collection.
     start                Starts ESA.
     status               Display agent status.
     stop                 Stops ESA.
     suspend              ESA suspends monitoring of the system.
     test                 Performs test operations for
                          connectivity, notification,
                          operations, and problem generation.
   ```

- Provide command help

   This example illustrates running the **esacli help** command.

   ```
   esacli help activity
   Help for activity

   Summary
     Use the esacli activity command to display activity log entries for IBM
     Electronic Service Agent instance.

   Synopsis

     esacli activity [[-m count] | [{-b start-date-time} {-e end-date-time}]]

   Description
     The esacli activity command displays activity log entries for IBM Electronic
     Service Agent instance.
   ```

```
Options
  -m | --max count
     Specifies the maximum number of entries from the end of the activity
     log to be displayed. A positive integer value must be specified. The
     entire activity log is displayed if this option is not specified.

  -b | --begin date-timestamp
     Specifies a date and time for the earliest entry from the activity log
     to be returned. The date and time may be specified using local
     conventions for specifying a date and time. Use help for this command
     to see a sample format for specifying a date and time value. The date
     and time can also be specified using ISO 8601 an international system
     for specifying dates and times. An ISO 8601 date and time should be
     expressed with the following format: YYYY-MM-DD HH:MM. The time is
     expressed using a 24 clock.

  -e | --end date-timestamp
     Specifies a date and time for the latest entry from the activity log
     to be returned. The date and time may be specified using local
     conventions for specifying a date and time. Use help for this command
     to see a sample format for specifying a date and time value. The date
     and time can also be specified using ISO 8601 an international system
     for specifying dates and times. An ISO 8601 date and time should be
     expressed with the following format: YYYY-MM-DD HH:MM. The time is
     expressed using a 24 clock.


Exit status
  0 = The operation completed successfully.
  1 = IBM Electronic Service Agent instance is not running.
  10 = Unsupported option was specified. Option: {option}.
  14 = A required option was not provided. Option: {option}.
  18 = An option was set more than once. Option: {option}.
  19 = An option value was not provided when required. Option: {option}.
  29 = IBM Electronic Service Agent instance has not been activated.
  31 = An integer value was not provided when required. Option: {name} Value:
       {value}.
  32 = An integer value was not in the valid range. Option: {option value}
       Range: {min-max}.
  41 = Invalid value specified: {value}. Value should be specified like {date
       format} for option {option}.
  42 = Invalid value {value} specified for the {option} option.
  45 = Mutually exclusive arguments used together.


Examples

  1. List the last 6 entries in the activity log
  This example illustrates running esacli activity to list the last 6 entries in
the activity log.
    > esacli activity -m 6
    Activity log entries:
    Jul 23, 2010 5:43:39 PM:  Operational test successful.
    Jul 22, 2010 8:59:28 PM:  Software service information sent.
    Jul 22, 2010 8:58:34 PM:  Software service information collection initiated.
    Jul 22, 2010 8:57:39 PM:  Software service information sent.
    Jul 22, 2010 8:55:40 PM:  Hardware service information collection initiated.
    Jul 22, 2010 8:56:34 PM:  Software service information sent.

  2. List the activity entries between two dates using a locale format.
  This example illustrates running esacli activity to list the activity between
two dates and times using a locale specific format.
    > esacli activity -b "7/21/12 3:56 PM" -e "7/24/12 3:56 PM"
    Activity log entries:
    Jul 23, 2012 5:43:39 PM:  Operational test successful.
    Jul 22, 2012 8:59:28 PM:  Software service information sent.
```

```
Jul 22, 2012 8:58:34 PM:  Software service information collection initiated.
Jul 22, 2012 8:57:39 PM:  Software service information sent.
Jul 22, 2012 8:55:40 PM:  Hardware service information collection initiated.
Jul 22, 2012 8:56:34 PM:  Software service information sent.

 3. List the activity entries between two dates using a standard format.
  This example illustrates running esacli activity to list the activity between
two dates using an ISO 8601 format.
   > esacli activity -b 2012-07-21 -e 2012-07-24
   Activity log entries:
Jul 23, 2012 5:43:39 PM:  Operational test successful.
Jul 22, 2012 8:59:28 PM:  Software service information sent.
Jul 22, 2012 8:58:34 PM:  Software service information collection initiated.
Jul 22, 2012 8:57:39 PM:  Software service information sent.
Jul 22, 2012 8:55:40 PM:  Hardware service information collection initiated.
Jul 22, 2012 8:56:34 PM:  Software service information sent.
```

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli ibmId

Use the **esacli ibmId** command to add IBM user IDs that can access the Electronic Service Agent support website to view status.

Synopsis

```
esacli ibmId —i {IBM user id list}
```

Description

The **esacli ibmId** command adds IBM user IDs that can access the Electronic Service Agent support website to view status.

Options

-i | --ibmid
   Comma-separated list of IBM user IDs to be granted access to the Electronic Service Agent website.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **27**: An invalid IBM ID was specified. IBM ID: {id}

Example

- Set IBM user accounts

   The example illustrates adding two user IDs to access the Electronic Service Agent website.

   esacli ibmId —i "user1,user2"
   ```
   The command completed successfully.
   ```

Related tasks:

"Providing IBM IDs" on page 33
An IBM ID is needed to view service information that was sent to IBM Support by Electronic Service Agent. Service information can be viewed on the Electronic Services website.

Related reference:
"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli lsentityIds

Use the **esacli lsentityIds** to display the entity IDs associated with the hosts.

Synopsis

```
esacli lsentityIds

esacli lsentityIds [-h hostname]
```

Description

The **esacli lsentityIds** command displays the entity IDs of all the hosts or a specific host.

Options

-h | --host

Displays the entity ID associated with the specified host.

To collect the entity ID of a particular host, specify the host name on which performance management data needs to be collected. The host can be a remote host or the primary system on which ESA is installed. For the primary system, the value can be either "localhost" or the output of the command host name. For remote host, the value can be either host name or system name / IP address that is used to discover the system.

Note: You might get the following error messages for the respective conditions:

Condition	Error message
Provided an invalid host name	**Specified host name is invalid**
If there is no entity ID associated with given host name	**No Entity IDs for the specified host**
If you provide the option **-h** and did not specify the host name (option value).	**An option value was not provided**

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **13**: An invalid host name was specified for a subcommand host option.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.

Examples

- Lists entity Ids of all hosts

  ```
  esacli lsentityIds
  EntityId|HostName|MachineType|MachineModel|SerialNumber|IPAddresses
  EPS/BOUB24924961|sa6p05|9117|MMA|10F94EB|9.5.103.126,2002:905:150e:301:214:5eff:fe5f:1a24,
  fe80::214:5eff:fe5f:1a24
  EPS/BOUB24925162|PEkvm|8286|41A|TU00010|fe80::42f2:e9ff:fe5a:8dec,9.5.31.12,
  fe80::42f2:e9ff:fe5a:8dec,192.168.122.1
  ```

- List entity Id associated with a specific host

```
esacli lsentityIds -h sa6p05
EntityId|HostName|MachineType|MachineModel|SerialNumber|IPAddresses
EPS/BOUB24924961|sa6p05|9117|MMA|10F94EB|9.5.103.126,2002:905:150e:301:214:5eff:fe5f:1a24,
fe80::214:5eff:fe5f:1a24
```

esacli import

Use the **esacli import** command to import the configuration settings for the Electronic Service Agent instance.

If the configuration settings being imported include values for all of the required options for the **esacli activate** command, then the Electronic Service Agent instance will be activated as if the **esacli activate** command had been used.

Synopsis

```
esacli import {-f file_name}
```

Description

The **esacli import** command enables you to import the configuration settings for the Electronic Service Agent instance from a file.

Options

-f | --file {*file_name*}
Specifies the name of a file from which the configuration settings are to be read. The **esacli export** command can be used to generate a file with the proper format for the **esacli import** command. The generated file includes comments documenting the various settings which can be changed. The file can specify either an absolute path or a path relative to the current working directory.

Note: The file that is used for importing properties using **esacli import** command must not contain values with leading or trailing spaces. Import action fails if **esacli import -f import.properties** command is used and if a property in the import.property file contains a leading or a trailing space.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **17**: The import operation failed. Reason: {Reason}
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **21**: An input file could not be read. Reason: {Reason}

Examples

- Successful import

  This example illustrates running the **esacli import** command.
  ```
  esacli import -f import.file
  ```

Related tasks:

"Importing a configuration" on page 43
The import configuration function allows you to import an Electronic Service Agent configuration file so you can use the same contact and location information and operational settings as used on another system.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli locationSettings

Use the **esacli locationSettings** command to configure and display the system location information.

Synopsis

```
esacli locationSettings [-d [script]]

esacli locationSettings [-d [script]] {-c country} {-s state-or-province}
{-z postal-code{ {-m city} {-a address}{-b building}
{-p phone}
```

Description

The **esacli locationSettings** command configures and displays the system location information. The **esacli locationSettings** command enables you to display and or change the configuration settings for IBM Electronic Service Agent instance associated with the system location. All required fields must be entered to run this command. All optional fields not specified will be cleared. This command will indicate that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Options

-d | --display

> Specifies the setting values are to be displayed.

> The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify locationSettings values, follow these steps:

> 1. Display the current locationSettings values by running the following command:

>    ```
>    esacli locationSettings -d
>    ```

>   **Tip:** You can display the help for the locationSettings command by running the following command: `esacli help locationSettings`.

> 2. Save the output of the locationSettings command to a file by running the following command:

>    ```
>    esacli locationSettings -d script > locations.script
>    ```

> 3. Edit the `locations.script` file to specify the wanted values.

> 4. Change the `locations.script` file to an executable script file.

> 5. Run the `locations.script` file to set the locationSettings values on this or other systems.

-c | --location.country *country*

> Specifies the name of the country or region for the system location. The country must be specified as a valid two letter code as defined by ISO-3166.

-s | --location.state *state*

> Specifies the name of the state or province where the system is located. If the location country is set to the United States or Canada, then a valid state or province setting must be a valid 2 character state or province abbreviation.

-z | --location.postal *postal code*

> Specifies the postal code where the system is located.

-m | --location.city *city*

> Specifies the name of the city where the system is located.

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-a | --location.address *address*
Specifies the address where the system is located.

-b | --location.building *location*
Specifies the address where the system is located.

-p | --location.phone *phone*
Specifies the telephone number where the system is located. Valid United States and Canada telephone numbers must be between 10 and 30 alphanumeric characters and cannot contain any dashes. Other telephone numbers can include any type of character but must be between 5 and 30 characters in length.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **23**: An invalid country or region was specified. Country: {country}.
- **24**: An invalid phone number was specified. Phone: {Phone}
- **25**: An invalid state or province was specified. State: {State}
- **26**: An invalid postal code: {code} for country code {country code} and state/province {state/province}
- **42**: Invalid value {value} specified for the {option} option.

Examples

- Display the current system location settings

  This example illustrates running the **esacli locationSettings** to display the current settings.

  ```
  esacli locationSettings -d
   System Location
     Country or region: United States
     State or province: NY
     Postal code: 12601
     City: Poughkeepsie
     Street address: 2455 South Rd
     Building, floor, office: 707, 1M-71
     Telephone number: 8005551212
  ```

- Set system location values

  This example illustrates running the **esacli locationSettings** to set several values.

  ```
  esacli locationSettings —a "2455 South Rd." —m "Poughkeepsie" —s "NY" —c "US"
  —z "12601" —p "8455559464" —b "Building 707 Floor 2 Rm M71"
  ```

Related tasks:

"Specifying service contact information" on page 14
Specifying Electronic Service Agent service contact information is the first step in preparing to connect to IBM Support.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli logSettings

Use the **esacli logSettings** command to set and display information for the current logging level.

Synopsis

```
esacli logSettings [-d [script]]
```

```
esacli logSettings [-d [script]] {-l level}
```

Description

The **esacli logSettings** command sets and displays information for the current logging level. This command is used to set and display the logging level. This command will indicate that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Options

-d | --display
   Specifies the setting values are to be displayed.

   The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify logSettings values, follow these steps:

   1. Display the current logSettings values by running the following command:

      ```
      esacli logSettings -d
      ```

      Tip: You can display the help for the logSettings command by running the following command: `esacli help logSettings`.
   2. Save the output of the logSettings command to a file by running the following command:

      ```
      esacli logSettings -d script > log.script
      ```
   3. Edit the `log.script` file to specify the wanted values.
   4. Change the `log.script` file to an executable script file.
   5. Run the `log.script` file to set the logSettings values on this or other systems.

-l | --level Severe | Error | Warning | Information | Debug | Trace
   Specifies the Electronic Service Agent logging level.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **42**: Invalid value {value} specified for the {option} option.

Examples

- Lists logging level

   esacli logSettings -d
   Logging Level: Error
- Sets logging level to Error

   esacli logSettings -l Error

Related tasks:

"Setting the trace level" on page 40
Trace level determines the message severity recorded during Electronic Service Agent activity.

Related reference:

Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli notificationSettings

Use the **esacli notificationSettings** to set and display information indicating where Electronic Service Agent sends notifications when errors occur.

Synopsis

```
esacli notificationSettings [[-d [script]]
```

```
esacli notificationSettings {-t email} [–e true] {–h hostname} {–p port} [–u userid]
[–w password] {–l email-list}
```

```
esacli notificationSettings {-t SNMP} [–e true] {–h hostname} {–p port} {-c SNMP Community}
```

```
esacli notificationSettings {-a "email list"} |{-r "email list"}
```

Description

The **esacli notificationSettings** command sets and displays information indicating where Electronic Service Agent will send notifications when errors occur. This command will indicate that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Options

-d | --display
Specifies the setting values are to be displayed.

The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify notificationSettings values, follow these steps:

1. Display the current notificationSettings values by running the following command:

   ```
   esacli notificationSettings -d
   ```

   Tip: You can display the help for the notificationSettings command by running the following command: `esacli help notificationSettings`.

2. Save the output of the notificationSettings command to a file by running the following command:

   ```
   esacli notificationSettings -d script > notifications.script
   ```

3. Edit the `notifications.script` file to specify the wanted values.
4. Change the `notifications.script` file to an executable script file.
5. Run the `notifications.script` file to set the notificationSettings values on this or other systems.

-t | --type <email|SNMP>
Specifies which setting values are to be displayed or set. This command must be run two times for setting both the email and SNMP values.

-e | --enable true or false
Specifies if notification is enabled or not. The default is true.

-h | --hostname *SMTP server or SNMP network manager host*
Specifies an SMTP server hostname or a SNMP network manager host. A hostname or IP Address can be used.

-p | --port *integer between 1 and 65535*
Specifies an SMTP or SNMP server port.

-u | --userid *user*
> Specifies a SMTP user account.

-w | --password *password*
> Specifies an SMTP user password. The command prompts for the password if the option but not the value is provided.

-l | --list *email list*
> Specifies a comma-separated list of email addresses where notifications will be sent. This list replaces any existing emails.

-c | --community *SNMP Community*
> Specifies a SNMP Community where SNMP traps will be sent.

-a | --add *email address(es)*
> Specifies additional comma-separated email address(es) where emails will be sent. This option is mutually exclusive of other options.

-r | --delete *email address(es)*
> Specifies comma-separated email address(es) to remove from the notification list. This option is mutually exclusive of other options.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **13**: An invalid host name was specified for a subcommand host option.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **22**: An invalid email address was specified. Email: {email} for option {option}.
- **31**: An integer value was not provided when required. Option: [name] Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **42**: Invalid value {value} specified for the {option} option.
- **45**: Mutually exclusive arguments used together.
- **46**: Can not delete required information.
- **55**: Option {option} is not a valid option when {option} is set to {value}.

Examples

- Lists notification settings

  esacli notificationSettings -d
  ```
  Notification Settings
   Send e-mail notifications
    Enabled: true
   SMTP service name: smtp.server.com
   Port: 25
   Userid: smtpu1
   Password: *********
   Addresses: user1@ibm.com, user2@ibm.com
  Send SNMP traps
    Enabled: true
  Target network manager host: snmp.host.com
  Community: snmp community
   Port: 162
  ```

- Set SNMP notification settings

  esacli notificationSettings -t SNMP —e true —h snmp.gateway.com —p 162 —c "SNMP Community"

- Set email notification settings

```
esacli notificationSettings --type email --enable true
--userid "smtpuser" –password "password" --hostname smtp.gateway.com --port 25 --list
"email1@ibm.com,email2@ibm.com"
```

- Add an email recipient

  ```
  esacli notificationSettings –add "email1@ibm.com"
  ```

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli opTestSettings

Use the **esacli opTestSettings** to set and display information indicating when Electronic Service Agent attempts to perform an automatic operational test.

Synopsis

```
esacli opTestSettings [[-d [script]]
```

```
esacli opTestSettings [–e true] {–x time} {–i interval in days}
```

```
esacli opTestSettings {-e false}
```

Description

The **esacli opTestSettings** command sets and displays information indicating when Electronic Service Agent attempts to perform an automatic operational test to IBM servers.

Options

-d | --display
Specifies the setting values are to be displayed.

The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify opTestSettings values, follow these steps:

1. Display the current opTestSettings values by running the following command:

   ```
   esacli opTestSettings -d
   ```

   Tip: You can display the help for the opTestSettings command by running the following command: `esacli help opTestSettings`.

2. Save the output of the opTestSettings command to a file by running the following command:

   ```
   esacli opTestSettings -d script > optest.script
   ```

   Note: For Windows systems, create a batch file in the following format: **esacli opTestSettings -d script > optest.bat**.

3. Edit the `optest.script` file to specify the wanted values.
4. Change the `optest.script` file to an executable script file.
5. Run the `optest.script` file to set the opTestSettings values on this or other systems.

-e | --enable *true or false*
Specifies if the operational test is enabled or not. The default is true.

-i | --interval *days*
Number of days between operational tests. Must be a value between 1-21.

-x | --time *test time*

> Specifies when the test should be run in 15 minute intervals. The format of the time uses the ISO 8601 standard. It is expressed as HH:MM using a 24 hour clock. Times are rounded to 15 minute intervals.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **31**: An integer value was not provided when required. Option: {name} Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **42**: Invalid value {value} specified for the {option} option.

Examples

- Lists operational test settings

```
esacli opTestSettings -d
Operational test
 Automatically test connection to IBM support
  Enabled: true
 Interval: 10 days
 Scheduled time: 15:00
```

- Set operational test settings

```
esacli opTestSettings --enable "true" --interval "11" --time "10:00"
The operation completed successfully.
```

esacli opNotificationSettings

Use the **esacli opNotificationSettings** to set and display information that indicates where Electronic Service Agent sends notifications when operational tests are performed.

Synopsis

```
esacli opNotificationSettings [[-d [script]]

esacli opNotificationSettings [—e true] {—h hostname} {—p port}
{—u userid} {—w password} {—m email}

esacli opNotificationSettings {-e false}
```

Description

The **esacli opNotificationSettings** command uses [-d] to display and [-e] to enable / disable the notification settings. When you run this command with display option or without any option, it displays the current settings.

When you specify the value true for the enable option, you can set the values for host name, port, user ID, password, and email address. When you specify the value false for the enable option, it disables the notification settings. For every successful execution of this command, it displays a message "This command completed successfully".

Note: This command must be run only when directed by IBM service, and any email address that is set must end with ibm.com.

Options

-d | --display
>Displays the values that are set for operational notifications.
>
>Use the optional **script** option to save all the current values to a script file that can be used for updates. For example, to create an executable script file that you can use to specify opNotificationSettings values, follow these steps:
>
>1. Run this command to display the current opNotificationSettings values.
>
>    ```
>    esacli opNotificationSettings -d
>    ```
>
>   **Tip:** To view the help for opNotificationSettings command, run the `esacli help opNotificationSettings` command.
>
>2. Run this command to save the output of the opNotificationSettings command to a file.
>
>    ```
>    esacli opNotificationSettings -d script > opnotifications.script
>    ```
>
>   **Note:** For Windows systems, create a batch file in this format **-esacli opNotificationSettings -d script > opnotifications.bat**.
>
>3. Edit the `opnotifications.script` file to specify the required values.
>4. Change the `opnotifications.script` file to an executable script file.
>5. Run the `opnotifications.script` file to set the opNotificationSettings values on this or other systems.

-e | --enable *true or false*
>Specifies whether notification is enabled or not. The default is true.

-h | --hostname *SMTP server or SNMP network manager host*
>Specifies an SMTP server host name or an SNMP network manager host. A host name or IP address can be used.

-p | --port *integer between 1 and 65535*
>Specifies an SMTP or an SNMP server port.

-u | --userid *user*
>Specifies an SMTP user account.

-w | --password *password*
>Specifies an SMTP user password. If you specify this option and do not provide the value, then the command prompts you for a password.

-m | --email *email address*
>Specifies an email where operational test notifications are sent. This email address must end with `ibm.com`.

Exit status

The **esacli opNotificationSettings** command returns the following codes and messages.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **13**: An invalid host name was specified for a subcommand host option.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **22**: An invalid email address was specified. Email: {email} for option {option}.
- **31**: An integer value was not provided when required. Option: {name} Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **42**: Invalid value {value} specified for the {option} option.

Examples

Use the `esacli opNotificationSettings`command to view or set the respective operational notification settings:

- Lists operational notification settings

```
esacli opNotificationSettings -d
Operational Settings
 Send e-mail notifications
  Enabled: true
 SMTP service name: smtp.server.com
 Port: 25
 Userid: smtpu1
 Password: *********
 Addresses: user1@ibm.com
```

- Set operational notification settings

```
esacli opNotificationSettings --enable true
--userid "smtpuser" –password "password" --hostname smtp.gateway.com
--port 25 --email email@ibm.com
```

esacli problem

Use the **esacli problem** command to work with problems for the IBM Electronic Service Agent instance.

Synopsis

```
esacli problem [-i {id} [-d | -u]]
```

Description

The **esacli problem** command enables you to work with problems for the IBM Electronic Service Agent instance. If a problem ID or service request ID is provided, then the operation that is performed is specific to the problem identified by the problem ID. Otherwise, the list of all open problems is displayed.

Note: This command is not available for HMC-controlled systems.

Options

-d | --delete
   Specifies that the problem is to be deleted.

-i | --id *id*
   Specifies the problem ID or service request ID of the problem for which information is to be displayed or deleted.

-u | --update
   Specifies that an update of the service request status for the problem should be retrieved.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **37**: Invalid problem ID specified.
- **38**: Problem deletion failed.
- **39**: Problem update failed.

- **45**: Mutually exclusive arguments used together.

Examples

- List problems

  This example illustrates running the **esacli problem** command to list the problem summary.

  ```
  esacli problem
  Problem list:
    Problem 138e4ca2c85-4aa3e003:
          Status:           Detected
          Service request:  USE0DSHHGRB
    Problem 137a5f4394d-1dd25937:
          Status:           Open
          Service request:  USE0DSHHZSH
  ```

- Display problem details

  This example illustrates running the **esacli problem** command to display details for a problem.

  ```
  esacli problem -i 139e0629965-1573f832
  Problem information:
      Problem ID:                    139e0629965-1573f832
      Service request:               28507379000
      Status:                        Open
      Is test problem:               Yes
      Problem description:           Test symptom generated by Electronic Service Agent
      Problem severity:              2
      Problem occurrence date/time:  Wed Sep 19 16:15:21 CDT 2012
      Extended problem data:
      Extended problem data available:  No
      Service request status:        Open
      Problem sent:                  Yes
      Number of attempts:            1
      Last changed:                  Wed Sep 19 16:15:37 CDT 2012
      Error code:                    ElectronicService.Test
  ```

- Delete a problem

  This example illustrates running the **esacli problem** command to delete a problem.

  ```
  esacli problem  -i 12a0068d6d9-28094f01 -d
  Problem with local problem ID or service request 12a0068d6d9-28094f01 deleted successfully.
  ```

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli problemSettings

Use the **esacli problemSettings** command to set and display information about how frequently Electronic Service Agent attempts to call a problem home when it is not initially successful at calling home the problem.

Synopsis

```
esacli problemSettings [[-d [script]]
```

```
esacli problemSettings {-r true|false} {-i minutes} {-n number of re-tries}
```

Description

The **esacli problemSettings** command sets and displays information about how frequently Electronic Service Agent attempts to call a problem home when it is not initially successful at calling home the problem. This command indicates that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Note: This command is not available for HMC-controlled systems.

Options

-d | --display

Specifies the setting values are to be displayed.

The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify problemSettings values, follow these steps:

1. Display the current problemSettings values by running the following command:

   ```
   esacli problemSettings -d
   ```

   Tip: You can display the help for the problemSettings command by running the following command: `esacli help problemSettings`.

2. Save the output of the problemSettings command to a file by running the following command:

   ```
   esacli problemSettings -d script > problems.script
   ```

3. Edit the `problems.script` file to specify the wanted values.

4. Change the `problems.script` file to an executable script file.

5. Run the `problems.script` file to set the problemSettings values on this or other systems.

-r | --retry{true or false }

Specifies whether Electronic Service Agent should re-try action to perform when reporting a problem fails.

-i | --interval interval{*integer between 15 and 720***}**

Specifies number of minutes to wait before retrying.

-n | --numtries{[*integer*** | unlimited]}**

Specifies number of times Electronic Service Agent should re-try to report a problem. The value can also be specified as unlimited.

Exit status

The following table contains the codes that are returned by this command.

- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **31**: An integer value was not provided when required. Option: [name] Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **42**: Invalid value {value} specified for the {option} option.

Examples

- List problem information settings

  esacli problemSettings -d
  ```
  Problem information
    Retry:               true
    Interval in minutes:  10
    Number of times:     300
  ```

- Set problem information settings

  ```
  esacli problemSettings --retry true --interval 300 --numtries 3
  ```

Related reference:

Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli resourceFilters

Use the **esacli resourceFilters** to set and display the range of resources that are ignored by Electronic Service Agent.

Synopsis

```
esacli resourceFilters  { [ -d ]}

esacli resourceFilters  [ -a]  {-b  begin range} {-e end range}

esacli resourceFilters  [ -r ] {-b  begin range}{-e end range}
```

Description

The **esacli resourceFilters** sets and displays the range of resources that are ignored by Electronic Service Agent problem reporting. This command indicates that it completed successfully with a message: `This command completed successfully`. When the display option is specified, the resource filters are displayed. This command also displays the current filters when run with only the display option or when no option is specified.

Options

-d | --display
  Specifies list of resource filters to be displayed

-a | --add Resource Filter
  Specifies the resource range to be added.

-r | --remove a resource filter
  Specifies the resource range to be removed

-b | --begin range of resource filter
  This option specifies the begin range and is a required option when **-a** or **-r** is used.

-e | --end range of resource filter
  This option specifies the end range and is a required option when **-a** or **-r** is used.

Exit status

The following table contains the codes that are returned by this command.
* **0**: The operation completed successfully.
* **1**: IBM Electronic Service Agent instance is not running.
* **10**: Unsupported option was specified. Option: {option}.
* **14**: A required option was not provided. Option: {option}.
* **19**: An option value was not provided when required. Option: {option}.
* **31**: An integer value was not provided when required. Option: {name} Value: {value}.
* **42**: Invalid value {value} specified for the {option} option.

Examples

* Display the Resource Filters

  esacli resourceFilters -d
  ```
  111 222
  333 444
  ```

* Add a Resource Filter

  esacli resourceFilters -a -b 333 -e 444
  `The operation completed successfully.`

- Remove a Resource Filter

  ```
  esacli resourceFilters -r -b 333 -e 444
  The operation completed successfully.
  ```

esacli restauth

Use the **esacli restauth** to enable or disable authentication of rest services like data, event, and endpoint services.

Synopsis

```
esacli restauth {-e | -d} "rest services list"
```

Description

The **esacli restauth** command controls the authentication of rest services (data, event and endpoint services). When enabled, the listed commands are authenticated. When disabled, the listed commands are not authenticated for rest services (data, event and endpoint services). This command displays a message - The operation completed successfully. on successful completion.

Options

-e | --enable rest services list

 Specifies a comma-separated list of rest services that are authenticated.

-d | --disable rest services list

 Specifies a comma-separated list of rest services that are not authenticated.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **45**: Mutually exclusive arguments used together.

Examples

- Enables authentication for the provided list of services

  ```
  esacli restauth -e "service1,service2"
  The operation completed successfully.
  ```

- Disables authentication for the provided list of services

  ```
  esacli restauth -d "service1,service2"
  The operation completed successfully.
  ```

esacli resume

Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

Synopsis

```
esacli resume
```

Description

The **esacli resume** command enables you to resume monitoring of the system by Electronic Service Agent.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.

Example

- Resuming Electronic Service Agent

  This example illustrates running **esacli resume** to resume Electronic Service Agent.

  ```
  esacli resume
  The system is being monitored.
  ```

Related tasks:

"Suspending and resuming Electronic Service Agent" on page 44
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to suspend or resume Electronic Service Agent.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli service

Use the **esacli service** command to immediately send inventory to IBM.

Synopsis

```
esacli service [-d]
esacli service {—t type} {-c}
esacli service {—t type} {-c} {-h}
```

Description

The **esacli service** command immediately sends inventory information to IBM when invoked with the --type and collect options. When invoked with only display option, the current settings for inventory collection are displayed.

Options

-d | --display
   Specifies the setting values are to be displayed.

-c | --collect
   Triggers an inventory collection.

-t | --type *type of service information*
   Specifies the type of service information that is collected. Options are **hardware**, **software**, **sysconfig** or **"system configuration"** and **perfmgmt** or **"performance management"**.

-h | --hostname
   Optional. Specify with **-c | --collect** option. Collects the performance management data on the specified host. The host can be a remote host or the primary system on which ESA is installed. For

the primary system, the value can be either "localhost" or the output of the command **hostname**. For remote host, the value can be either host name or system name / IP address that is used to discover the system.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **42**: Invalid value {value} specified for the {option} option.
- **49**: The {collector} collector did not start. Reason: {Reason}

Example

- List service information

  esacli service –t Hardware -c
  ```
  The hardware collector has been started, and will complete in approximately 2-15 minutes.
  Please check the activity log to view the results.
  ```

- Collect performance management data

  esacli service -t "performance management" -c -h localhost
  ```
  The perfmgmt collector has been started, and will complete in approximately 2-15 minutes.
  Please check the activity log to view the results.
  ```

Related tasks:

"Collecting and sending service information" on page 27
Electronic Service Agent collects and sends service information to IBM. Service information consists of hardware, software, system configuration, and performance management information about the system being monitored by Electronic Service Agent.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli serviceSettings

Use the **esacli serviceSettings** command to set and display information about the types of inventory collected and the schedule for sending that inventory to IBM.

Synopsis

```
esacli serviceSettings {–t type} [-d [script]]

esacli serviceSettings {–t type} {–e false}

esacli serviceSettings {–t type} [–e true] {–x time} {–f frequency} [-g day-of-the-week]
[-m day-of-the-month] [-q month-of-the-quarter]]
```

Description

The **esacli serviceSettings** command sets and displays types of inventory collected and the schedule for collecting the information. Times values are rounded to 15-minute intervals. This command will indicate that it completed successfully with a message: This command completed successfully. When the display option is specified, the new settings will be displayed. This command will also display the current settings when run with only the display option or no option is specified.

Options

-d | --display
Specifies the setting values are to be displayed.

The optional **script** option generates this command containing all the current values, which can be used for updates. For example, to create an executable script file that you can use to specify serviceSettings values, follow these steps:

1. Display the current serviceSettings values by running the following command:

   `esacli serviceSettings -d`

   Tip: You can display the help for the serviceSettings command by running the following command: `esacli help serviceSettings`.

2. Save the output of the serviceSettings command to a file by running the following command:

   `esacli serviceSettings -d script > services.script`

3. Edit the `services.script` file to specify the wanted values.
4. Change the `services.script` file to an executable script file.
5. Run the `services.script` file to set the serviceSettings values on this or other systems.

-e | --enable true or false
Specifies whether inventory collection is enabled. The default value is true.

-f | --frequency {daily | weekly | monthly | quarterly}
Specifies how frequently inventory is collected. The words are not case-sensitive. If the type option is set to **perfmgmt** or **"Performance management"**, **daily** must be specified for this option.

-g | --dayofweek *Day of the Week*
If frequency is Weekly, specifies the day of the week. Locale info can be used for different starts of the week. Monday Tuesday, Wednesday, etc.

-m | --dayofmonth *1-28*
If frequency is Monthly, specifies the day of the month.

-q | --monthofquarter *1-3*
If frequency is Quarterly, specifies the month of the quarter.

-t | --type *type of service information*
Specifies the type of service information that is collected. Options are **hardware**, **software**, **sysconfig** or **"system configuration"**, and **perfmgmt** or **"performance management"**.

Note: Performance management information is collected daily.

-x | --time *collection time*
Specifies when the inventory is collected in 15 minute intervals. The format of the time uses the ISO 8601 standard. It is expressed as HH:MM using a 24 hour clock. Times will be rounded to 15 minute intervals.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **14**: A required option was not provided. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **31**: An integer value was not provided when required. Option: [name] Value: {value}.
- **32**: An integer value was not in the valid range. Option: {option value} Range: {min-max}.
- **41**: Invalid value specified: {value}. Value should be specified like {date format} for option {option}.

- **42**: Invalid value {value} specified for the {option} option.
- **55**: Option {option} is not a valid option when {option} is set to {value}.

Examples

- List service settings information

  esacli serviceSettings –d –t Hardware
  ```
  Service information
   Hardware
    Enabled: true
    Collection time: 11:15
    Frequency: Quarterly
    Collection month of quarter: First
  Collection day of month: 1
  ```

- Set service settings information

  ```
  esacli serviceSettings –t hardware –e true –x 13:15 –f daily

  esacli serviceSettings -t hardware –e true –x 13:15 –f weekly –g Monday

  esacli serviceSettings -t hardware –e true –x 13:15 –f monthly –m 28

  esacli serviceSettings -t software –e true –x 13:15 –f quarterly –q 1 –m 14
  ```

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli srcFilters

Use the **esacli srcFilters** to display the system reference codes that are ignored for problem reporting.

Synopsis

```
esacli srcFilters { [ -d ]}
```

Description

The **esacli srcFilters** displays the system reference codes that are ignored for problem reporting. When the display option is specified, the resource filters are displayed. This command also displays the current filters when run with only the display option or when no option is specified.

Options

-d | --display
    Displays the system reference codes.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **10**: Unsupported option was specified. Option: {option}.
- **42**: Invalid value {value} specified for the {option} option.

Examples

- Lists srcFilters

  esacli srcFilters -d
  ```
  762-996
  762-998
  801-102
  802-890
  ```

```
844-405
850-902
950-999
704-128
704-130
A10-200
```

esacli start

Use the **esacli start** command to start Electronic Service Agent.

Synopsis

```
esacli start
```

Description

The **esacli start** command enables you to start Electronic Service Agent.

Exit status

The following table contains the codes that are returned by this command.
* **0**: The operation completed successfully.
* **43**: IBM Electronic Service Agent is already active.
* **44**: IBM Electronic Service Agent did not start.
* **52**: Administrator privileges needed to run this command.

Example

* Starting the Electronic Service Agent

  This example illustrates running **esacli start** to start the Electronic Service Agent.

  esacli start
  The system is being monitored.

Related tasks:

"Stopping and starting Electronic Service Agent" on page 44
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to stop or start Electronic Service Agent.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli status

Use the **esacli status** command to display the status of the IBM Electronic Service Agent instance.

Synopsis

```
esacli status
```

Description

The **esacli status** command enables you to display the status of the IBM Electronic Service Agent instance.

Exit status

The following table contains the codes that are returned by this command.
* **0**: The operation completed successfully.

- **1**: The IBM Electronic Service Agent instance is not active.
- **10**: Unsupported option was specified.
- **29**: The IBM Electronic Service Agent instance has not been activated.
- **30**: The IBM Electronic Service Agent instance is currently suspended.

Examples

- Status after activation

  This example illustrates running the **esacli status** command successfully.

  ```
  The system is being monitored.
  System properties:
      Name:              gwtest05.rchland.ibm.com
      Type:              9406
      Model:             570
      Serial Number:     105A6CC
      Manufacturer:      IBM
      Partition ID:      6
      Operating System:  aix
      Entity ID:         EPS/BOUB11234747
      Product Version:   6.6.8.0 aix61v.gwsa120913
  ```

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli stop

Use the **esacli stop** command to stop Electronic Service Agent.

Synopsis

```
esacli stop
```

Description

The **esacli stop** command enables you to stop Electronic Service Agent.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **52**: Administrator privileges needed to run this command.

Example

- Stopping Electronic Service Agent

  This example illustrates running **esacli stop** to stop Electronic Service Agent.

  ```
  esacli stop
  IBM Electronic Service Agent was stopped.
  ```

Related tasks:

"Stopping and starting Electronic Service Agent" on page 44
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to stop or start Electronic Service Agent.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli suspend

Use the **esacli suspend** command to suspend Electronic Service Agent.

Synopsis

```
esacli suspend
```

Description

The **esacli start** command enables you to suspend monitoring of the system by Electronic Service Agent.

Exit status

The following table contains the codes that are returned by this command.
* **0**: The operation completed successfully.
* **1**: IBM Electronic Service Agent instance is not running.
* **30**: IBM Electronic Service Agent instance is currently suspended.

Example

* Suspending Electronic Service Agent

    This example illustrates running **esacli suspend** to suspend Electronic Service Agent.

    esacli suspend
    ```
    The system is NOT being monitored. IBM Electronic Service Agent is currently suspended.
    ```

Related tasks:

"Suspending and resuming Electronic Service Agent" on page 44
Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to suspend or resume Electronic Service Agent.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli test

Use the **esacli test** command to perform test operations for the IBM Electronic Service Agent instance.

Synopsis

```
esacli test {-c | -o | -p | -n}
```

Description

The **esacli test** command enables you to perform a test operation for the IBM Electronic Service Agent instance.

Options

-c | --connectivity
    Specifies that a connectivity test is to be performed.

-o | --operational
    Specifies that an operational test is to be performed.

-p | --problem
    Specifies that creation of a test problem is to be performed.

    Note: This option is not available for HMC-controlled systems.

-n | --notification

Specifies that a notification test is to be performed.

Tip: Run the **esacli notificationSettings** command to enable notifications before performing a notification test. For information, see "esacli notificationSettings" on page 66.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: The IBM Electronic Service Agent instance is not active.
- **10**: Unsupported option was specified.
- **14**: A required option was not provided.
- **18**: An option was set more than once. Option: {option}.
- **29**: The IBM Electronic Service Agent instance has not been activated.
- **33**: Connectivity test failed.
- **34**: More than one required option was specified.
- **35**: Operational test failed.
- **36**: Test problem creation failed.
- **45**: Mutually exclusive arguments used together.

Examples

- Connectivity test

  This example illustrates running the **esacli test** command to perform a connectivity test.

  ```
  esacli test -cPerforming Connectivity Verification Test
  success  Edge_Bulk_Data_1 esupport.ibm.com                      129.42.56.189  443
  success  Edge_Bulk_Data_2 esupport.ibm.com              129.42.58.189  443
  success  Edge_Bulk_Data_3 esupport.ibm.com                      129.42.60.189  443
  success  Edge_Bulk_Data_4 esupport.ibm.com  2620:0:6c2:200:129:42:60:189  443
  success  Edge_Bulk_Data_5 esupport.ibm.com  2620:0:6c2:200:129:42:58:189  443
  success  Edge_Bulk_Data_6 esupport.ibm.com  2620:0:6c2:200:129:42:56:189  443
  6 successes
  0 failures
  Connectivity Verification Test Results: succeeded
  ```

- Operational test

  This example illustrates running the **esacli test** command to perform an operational test.

  ```
  esacli test -o
  The operational test has been completed successfully.
  ```

- Create test problem

  This example illustrates running the **esacli test** command to create a test problem.

  ```
  esacli test -p
  Test problem created successfully.
  ```

- Notification test

  This example illustrates running the **esacli test** command to create a test notification.

  ```
  esacli test -n
  Test notification sent successfully.
  ```

Related tasks:

"Testing connectivity to IBM" on page 14
You can test your connection to IBM.

Related reference:

"How to read syntax diagrams" on page 89
Review the conventions that are used in syntax diagrams to understand the command descriptions.

esacli token

Use the **esacli token** command to display the private token for the IBM Electronic Service Agent.

Synopsis

`esacli token {[-d]} {[-f json]}`

Description

The **esacli token** command allows to display the token for the IBM Electronic Service Agent.

Options

-d | --display
   Displays the private token.

-f | --format
   Prints the private token in a specific format.

   Note: Currently only *json* format is supported.

Exit status

The following table contains the codes that are returned by this command.
- **0**: The operation completed successfully.
- **1**: IBM Electronic Service Agent instance is not running.
- **5**: An unsupported command was specified.
- **10**: Unsupported option was specified. Option: {option}.
- **18**: An option was set more than once. Option: {option}.
- **19**: An option value was not provided when required. Option: {option}.
- **29**: The IBM Electronic Service Agent instance has not been activated.
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **61**: Not a valid option value. Option: {option}.

Examples

This example illustrates running the **esacli token** command.

```
esacli token -d
activated:  true
esa-url:    https://hostname:5024/rest/v1
token:      606133b2d4d6b32e121b34dd78b30c3c
esacli token -d -f json
{
"activated":true,
"esa-url":"https://hostname:5024/rest/v1",
"token":"606133b2d4d6b32e121b34dd78b30c3c"
}
```

Troubleshooting Electronic Service Agent

Follow these general troubleshooting guidelines when monitoring Electronic Service Agent.

Set the Electronic Service Agent trace level

Adjusting the trace level using the Electronic Service Agent graphical interface allows you to set the message severity recorded during Electronic Service Agent activity. Working with IBM Support to analyze the messages may help you diagnose problems. If the trace level is set to Severe or Error, you may want

to change it to Warning or Information to gather more information about the problem. For more information, see the section "Setting the trace level" on page 40.

View the activity log to see whether there are problems recorded

The activity log shows the date and time a problem occurred, along with a description of the problem. See Displaying the activity log.

If a problem occurs when the system attempts to electronically send a problem or service information to IBM Support, there are many possible reasons why the transmission might not be successful. Electronic Service Agent depends on functions of the operating system to be working correctly. This includes managing the Electronic Service Agent daemon and system connectivity. Normal system problem determination is recommended for this type of problem.

Verifying that service information was sent to IBM Support

Service information collection activity shows the type of service information collected, when it was last collected, and when it was last sent.

If service information is currently being collected or transmitted, the last collected and last sent activity will not show until the tasks are completed.

The tasks of collecting service information and sending service information take time to run. The time needed to collect and send information is influenced by the size of the system, processing load, and the speed of the connection. Here is a summary of the collection and transmission process.

1. A collection task collects new service information.
2. After the collection is complete, a task is started to do the following steps:
   a. Start the connection profile
   b. Connect to IBM Support
   c. Send the service information

To verify that the information was sent to IBM Support, see Displaying service information collection activity.

Problems opening the Electronic Service Agent graphical user interface

If you cannot access the Electronic Service Agent graphical user interface, perform the following steps:
1. Log on to the system as `root` for AIX or `padmin` for VIOS.
2. Enter **smit** at the AIX command prompt for AIX or **cfgassist** for VIOS.
3. Select **Electronic Service Agent** > **Start Electronic Service Agent**.
4. Reconnect to the Electronic Service Agent graphical user interface.

Electronic Service Agent connectivity test fails

Configure the firewall to allow the outbound traffic to all the addresses and ports that are mentioned in the output of `/usr/esa/bin/esacli test -c`. Following are the list of IP addresses and ports that must be configured.

Host name	IP address	Port number
esupport.ibm.com	129.42.56.189	443
esupport.ibm.com	129.42.58.189	443
esupport.ibm.com	129.42.60.189	443
esupport.ibm.com	2620:0:6c2:200:129:42:60:189	443
esupport.ibm.com	2620:0:6c2:200:129:42:58:189	443
esupport.ibm.com	2620:0:6c2:200:129:42:56:189	443

Note: If the problem is not still resolved, contact IBM support. For uploading the required information to IBM support for their further analysis, see the section "Steps to run esaffdc command" on page 87.

Electronic Service Agent activation fails

Electronic Service Agent activation might fail due to any of the following reasons:

1. Connectivity test fails - See section "Electronic Service Agent activation fails"
2. Java version that is used - The most common symptom to identify this error is that CLI works and UI throws 403 error. Ensure that Java is installed and JAVA_HOME points to the Java version required by ESA.
3. Multiple Instances of ESA are running -
   a. To check whether there are any instances of ESA that are already running, run this command - **ps -aef | grep esa** before starting ESA.
   b. To terminate the instances of ESA that are already running, run this command -**kill -9 <<pid of ESA instance>>**.
   c. Always use SMITTY for a smooth shutdown of ESA.

Note: If the problem is not still resolved, contact IBM support. For uploading the required information to IBM support for their further analysis, see the section "Steps to run esaffdc command" on page 87.

Inventory collection failed using provider "com.ibm.esa.aix. PmAixService" due to unexpected error

To resolve the error, follow these steps:

1. Disable data transmission at: **smit topas >> Setup Performance Management >> Disable Data Transmission**.
2. Confirm whether **topasrec** is running or not by using the command - **ps -aef | grep topasrec | grep ypersistent**.
3. If persistent recording is running, stop/kill it by using the command - **kill -9 <<pid of ESA instance>>**.
4. Remove old **topasrec** recording files under /etc/perf/daily/ by using the command - **rm -r***.
5. Remove all files under cd /var/perf/pm/daily/ by using the command **rm -r***.
6. Start a new recording
   a. **smit topas >> Start New Recording >> Start Persistent local recording >> binary**.
   b. Press Enter to start new recording with default settings.
7. Make sure that persistent recording is running by using the command **ps -aef | grep topasrec | grep ypersistent**.
8. Wait for 10 minutes before proceeding to next step.
9. Enable data transmission after 10 minutes at **smit topas >> Setup Performance Management >> Enable Data Transmission**.

10. Run the command **/var/perf/pm/bin/pmcfg** and check whether the files are generated under /var/perf/pm/daily/<hostname> where, host name is the name of partition from command **uname -n**.

11. Run the command **cat /var/perf/pm/daily/pmcfg.log**

12. Run the command **/var/perf/pm/bin/pmcfg -s** to confirm if the file **stats.send** is generated.

13. Transmit the PM data by using the command **/var/perf/pm/bin/pmcfg -T** or through SMIT **smit topas >> Setup Performance Management >> Retransmit Recorded Data**.

Note: If the problem is not still resolved, contact IBM support. For uploading the required information to IBM support for their further analysis, see "Steps to run esaffdc command."

Issue with disk space

Use any of the following commands to increase the disk space for a particular file system:

1. **chfs -a size=<Size> <Filesystem path>**. For example, to set the space of */var* filesystem to 10 GB, **chfs -a size=10GB /var**.

2. **chfs -a size=+<Size> <Filesystem path>**. For example, to increase the space for */usr* filesystem by 6 GB, use the command - **chfs -a size=+6 /usr**.

PM data is not being transmitted from customer system to IBM

Configure the firewall rules and the files /etc/hosts and /etc/resolv.conf to allow outbound traffic to IBM such that the system on which ESA is installed can connect to IBM. For more information, see "Electronic Service Agent activation fails" on page 86.

Note: If the problem is not still resolved, contact IBM support. For uploading the required information to IBM support for their further analysis, see "Steps to run esaffdc command."

Receiving mails on an inactive profile

- Use IBM ID to log in to ESA support portal: https://www-947.ibm.com/support/entry/portal/support.
- Remove inactive profiles from mysystems.

Steps to run esaffdc command

Follow these steps to run the **esaffdc** command:

1. Change the directory to /usr/esa/bin by using the command **cd /usr/esa/bin**.

2. Run **esaffdc** command. This command generates a tar file in the **esaffdc-ESAFFDC-mm-dd-yy.tar** format in the folder /usr/esa/bin.

3. Upload the generated file to IBM. For more information on uploading files to IBM, see section "Steps to upload files to IBM."

Note: Root access is required to run these commands.

Steps to upload files to IBM

Follow these steps to upload files to IBM:

1. Prepend the file name that is to be uploaded to IBM with pmr and PMRNo. File name must be in the **pmr.<<PMR No>>.<<File Name>>** format.

2. FTP to the testcase by using the command **ftp testcase.boulder.ibm.com**.

3. Login with user name as anonymous and password as your IBM account email address. For example, abc.xyz@in.ibm.com.

4. Go to the AIX upload directory by using the command **cd toibm/aix**.
5. Enable binary mode for the FTP session by typing `binary` at the command prompt.
6. Upload the file by using the command **put <<file name>>**.
7. End your FTP session.

Steps to download files from IBM

Follow these steps to download files from IBM:
1. Log in to the system as a `root` user, where you must download the files.
2. Run the command **mkdir /<<directory name>>**. For example, **mkdir /ibm_downloads**.
3. Run the command **cd /<<directory name>>**. For example, **cd /ibm_downloads**.
4. FTP to the testcase by using the command **ftp testcase.boulder.ibm.com**.
5. Log in with user name as `anonymous` and password as your IBM account email address. For example, `abc.xyz@in.ibm.com`.
6. Go to the AIX upload directory by using the command **cd toibm/aix**.
7. Enable binary mode for the FTP session by typing `binary` at the command prompt.
8. Download the necessary files by using the command **get <<file name>>**.
9. End your FTP session.

Unable to activate ESA after you apply interim fix for LWI *(pconsole CVE-2014-0918)*

Error: 0980-014 Unable to send contact information to Electronic Service Agent subsystem. Please ensure the IBM.ESAGENT subsystem is active and try again.

If you are getting the error **0980-014**when you are activating ESA after you apply *ifix* for LWI, run the following commands and activate ESA again.

```
cd /esa
chown -R esaadmin *
```

Note: The issue is seen only when you uninstall ESA after you apply *ifix* for LWI and install ESA.

Related tasks:

"Displaying the activity log" on page 28
Displaying the activity log allows you to see all Electronic Service Agent activity for a designated time period.
"Setting the trace level" on page 40
Trace level determines the message severity recorded during Electronic Service Agent activity.

Appendix - Legacy Server Connections

This table contains the IBM server information that is used by IBM Electronic Service Agent before AIX release 6.1 TL9 SP5, AIX 7.1 TL3 SP5, and AIX 7.2. This appendix exists for reference only.

Table 3. Traditional Server connections

DNS name	IP address	Port	Purpose
eccgw01.boulder.ibm.com	207.25.252.197	443	Transmission of discovery data
eccgw02.rochester.ibm.com	129.42.160.51	443	Transmission of discovery data
www-945.ibm.com	192.42.26.224	443	Problem reporting
www-945.ibm.com	192.42.50.224	443	Problem reporting
www-945.ibm.com	192.42.42.224	443	Problem reporting
www6.software.ibm.com	170.225.15.41	443	Extended error data and system configuration reporting
www.ecurep.ibm.com	192.109.81.20	443	Extended error data and system configuration reporting
www.ibm.com	129.42.56.216	80, 443	Configuration updates
www.ibm.com	129.42.58.216	80, 443	Configuration updates
www.ibm.com	129.42.60.216	80, 443	Configuration updates
www-03.ibm.com	204.146.30.17	80, 443	Configuration updates

Note: If your AIX version is earlier to 6.1 TL9 SP5, AIX 7.1 TL3 SP5, and AIX 7.2, you are likely connecting to the traditional IBM server environment. It is highly recommended that you change your network firewall configuration to allow outbound connections to the new environment to take advantage of the new features. If your network does not allow access to the new servers, ESA transactions to the new servers fail and ESA then reattempts to connect to the traditional servers.

Reference information

This section includes additional reference materials related to Electronic Service Agent.

How to read syntax diagrams

Review the conventions that are used in syntax diagrams to understand the command descriptions.

Syntax diagrams consist of options, option arguments, and operands.

Options
  Options indicate input that affects the behavior of the base command (for example, `-l` specifies long output) or required input that you can specify in different ways (for example, you can target objects using either `-n` *name* OR `-N` *groupname* OR `-ac` *objectclass*). Options consist of either a hyphen and single letter (for example, `-h`) or two hyphens and multiple letters (for example, `--help`). The single letter format is the short form of the multiple letter format, and the two formats are functionally interchangeable when issuing a command.

Option arguments
  Some options are followed by one or more *option arguments* that specify a value for the option. For example, with `-file` *file_name*, *file_name* specifies the name of the file on or with which to take action.

Operands
  Operands are parameters at the end of a command that specify required user input.

Syntax diagrams adhere to the following conventions:
* Options and operands that are enclosed in brackets ([]) are optional. Do not include these brackets in the command.
* Options and operands that are enclosed in braces ({}) are required. Do not include these braces in the command.
* Options and operands that are not enclosed in either brackets or braces are required.

- Operands and option arguments that are italicized must be replaced with actual values.
- The names of options are case-sensitive and must be typed exactly as shown.
- Options preceded by two dashes (--) must be specified in their entirety.
- A pipe (|) character signifies that you can or must, depending on the enclosing characters, choose one option or the other. For example, [a | b] indicates that you can choose either a or b, but not both. Similarly, {a | b} indicates that you must choose either a or b.
- An ellipsis (...) signifies that you can repeat the operand and option argument on the command line.
- A dash (-) represents standard output.

Modem information

Modems were supported in a previous release.

Supported modems include the following

- IBM 7852 - 400
- IBM 7857 - 017
- IBM 7858 - 336
- Multi-Tech MultiModem MT 5600

  Note: See your MultiModem MT 5600 documentation for configuration information.

Modem init strings can be found in the following directory:

```
/var/ecc/dial/modems.txt
```

Modem communication steps

1. Ensure that the system that is running Electronic Service Agent has an available serial port. The serial port must have a TTY device that is available and configured on the system. Use the automatic default options if a TTY device needs to be added.
2. An asynchronous modem with a minimum communications speed of 19200 baud is required. However, for optimum results, a higher baud rate is recommended.
3. The modem and phone must be connected and operational. Make sure to verify the physical connections.

   Remember: The physical port to which the modem is attached does not equate to the assigned TTY port. Check the TTY configuration to associate the physical port to the proper TTY.
4. Ensure that the system running Electronic Service Agent has Point-to-Point Protocol (PPP) installed and configured on it. PPP is only required if a modem is going to be used for reporting information to IBM Support.
   a. If pppcontrold cannot be located, determine if it is installed by entering the following command:
      ```
      lslpp -l bos.net.ppp
      ```

      Attention: You must install the code from the AIX media.
   b. To configured PPP, do the following:
      1) Type
         ```
         smit
         ```
      2) Select **Communications Applications and Services** > **PPP** > **Link Control Configuration** > **Change/Show a Link Configuration**.

         Note: If an error occurs, it means there is no link configured.

         To create a link, perform the following steps:

a) Cancel out of **Change/Show a Link Configuration**.

b) Select **Add a Link Configuration**.

c) These values are used for Electronic Service Agent. The values may be adjusted depending on any additional connections configured.

- PPP Subsystem name = PP
- max server connections(num) = 0
- max client Connections(Num) = 1
- max demand connections(Num) = 0
- max IP interfaces(num) = 1
- Max IPv6 interfaces = 0
- Max IP IPv6 interfaces = 0
- max async hdlc attachments(num) = 545
- mru(Num) = 1500
- async character map (Hex) = 454 (for vty port a0001)
- transmit async character map (Hex) = 343

d) Accept the remaining defaults by clicking **OK**.

e) Return to **PPP** and select **Start PPP**.

Configuring the 7852-400 modem

7852-400 modem configuration includes setting up and initializing the modem to work correctly with Electronic Service Agent.

Complete the following procedure to set up and initialize the 7852-400 modem

The DIP switches on the side of the modem are set at the factory. However, you need to ensure that they are set correctly for use with Electronic Service Agent.

1. Set the DIP switches on the modem as follows:

Table 4. 7852 Model 400 DIP switches

Switch	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Up (On)	On	On				On	On			On			On	On	On	On
Down (Off)			Off	Off	Off			Off	Off		Off	Off				

> **Note:** Switch 5 is set to the off (down) position to disable automatic answering to meet the security requirement that the modem will not answer. Switch 12 is set to the off (down) position for asynchronous mode.

2. Connect the RS232 cable to the modem and to a serial port.

3. Connect the telephone cable (sent with the modem) to the modem connector labeled Line (middle connector), and to the telephone wall jack.

4. Connect the modem power cable to the modem and the transformer to the wall power outlet.

5. Power-on the modem using the power switch that is located on the back of the modem.

Configuring the 7857-017 or 7858-336 modem

7857-017 and 7858-336 modem configuration includes setting up, initializing, and placing the modem in a known configuration to work correctly with Electronic Service Agent.

Complete the following procedure to set up and initialize the 7857-017 or 7858-336 modem

1. Connect the RS232 cable to the modem and to a serial port.

2. Connect the telephone cable (sent with the modem) to the modem connector labeled PSTN, and to the telephone wall jack.

3. Connect the modem power cable to the wall power outlet.
4. Power-on the modem.
5. Wait for the main display panel to appear.

Complete the following procedure to place the modem in a known configuration

After the modem is powered on and local tests have completed, two lines of configuration information are displayed on the modem LCD panel.

1. Press the down arrow key 12 times until the CONFIGURATIONS message is displayed.

   ```
   ↓ CONFIGURATIONS D12
   Press →
   ```

2. Press the right arrow key until the Select Factory message is displayed.

   ```
   → CONFIGURATIONS D12
   Select Factory_
   ```

3. Press the Enter key to select the Factory configuration option.

4. Press the arrow key until 0 is displayed.

   ```
   ↑ CONFIGURATIONS D12
   Select Factory 0
   ```

5. Press the Enter key to load the predefined factory configuration 0.

   ```
   IBM 7857 AT CMD aa ■
   td_rd_dsr_ec ■ ll_            ■ = Shows LCD as on.
   ```

6. Press the down arrow key 7 times until the S-REGISTER message is displayed.

   ```
   ↓ S-REGISTER D7
   Press →
   ```

7. Press the right arrow key until the message Ring to answ. on is displayed.

   ```
   → S-REGISTER D7
   Ring to answ. On=2
   ```

8. Press the Enter key to select Ring to answ. on.

   ```
   S-REGISTER D7
   Ring to answ. On=
   ```

9. Press the up arrow key until 0 is displayed.

   ```
   ↑ S-REGISTER D7
   Ring to answ. On=0
   ```

10. Press the Enter key to set Auto Answer to 0.

    ```
    S-REGISTER D7
    Press →
    ```

11. Press the down arrow key 5 times until the CONFIGURATIONS message is displayed.

    ```
    ↓ CONFIGURATIONS D12
    Press →
    ```

12. Press the right arrow key 3 times until the Store User Conf. message is displayed.

    ```
    → CONFIGURATIONS D12
    Store User Conf._
    ```

13. Press the Enter key to select the Store User Configuration option.

14. Press the up arrow key until 0 is displayed

    ```
    ↑ CONFIGURATIONS D12
    Store User Conf. 0
    ```

15. Press the Enter key to select location 0.

16. Press the Enter key to save current configuration into User 0.

    ```
    CONFIGURATIONS D12
    Press →
    ```

17. Press the Enter key to return to the main display panel.

```
IBM 7857 AT CMD aa_
td_rd_dsr_ ec ■ 11_              ■ = Shows LCD as on.
```
The modem is now correctly configured for use by Electronic Service Agent.

Note:

1. The modem initialization strings provided are on an as is basis. Although they have been tested in a typical environment, they may need to be modified depending on the actual setup and configuration of your environment.

2. If modem configuration assistance is required, you should contact the modem vendor for assistance. Information regarding modem standards, general modem setup, and specific configuration tips for IBM asynchronous adapters can be found in the modems package on aixserv.

Connecting to IBM Support through a dial connection

Connecting Electronic Service Agent to IBM Support through modem support (dial) is slower than other connection methods and each Electronic Service Agent client must have a separate Internet connection. However, it is your only option if you do nothave a direct connection to the Internet.

You selected to use a dialup connection to IBM Support.

To specify a dialup connection type, complete the following steps:

1. Enter yes in the **Test service configuration** field to automatically test the connection after all information is entered and Enter is pressed.

2. In the **TTY Port of modem** field, enter the port number of the modem to be used for the dialup connection.

3. In the **Modem Type** field, enter the modem type to be used for the dialup connection.

4. In the **Primary telephone number** field, enter the primary telephone number that is dialed to connect to AT&T Global Network Services (AGNS).

5. In the **Alternate telephone number** field, enter the alternate telephone number that is dialed to connect to AT&T Global Network Services (AGNS). This is the number that is used if the connection attempt using the primary telephone number is unsuccessful.

6. In the **Dial prefix** field, enter any prefix number that must be dialed before the primary or secondary telephone number is dialed. Specify any numbers or characters needed to obtain an outside line, pause while dialing, or similar requirement.

7. If Dial Pre-test fails on Point-to-Point (PPP), configure PPP protocol by doing the following:

    a. Go back to the **Configure Service Connectivity** panel.

    b. Select **Configure PPP for Dial**. See the Asynchronous Point-to-Point Protocol configuration topic in the System p and AIX Information Center and follow the instructions to complete the configuration.

8. Go back to the **Create/Change Service Configuration** panel.

9. After the connection information is entered, press Enter to create or change the service configuration and to test the connection path if previously selected.

10. Go to Configuring Electronic Service Agent to enable it to perform the functions that are important to your service environment.

Related tasks:

"Testing connectivity to IBM" on page 14
You can test your connection to IBM.

Related information:

Asynchronous Point-to-Point Protocol configuration
See the "Asynchronous Point-to-Point Protocol configuration" topic in the pSeries and AIX Information Center.

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