IBM Electronic Service Agent for Linux 4.6.5.0

User's Guide

Note

Before using this information and the product it supports, read the information in “Notices” on page 145 .

Twenty Eighth Edition (December 2025)

Contents

About this document

This book provides the information necessary to install, activate, use, and manage IBM® Electronic Service Agent for Linux®.

Note: For the most current information about IBM Electronic Service Agent for Linux, go to the following address:

https://www.ibm.com/docs/en/linux-on-systems?topic=tools-electronic-service-agent

Highlighting

The following highlighting conventions are used in this book:

Bold	Identifies commands, subroutines, keywords, files, structures, directories, and other items whose names are predefined by the system. Also identifies graphical objects such as buttons, labels, and icons that the user selects.
Italics	Identifies parameters whose actual names or values are to be supplied by the user.
`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 information you must actually type.

Case-sensitivity in Linux

Linux 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, 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.

Chapter 1. IBM Electronic Service Agent

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

The following topic collection provides information about installing, activating, configuring, by using, and troubleshooting IBMESA on Linux servers.

The most current version of this information is in the IBM Docs for Linux. To access this information, use the following web address:

https://www.ibm.com/docs/en/linux-on-systems?topic=tools-electronic-service-agent.

To view or download the PDF version of IBM Electronic Service Agent, select the following link:

IBM Electronic Service Agent for Linux

By running the following steps, the download of Adobe Reader Software can be completed: You need the Adobe Reader that is installed on your system to view or print this PDF. You can download a free copy from the Adobe website (www.adobe.com/products/acrobat/readstep.html).

What's new in IBM Electronic Service Agent for Linux

IBM Electronic Service Agent version 4.6.5 Linux provides the following new features and enhancements.

What's new in IBM Electronic Service Agent 4.6.5

1. ESA sends heartbeat for an MVS system only when it can connect to that system and receive a trap.
2. ESA sends an email notification listing all systems it cannot connect to or from which traps cannot be received.
3. Enhanced HP EED collector to support EED data collection via REST API.
4. Problems reported for storage nodes will use SRN_DEF_HW as the group name and SIS0ACU as the component name.
5. Upgraded Python modules to the latest versions for improved stability and compatibility.
6. Fixed issue with automatically enable SNMP alerts while registering few DELL servers.
7. Java 25 is used for the docker image (quay.io/ibm/ibmesa:1.1.1.6) (For rpm the prerequisite is java17+)

What's new in IBM Electronic Service Agent 4.6.4

1. Addressed the security vulnerabilities *CVE-2024-47081* and *CVE-2025-50182*.
2. Removed the **Administrator** privilege for `IBM_Monitor` on DELL and Lenovo.
3. ECC version is updated to 3.2.4.
4. Added support for DELL OEM server registration.
5. Rollout implemented for `/opt/ibm/esaclient/logs/listener.log`.
6. Displayed the serial number under **All Systems** panel.
7. Enhanced client installation screen with more informative error messages when ESA-client installation fails.
8. Python version used by IBM Electronic Service Agent would not disturb the system-installed python.
9. Do not transmit or report problems if the machine's serial number is not found in the `/opt/ibm/esaclient/conf/common/ContractInventory.xlsx`.

What's new in IBM Electronic Service Agent 4.6.3

1. The Equinox has been upgraded to 4.34 from 4.23.
2. ESA-client for 4.6.3 release requires Python 3.12 (upgraded from 3.11 to 3.12).
3. ESA 4.6.3 requires Java17 (upgraded from Java11 to Java17).
4. ESA-client uses python virtual environment to manage dependencies.
5. While installing ESA-client, after installing all the dependencies in the python virtual environment, PIP will be removed.
6. Addressed all the security vulnerabilities identified.
7. ESA-client installation takes around 30min in this version.

What's new in IBM Electronic Service Agent 4.6.2

MVS Support

1. **Lenovo Registration**

   Added support for Lenovo Registration.
2. **Lenovo Problem Reporting**

   Added support for Lenovo Problem reporting and EED transmission.

What's new in IBM Electronic Service Agent 4.6.1

Export Systems' Data to CSV

IBM Electronic Service Agent for Linux now supports the export of all systems' data to a CSV file. Click the **Export Systems to CSV** button to export all data.

Security Vulnerability

Address Security vulnerabilities identified.

Additional Package Support in Docker

Add *ssh*, *telnet*, *tcpdump* and *vim* to the docker image.

Ownership change to esaadmin

Change the file ownership of ESA and ESA-client files to *esaadmin* instead of *root*.

Feed Data using CSV File

Add ability to feed the data using a CSV in SNMP Listener panel.

Remote MVS Node Configuration Validation

Validation of node configuration is implemented, before applying configuration to the ESA-client.

Event Filters

The support for Event filters has been enabled.

What's new in IBM Electronic Service Agent 4.6.0.2

Kubernetes Support

IBM Electronic Service Agent for Linux now supports Kubernetes that manages ESA docker images. ESA docker containers are a standard way to package an application and its dependencies (Python, Python modules, Perl, Perl modules, Java), so that the application can be moved between environments and run without changes. You can access ESA from your local host and continuously monitor, collect, and submit hardware problem information to the IBM Electronic Support website.

Upgrade Support

Make sure that you install IBM Electronic Service Agent version 4.6.0 or higher to upgrade ESA-client and work with latest version of ESA-client. ESA versions before 4.6.0 do not have upgrade support for ESA-client. Learn more...

Email notifications

IBM Electronic Service Agent is enhanced to send test notification emails to the secondary contact that is specified in the **Service Contact** page. Learn more....

Enhanced Problem status

IBM Electronic Service Agent displays and notifies duplicate problems that the MVS systems create. The duplicate problems are reported for same system and also that has the **Local Problem Status** as *Email sent*. Learn more...

`esacli generateToken`

Use **`esacli generateToken`** command to generate token for the specified client ID. Learn more....

Updates to troubleshooting section

If ESA does not start even after you try multiple times, delete the **`login.failure.properties`** file. Learn more...

What's new in IBM Electronic Service Agent 4.5.9

ESA as a Container and RPM

IBM Electronic Service Agent can now be installed as a Container (in Docker or Podman) on x86 systems and as an RPM on both Power Systems running Linux, and x86 Systems. Learn more....

`esacli generateClientKey`

Use **`esacli generateClientKey`** command to generate client key for the specified ESA-client or primary system. Learn more....

What's new in IBM Electronic Service Agent 4.5.8.2

SNMP Status

IBM Electronic Service Agent identifies if the registered systems have SNMP connectivity to ESA. Learn more....

Installation of ESA-client

IBM Electronic Service Agent supports installation of ESA-client in either RPM or Docker image. During the installation of ESA-client, a new user *ibm_esaclient* gets created, which is used for all the communication from ESA to ESA-client. Learn more....

Filter options

IBM Electronic Service Agent GUI displays filter options on **All Systems** page and **All Problems** page. To search for a particular system or problem that you require, use the **Define Filter** option and specify the rules on the **Filter** window. Learn more....

What's new in IBM Electronic Service Agent 4.5.8

Support for Multi-Vendor Systems

IBM Electronic Service Agent extended its support for Multi Vendor Systems (MVS). To support MVS, ESA is now packaged in a docker container so that the application can be moved between environments and run without changes. The multi-vendor systems that are now supported are HP (ILO3, ILO4, and ILO5) and Dell (iDRAC8 and iDRAC9) systems. ESA and ESA-client docker images are available to support these x86 systems. ESA supports installation of ESA-Client in either RPM or Docker image. Learn more....

Support for eBMC Systems

IBM Electronic Service Agent supports discovery of eBMC (Enterprise Baseboard Management Controller) systems for problem reporting, periodic transmission of HW inventory, system information, and heartbeat.

. Learn more...

View trace log

The **SNMP Listener** page is enhanced with a **View Trace Log** link that allows to view the ESA-client trace log. Learn more...

Endpoint Name

Displays the hostname of the target MVS system that is specified when you register the system. Learn more.

What's new in IBM Electronic Service Agent 4.5.6

Enhanced IBM Electronic Service Agent suspend and resume operations

Most of the operations are stopped when IBM Electronic Service Agent is suspended. However, the other IBM Electronic Service Agent graphical user interface functions continue to operate. Learn more...

Removed PM data

You can no longer configure IBM Electronic Service Agent to transmit Performance Management (PM) for Power data to IBM.

Updates to troubleshooting section

To resolve the command-line issues, when ESA is activated on another port other than 5024, upgrade ESA to 4.5.6 or later versions. Learn more...

What's new in IBM Electronic Service Agent 4.5.5

- IBM Electronic Service Agent for PowerLinux now supports OpenJDK 8 along with IBM Java.
- Internal defect fixes

What's new in IBM Electronic Service Agent 4.5.4

- Implemented configuration of system cleanup settings for IBM ESA to schedule the data cleanup of remote systems and the associated heartbeat, hardware inventory, software inventory, and problems data.

  Learn more...
- Internal defect fixes

IBMESA overview

IBM Electronic Service Agent is a no-charge software tool that resides on your system to automatically and continuously monitor, collect, and submit hardware problem information to the IBM Electronic Support website. IBM Electronic Service Agent can also routinely collect and submit hardware, software, 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:

- 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 solve 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

Using the IBM Electronic Support portal, you can view service information that is reported by IBM Electronic Service Agent. You can also search all content by 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 to run smoothly.
- http://www-01.ibm.com/support/electronicsupport/: The support portal to view contracts, inventory, heartbeat 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

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

Problem processing overview

Problem processing is an important capability of IBM Electronic Service Agent. When IBM Electronic Service Agent detects a problem, a specific sequence of eventsoccurs 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 35.
2. IBM Electronic Service Agent reports the problem to IBM.

   Note: For all the HMC-controlled systems, HMC ESA reports the problems, but not the stand-alone ESA that is installed on the Linux system.
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, and system configuration.

   To view the service information sent to IBM Electronic Support website, go to the IBM Electronic Support website and select **My Systems**. For more information, see “Accessing the IBM Electronic Support portal” on page 5.

   Note: The **Service Information** feature is not applicable for x86 systems.
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 24. When you contact the service contact, IBM Support team either arranges an appointment to replace the part, or attempts to resolve the problem without a visit to the customer's site.
5. After the problem is resolved, IBM Support closes the service request. For information about verifying a service request that is assigned to a problem is closed, see “Displaying problem information” on page 35.

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

1. MVS systems send SNMP Alerts on default port 162, if any hardware problem is identified.
2. ESA-client reports problems to ESA (via Rest API on port 5024)
3. IBM Electronic Service Agent Sends email to the IBM SPOC, Creates a ticket in the CSP portal, Updates ticket details to customer, and receives request to upload EED from customer.
4. ESA-client collects EED from MVS nodes via SSH and sends EED to ESA (via Rest API on port 5024)
5. ESA uploads EED to IBM for problem diagnosis.

Related concepts

Accessing the IBM Electronic Support portal
Using the IBM Electronic Support portal, you can view service information that is reported by IBM Electronic Service Agent. You can also search all content by 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

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

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.

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.

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

Planning for IBM Electronic Service Agent

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

Installing IBM Electronic Service Agent

Install IBM Electronic Service Agent to enable problem detection, reporting, and transmission of service information to the IBM Electronic Support website.

Related concepts

Activating and configuring IBM Electronic Service Agent
After the installation of IBM Electronic Service Agent, you must activate and configure IBM Electronic Service Agent.

Uninstalling IBM Electronic Service Agent
Before you uninstall IBM Electronic Service Agent, determine whether you want to save the configuration information to use for another system or later on this system.

Before you begin

IBM Electronic Service Agent can be installed from an RPM, Docker, and Kubernetes.

- ESA as a container (in Docker or Podman) can be installed only on x86 systems.
- ESA as a RPM can be installed on both Power Systems running Linux, and x86 Systems.
- ESA can also be installed and run on Kubernetes. To run ESA on Kubernetes, you must first create a Kubernetes cluster and deploy ESA.

Also, IBM Electronic Service Agent requires the following products:

- IBM Java™
- The open source Power® Linux diagnostics package **ppc64-diag**
- Discovery of BMC devices is supported from ESA 4.3 and later versions. To discover BMC devices, it is mandatory to install the IPMI tool (*ipmitool* 1.8.15 or later) on the ESA installed machine.

Uninstalling previous versions of IBM Electronic Service Agent

You must uninstall previous 1.x versions of IBM Electronic Service Agent before proceeding to the installation of a new version. For the 2.x versions of IBM Electronic Service Agent, you can directly upgrade to IBM Electronic Service Agent 3.0 and later.

To determine whether a version of IBM Electronic Service Agent is already installed on a system, enter the following command:

```
rpm -qa | grep -i esagent
```

- If no information is returned, it implies that IBM Electronic Service Agent is not installed.
- If information is returned, then IBM Electronic Service Agent is installed and must be uninstalled before installing the new version.

  For information about the uninstallation of IBM Electronic Service Agent, see “Uninstalling IBM Electronic Service Agent” on page 74.

Upgrade IBM Electronic Service Agent

To upgrade to IBM Electronic Service Agent 4.0 and later versions, enter the command:

```
rpm -Uvh esagent.pLinux-<version>.ppc.rpm
```

For example, `rpm -Uvh esagent.pLinux-4.9.0-0.ppc.rpm`

About this task

IBM Electronic Service Agent3.0.0 and later is bi-endian, supporting both big-endian and little-endian modes. But from IBM Electronic Service Agent 4.0.0 and later, you can use the same IBIBM Electronic Service Agent package for both the modes. To install IBM Electronic Service Agent, go through the following sections.

Installing IBM Electronic Service Agent RPM

Procedure

ESA RPM can be installed on Power Systems and x86 systems. To download and install ESA RPM, go through the following steps:

1. Download the respective ESA RPM from the ESA website https://www.ibm.com/support/pages/esa/us-en/downloads.
2. Go to the directory that contains the IBM Electronic Service Agent RPM file.
3. Use your normal installation process to install IBM Electronic Service Agent.

   The IBM Electronic Service Agent file set name is

   - For IBM PowerLinux`esagent.pLinux-<`*`version`*`>.noarch.rpm` where *`version`*, where *`version`* is the ESA version.
   - `esagent.x86Linux-<`*`version`*`>.noarch.rpm` where *`version`*, where *`version`* is the ESA version.
4. Enter the RPM installation command:

   ```
   rpm -ivh esagent.pLinux-4.5.9.noarch.rpm
   ```

   Tip: Both Red Hat Enterprise Linux (RHEL) and SUSE Linux Enterprise Server (SLES) provide utilities that simplify installation of a software package with prerequisites. For RHEL, the **yum** utility installs the prerequisites of a software package before attempting to install the package itself. For SLES, the **zypper** utility provides a similar capability. You can use **yum** or **zypper** utilities to install IBM Electronic Service Agent.

What to do next

When the installation is complete, you must activate and configure IBM Electronic Service Agent to enable it to report problems and transmit service information to the IBM Electronic Support website. For more information, see “Operating systems for IBM Electronic Service Agent” on page 9“Activating and configuring IBM Electronic Service Agent” on page 15.

Installing IBM Electronic Service Agent Container

Procedure

ESA as a container (in Docker or Podman) can be installed only on x86 systems. To download and install ESA on x86 systems, go through the following steps:

1. Download ESA image from this link.
2. Run the following commands:

```
gunzip esa-images-all-1.0.0.tar.gz
docker load < ibmjava-jre.tar.gz
docker load < ibmesabase-1.0.2.tar.gz
docker load < ibmesa-1.0.4.tar.gz
```

3. Create a docker network by using the following command:

```
docker network create -d bridge --subnet=<<subnetwork>> --gateway=<<gateway IP>><<name>>
```

   For example,

```
docker network create -d bridge --subnet=10.1.0.0/24 --gateway=10.1.0.1 esanet
```

4. Pull the ESA container image and start the Docker container:

```
docker container run -itd --name=IBMESAContainer  --restart=unless-stopped --ip 10.1.0.23
--net
esanet -p 5024:5024 -e HOST="HOST IP Address" docker.io/ibmcom/ibmesa:1.0.4_beta
```

Installing IBM Electronic Service Agent on Kubernetes

Kubernetes is an open source container orchestration engine for automating deployment, scaling, and management of containerized applications. IBM Electronic Service Agent can now be installed and run on Kubernetes. To run ESA on Kubernetes, you must first create a Kubernetes cluster and deploy ESA.

For the complete steps on installation and configuration of ESA on Kubernetes, see ESA Kubernetes Configuration Guide.

After the successful deployment of the Kubernetes cluster and ESA installation, you can access ESA from your local host. Then, using ESA you can continuously monitor, collect, and submit hardware problem information to the IBM Electronic Support website. IBM Electronic Service Agent can also routinely collect and submit hardware, software, and system configuration information, which might help IBM Support in diagnosing problems.

Operating systems for IBM Electronic Service Agent

IBM Electronic Service Agent for Linux is included in the IBM Installation Toolkit for LinuxPowerLinux.

IBM Electronic Service Agent (as an rpm) for Power Linux systems is supported on the following operating systems:

- Red Hat Enterprise Linux Version 8.7 or higher
- SUSE Linux Enterprise Server Version 12.0 or higher

IBM Electronic Service Agent (as an rpm) on X86 systems is supported on the following operating systems:

- Ubuntu 18.04 and later
- Red Hat Enterprise Linux Version 8.7 and later
- SUSE Linux Enterprise Server Version 12.0 and later

IBM Electronic Service Agent (docker container) on X86 systems is supported on the following operating systems:

- Ubuntu 18.04 and later
- Red Hat Enterprise Linux Version 8.7 and later

Browsers for IBM Electronic Service Agent

It is recommended that you use one of the following browser to run the IBM Electronic Service Agent graphical user interface.

Although other browsers might work when viewing the IBM Electronic Service Agentgraphical user interface, the following browsers are supported on the indicated operating systems:

- Microsoft Windows Internet Explorer for use on Microsoft Windows operating system.
- Mozilla Firefox for use on Microsoft Windows, Red Hat Enterprise Linux (RHEL) and SUSE Linux operating systems.
- Google Chrome for use on Microsoft Windows operating system.
- Microsoft Edge for Microsoft Windows 10 and later operating system.

Security

When using IBM 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 the IBM Electronic Support website, and the security of those using IBM Electronic Service Agent.

Information privacy

The service information you provide to the IBM Electronic Support website 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 the IBM Electronic Support website is collected from the information that you have entered into IBM Electronic Service Agent and the information that is collected by IBM Electronic Service Agent 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 IBM Electronic Service Agent includes the following:

- Your support contact information, including names, phone numbers, and email addresses.
- Location information about the system on which IBM Electronic Service Agent is installed, including city, geographic region, country, building, and the phone 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, and system utilization.

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, IBM 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 that is collected by such offerings is covered in a separate agreement for each IBM offering.

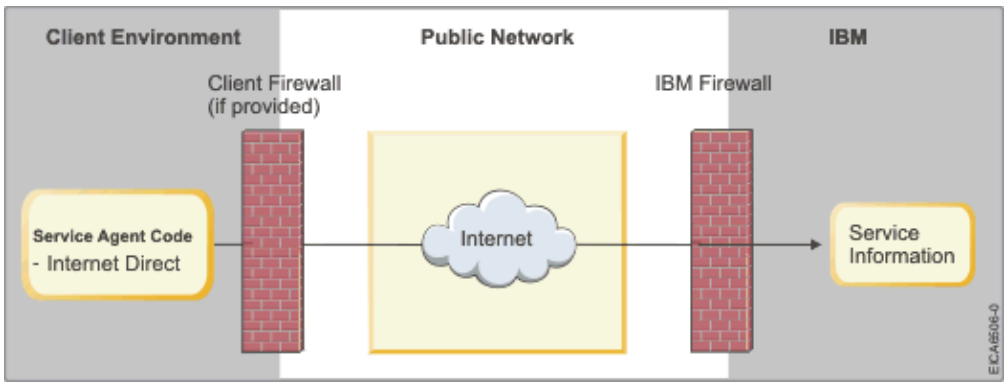
Information transmission security

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

IBM Electronic Service Agent can collect problem and service information and send it to the IBM Electronic Support website on a scheduled basis. IBM Electronic Service Agent transactions are outbound requests sent using the security of Hypertext Transfer Protocol Secure (HTTPS). These connection requests are always initiated from the customer system by IBM Electronic Service Agent. IBM Electronic Service Agent can accept incoming connections from the activator command that is used to activate the product, from the **esacli** command, and from the IBM 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.

IBM Electronic Service Agent initiates a connection with the IBM Electronic Support website and then the IBM Electronic Support website replies. The IBM Electronic Support website never initiates a connection to IBM Electronic Service Agent. During the activation and setup of IBM Electronic Service Agent, you select how IBM 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 IBM Electronic Service Agent proxy server or another proxy server. IBM Electronic Service Agent uses the client's connectivity environment, including any firewalls that the client has established.

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, IBM Electronic Service Agent collects the information to be transmitted and queues it for transmission.
2. IBM Electronic Service Agent establishes an TLS internet connection with the IBM Electronic Support website using the system ID and password that was created previously.
3. The collected information is sent to the IBM Electronic Support website.
4. After the arrival at the IBM Electronic Support website, 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, IBM Electronic Service Agent collects the information to be transmitted and queues it for transmission.
2. Using the TLS connection between the system and the IBM Electronic Support website, IBM Electronic Service Agent establishes an TLS internet connection between the proxy and the IBM Electronic Support website. This connection is authenticated using the system ID and password previously created.
3. IBM Electronic Service Agent sends the collected information through the proxy to the IBM Electronic Support website.
4. After the information arrives at the IBM Electronic Support website, the information is transferred to the appropriate IBM database.

IP addresses

From version 3.3, IBM Electronic Service Agent connects to the new IBM server environment that simplifies connectivity and provides enhanced security. This server environment is fully NIST SP800-131A compliant by supporting TLS 1.3 protocol, SHA-256 or stronger hashing functions, and at least 2048-bit strength RSA keys. All ESA transactions to the new environment route through a single hosting environment with only a few IP addresses that are required for outbound connections. Ensure that your firewall allows connections to the new IP addresses and ports as explained in the table:

Domain name	IP address	Port	Protocol
esupport.ibm.com	192.148.6.11	443	HTTPS (to IBM)

Note: A new IP address (192.148.6.11) is enabled and returned from DNS. The old IP addresses (129.42.21.70, 129.42.56.189, and 129.42.60.189) have been de-advertised and are no longer returned from DNS. These IPs will be disabled from June 30, 2024 onwards. For more information, see https://www.ibm.com/support/pages/node/6853429.

Note: It is recommended to use the DNS name esupport.ibm.com, rather than the IP address, in case this IP address changes in the future.

Ports

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

Port number	Description
5024	Port number at which the IBM Electronic Service Agent graphical user interface is accessible through the HTTPS protocol.
5026(Optional)	Port number at which the Service Proxy is configured as an ECC service proxy.
5028 (Optional) **Note:** The port is supported from ESA version 3.0 and later.	Port number at which the firewall that must be opened for UDP traffic to receive SNMP Traps.

The following are the default ports that are used by ESA-client:

Port number	Description
162	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 Linux user authorizations and privileges

Users that can remotely log in to the system can use their user IDs and passwords to log in to the IBM Electronic Service Agent graphical user interface.

Related tasks

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

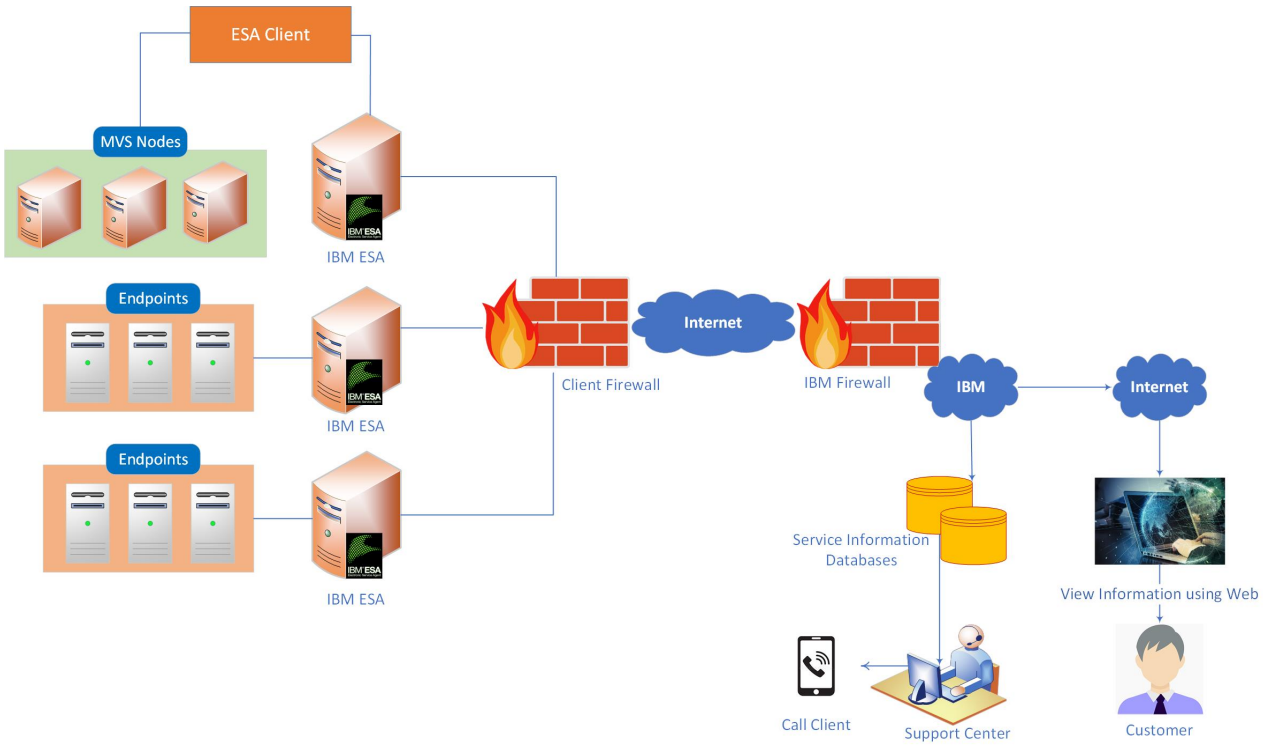
Topology

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

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

Stand-alone client topology

1. The Service Agent client gathers the information from the hosts through SSH and transmits it to the IBM Electronic Support portal.
2. The information is transmitted to the IBM Electronic Support portal in one of the following ways:
   - Through an Internet connection to the 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

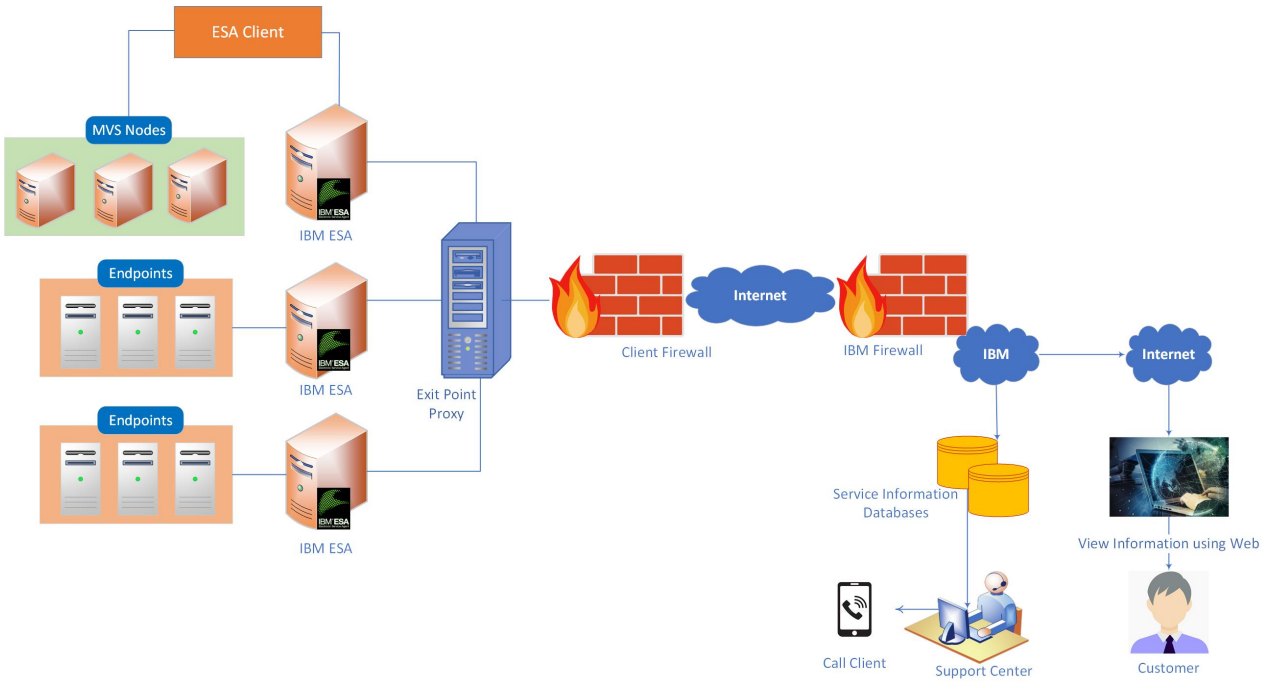
The common exit point topology consists of IBM Electronic Service Agent clients connecting through a proxy to the service and support facilities of IBM. The proxy can be either a client supplied HTTP proxy or the IBM Service and Support Proxy. Information is protected using existing client firewalls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

Note: IBM Electronic Service Agent provides remote system support to only ESS, and BMC (through IPMI and REST) devices.

In the following diagram, the information transmission proceeds as follows:

1. Each IBM Electronic Service Agent client gathers the information from the hosts (AIX, Linux, IVM) 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 the IBM Electronic Support portal through the exit point proxy.
3. The IBM Electronic Service Agent exit point transmits the information to the 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.



Related tasks

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.

Using IBM Electronic Service Agent in an environment with other operating systems

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

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

To access the IBM Electronic Service Agent user guides for different operating systems, go to the IBM Electronic Support portal.

Related information

Accessing the IBM Electronic Support PortalThe 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.

Activating and configuring IBM Electronic Service Agent

After the installation of IBM Electronic Service Agent, you must activate and configure IBM Electronic Service Agent.

Activating and configuring IBM Electronic Service Agent consists of the following steps:

1. Using an activation wizard or commands to activate IBM Electronic Service Agent.
2. Configuring the service connection to IBM so that IBM Electronic Service Agent can report problems and send service information.
3. Testing the service connection to IBM.

4. Mention contact and location information so that IBM Support representatives know the location of the system that is running IBM Electronic Service Agent. It also helps to know whom to contact about a problem, that the IBM Electronic Support website receives from IBM Electronic Service Agent.

If you installed an ESA rpm either on Power or x86 Linux systems, two mechanisms are available for activating IBM Electronic Service Agent: Command activation and wizard activation. If you have many systems to activate or there is little or no variation from one system to the next, it is easier to develop a script to activate IBM Electronic Service Agent. If you have few systems to activate or in case of many variations in configuration details, there is an interactive activation wizard available through the IBM Electronic Service Agent graphical user interface.

Note: For installing ESA as a container (in Docker or Podman) on x86 Linux systems, you can use only interactive activation wizard to activate ESA.

Related tasks

Sending a test problem
Send a test problem to the IBM Electronic Support website to see whether the problem reporting function is working correctly.

Using the activation wizard

If you have few systems to activate or in case of many variations in configuration details, use the interactive activation wizard that is available through the IBM Electronic Service Agent graphical user interface.

Before you begin

Before using the activation wizard, run the following command:

```
/opt/ibm/esa/bin/activator -C [-p port] [-w] [-Y]
```

where the **-C** (capital C) command-line option activates IBM Electronic Service Agent but defers configuration until later.

In addition, there are three optional parameters.

-p *port*
The default communication port that the IBM Electronic Service Agent graphical user interface uses is **5024**, however, you can replace *port* with any unused port between **1025** and **65535**, inclusive.

-w
Many Linux servers have an active firewall that blocks communication with other systems in the network. You can specify this option to enable remote access to the IBM Electronic Service Agent communication port.

Note: If you want to configure IBM Electronic Service Agent from a location other than the console of the server on which IBM Electronic Service Agent is installed such as a workstation in another room, you must specify the **-w** option on the **activator** command to allow remote access to the IBM Electronic Service Agent graphical user interface.

-Y
This option specifies your acceptance of the IBM license agreement (LA) for IBM Electronic Service Agent.

By default, the license agreement is displayed when you specify the **-C** option, and you can choose whether to accept or reject the license agreement. You must accept the license agreement before activation will proceed; activation will not proceed if you reject the license agreement. Specifying the **-Y** option skips the interactive review and acceptance of the license agreement.

Note: To view the license agreement at any time, enter the following command:

```
/opt/ibm/esa/bin/reviewLA
```

About this task

After you run the **activator -C** command, you can use the IBM Electronic Service Agent activation wizard to interactively complete the activation and configuration. To use the wizard to configure IBM Electronic Service Agent, follow these steps:

Procedure

1. Open a browser and enter this web address:

   ```
   https://hostname:5024/esa
   ```

   where *hostname* is the fully qualified name or IP address of the system that runs IBM Electronic Service Agent.

   Note: Port 5024 is the default port. If you activated IBM Electronic Service Agent on a different port, use that port number in the web address.
2. On the Welcome pane, log in to the IBM Electronic Service Agent graphical user interface.

   Note: Users that can remotely log in to the system can use their user IDs and passwords to log in to the IBM Electronic Service Agent graphical user interface.
3. On the Welcome pane, click **Activate ESA** under **Main** menu. The **Electronic Service Agent Activation** wizard displays.

   Note: Unless you activate ESA, all other options of the left navigation on the **Welcome** pane are disabled and you cannot use them.
4. On the **Introduction** panel, click **Next**.
5. On the **Contact information** panel, specify the information that you want IBM Service to use when arranging a service appointment.

   The person whose contact information you specify must be able to arrange physical access to the system when service is required.
6. On the **Location information** panel, specify the physical location of the system.

   The IBM Service Engineer will visit this location to service the system.
7. On the **SMTP** panel, specify whether you want to be notified when IBM Electronic Service Agent opens a service request with IBM.

   Use this panel to configure a connection to an email server (SMTP) that will forward an email notification to the email address that you specified on the Contact information panel. The username and password on this panel might be required for authentication with the SMTP server.
8. On the **IBM ID** panel, specify the IBM ID that is registered for this system.

   This IBM ID is required to access information about the system. You can use the link on this panel to register for a free IBM ID. You can also specify an alternate IBM ID with similar access to the system.
9. On the **Connectivity** panel, specify whether the system you are activating will connect directly to the internet or will connect through a proxy server or firewall.

   The default configuration is a direct connection. A proxy connection requires additional configuration. If you select **Proxy connection** option, then only you see the **Proxy** panel.
10. On the **Proxy** panel, specify an address and port for the proxy server.

    You may also need to specify a username and password for network authentication.
11. On the **Test** panel, you can specify the tests that IBM Electronic Service Agent runs during this configuration.
12. On the **Summary** panel, verify the information that you specified for activating IBM Electronic Service Agent. Click **Back** to make changes and click **Activate** when you are satisfied with the configuration.

    The **Results** panel displays the outcome of the activation process.
13. When you are done viewing the results, click **Finish**.

    The **IBM Electronic Service Agent** is activated and all the options on the left navigation on ESA main page are enabled.

Results

Once you activate IBM Electronic Service Agent on this system, you can no longer see the **Activate ESA** option and you cannot use the **Activation Wizard**. However, you can use either the graphical user interface or the command line interface to both use and manage IBM Electronic Service Agent.

Related concepts

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.

Using IBM Electronic Service Agent

You can check whether IBM Electronic Service Agent is monitoring the status of your system, view problem information and activity, export and import a configuration, and manage who is authorized to view the information that is sent to the IBM Electronic Support website.

Related tasks

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface

IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

Using the activator command

If you have many systems to activate and configure or there is little or no variation from one system to the next, it is easy to develop a script to activate and configure IBM Electronic Service Agent.

About this task

You can activate and configure IBM Electronic Service Agent with a non-interactive operation executed as a command in a shell or in a script. This activation script enables you to automate activation and configuration of IBM Electronic Service Agent. For this method of activation and configuration, one command contains all the configuration parameters used to define the contact and location for the machine.

Most of the parameters used to configure IBM Electronic Service Agent from the command line are necessary to supply contact and location information to the IBM Electronic Support website, and are therefore required. Enclose parameter arguments in quotation marks, such as ‘United States’ or “Great Britain”. Options and operands that are enclosed in brackets ([]), such as `[-w]` or `[-Y]`, are optional. For more information about reading syntax diagrams, see “How to read syntax diagrams” on page 143.

To activate and configure IBM Electronic Service Agent, run the following command:

```
/opt/ibm/esa/bin/activator -c -m company -n contact name -e contact mail
-t contact phone -g contact country -s system phone -u system country
-r system address -y system city -a system state -z system postal code
-b system building -i IBM ID -p port [-w] [-Y]
```

-c
Specifies that activation and configuration are performed immediately.

-m {*company*}
Specifies the name of the company that owns or is responsible for the system.

-n {*contact name*}
Specifies the name of the person in the organization that is responsible for the system.

-e {*contact mail*}
Specifies the email address for the contact person.

-t {*contact phone*}
Specifies the telephone number where the contact person can be reached. A valid telephone number can contain alphanumeric characters and must include at least 5 but not more than 30 characters. Valid United States or Canada telephone numbers must contain at least 10 but not more than 30 characters and must not contain any dashes.

-g {*contact country*}
Specifies the name of the region or country where the contact person is located. The country must be specified as a valid two-letter code as defined by ISO-3166.

-s {*system phone*}
Specifies the telephone number where the system is located. A valid phone number must include at least 5 but not more than 30 characters. A valid telephone number can contain alphanumeric characters and must include at least 5 but not more than 30 characters. Valid United States or Canada telephone numbers must contain at least 10 but not more than 30 characters and must not contain any dashes.

-u {*system country*}
Specifies the name of the region or country where the system is located. The country must be specified as a valid two-letter code as defined by ISO-3166.

-r {*system address*}
Specifies the address where the system is located.

-y {*system city*}
Specifies the name of the city where the system is located.

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

-z {*system postal code*}
Specifies the postal code where the system is located.

-b {*system building*}
Specifies the building, floor, and office where the system is located.

-i {*IBM ID*}
Specifies the IBM ID to associate with the system.

-f {*secondary contact name*}
Specifies the secondary person in the organization who is responsible for the system.

-j {*secondary contact email*}
Specifies the email address for the secondary contact person. (for example, newuserid@mycompany.com)

-k {*secondary contact phone*}
Specifies the telephone number where the secondary contact person can be reached. A valid telephone number can contain alphanumeric characters and must include at least 5 but not more than 30 characters. Valid United States or Canada telephone numbers must contain at least 10 but not more than 30 characters and must not contain any dashes.

-p {*port*}
Specifies the port number on which the subsystem listens for incoming client requests.

-w
Specifies to add firewall rules that are required to access IBM Electronic Service Agent from remote systems.

-Y
Specifies acceptance of the license agreement so the license agreement is not displayed.

Note: To view the license agreement at any time, enter the following command:

```
/opt/ibm/esa/bin/reviewLA
```

Results

To display and verify the contact and location settings, enter the following command:

```
/opt/ibm/esa/bin/activator –d
```

The contact settings are displayed as a set of values that are separated by colon characters (:). For example,, (with line breaks added for clarity):

```
# /opt/ibm/esa/bin/activator -d
#company:name:email:country:tele_number:system_tele_number:\
system_country:system_address:system_city:system_state:system_zip:\
system_building:port:sec_contact_name:sec_contact_email:sec_contact_phone

IBM_TEST_OK_to_close:ESA Developer:testmail@in.ibm.com:UNITED STATES:0123456789:\
01234567789:UNITED STATES:121 Pinto:\
Austin:TX:78642:005:5024:secondary:testmail2@in.ibm.com:0123456789
```

You can change the configuration by using the IBM Electronic Service Agent graphical user interface.

Tip: You can also use the **`esacli contactSettings`** and **`esacli locationSettings`** commands to change the configuration settings.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

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

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

How to read syntax diagrams
Review the conventions used in syntax diagrams to understand the command descriptions.

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

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.

About this task

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.

Tip: You can also use the **`esacli connectionSettings`** command to configure your service connection. For information, see “esacli connectionSettings” on page 82.

To configure your service connection using the graphical user interface, follow these steps:

Procedure

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 “Common exit point topology” on page 14 for information about using an exit point for IBM Electronic Service Agent. Then go to “Creating the IBM Service and Support proxy” on page 22 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. Click **Verify Connectivity** to test the service connection.
7. When you are satisfied with the connection definitions and order, click **Save Settings** to save the configuration.

Related concepts

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

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

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.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli connectionSettings
Use the **esacli connectionSettings** command to set and display information about the connections to IBM.

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.

About this task

You can use the IBM Electronic Service Agent graphical user interface to create the IBM service and support proxy.

Tip: You can also use the **esacli supportProxySettings** command to create the IBM service and support proxy. For information, see "esacli supportProxySettings" on page 118.

To create the IBM service and support proxy, follow these steps:

Procedure

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.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

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.

Testing connectivity to IBM
When you have completed configuration of your connectivity settings, test for connectivity to IBM.

Related reference
Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli supportProxySettings
Use the **esacli supportProxySettings** command to set and display information that configures the Service and Support Proxy.

esacli interfaces
Use the **esacli interfaces** command to list the names of the network interfaces.

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

Testing connectivity to IBM

When you have completed configuration of your connectivity settings, test for connectivity to IBM.

About this task

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.

To test connectivity to IBM, run either of the following commands:

```
/opt/ibm/esa/bin/verifyConnectivity -t
```

or

```
/opt/ibm/esa/bin/esacli test -c
```

Results

The system returns information similar to the following report.

Example

```
Performing Connectivity Verification Test
success  Edge_Bulk_Data_1      esupport.ibm.com              192.148.6.11     443
success  Edge_Bulk_Data_2      esupport.ibm.com              170.225.123.67   443
2 successes
0 failures
Connectivity Verification Test Results: succeeded
```

Note: Specific IP addresses are subject to change.

What to do next

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
Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli test

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

Specifying Service Contact information

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

Before you begin

Service Contact Information

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 more information, see “esacli contactSettings” on page 84.

About this task

Use one of the following methods to specify the contact information.

- Specify contact information during activation.

  For more information, see “Activating and configuring IBM Electronic Service Agent” on page 15.
- After IBM Electronic Service Agent is activated, you can use the IBM Electronic Service Agent graphical user interface (GUI) to specify contact information. Select **Help** in the upper right of the pages if you have questions about the specific page or the information to enter.

  Tip: You can also use the **esacli contactSettings** command to display and specify contact information. For more information, see “esacli contactSettings” on page 84.

Procedure

To specify contact 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 **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**
     The name of the country or region in which the contact person is located. The following is an 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. The following is an example: `myuserid@mycompany.com`.

Alternate email
Fully qualified alternate email address for the contact person. The following is an 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**
The 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. The following is an example: `myuserid@mycompany.com`.

4. Click **Save Settings** to save the details.

Related concepts

Activating and configuring IBM Electronic Service Agent
After the installation of IBM Electronic Service Agent, you must activate and configure IBM Electronic Service Agent.

Related tasks

Using the activator command
If you have many systems to activate and configure or there is little or no variation from one system to the next, it is easy to develop a script to activate and configure IBM Electronic Service Agent.

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

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

Using IBM Electronic Service Agent

You can check whether IBM Electronic Service Agent is monitoring the status of your system, view problem information and activity, export and import a configuration, and manage who is authorized to view the information that is sent to the IBM Electronic Support website.

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Before you begin

On some systems, the firewall might block access through this port unless the `-w` option was used to add a firewall rule to the default firewall configuration when you are activating IBM Electronic Service Agent. To check whether the firewall port is open for remote browsers, enter the following command:

```
/opt/ibm/esa/bin/esafirewall status
```

This command displays whether IBM Electronic Service Agent graphical user interface port has access through the firewall that is running on the system.

If the port is blocked, you can use the following command to enable access from remote systems:

```
/opt/ibm/esa/bin/esafirewall enable
```

To remove the firewall rule added by the –w option, use the following command:

```
/opt/ibm/esa/bin/esafirewall clear
```

For the NPS Survey, after you provide feedback for a single system, the feedback pane is not getting refreshed to provide feedback for the other systems. To resolve this issue in Firefox browser, go through the following steps:

1. Open your browser and go to **Options** → **Privacy & Security** → **Cookies and Site Data**
2. Click **Manage Permissions**. The **Exceptions - Cookies and Site Data** window is displayed.
3. In the **Address of Website**, enter *https://survey.medallia.eu* and click **Block**.
4. Click **Save Changes** to apply the exceptions.
5. Access the IBM Electronic Service Agent graphical user interface.

Note: For information on the settings of the other browsers, see "NPS survey - known issue" on page 130

Note: The **NPS Survey** window is displayed only after 30 days of initial login to the IBM Electronic Service Agent.

About this task

To access and use the IBM Electronic Service Agent graphical user interface, follow these steps:

Procedure

1. Open a browser and enter this web address:

   `https://`*`hostname`*`:5024/esa`

   Where *hostname* is the name or IP address of the system that runs IBM Electronic Service Agent.
2. On the Welcome pane, log in to the IBM Electronic Service Agent graphical user interface.
3. If you receive a warning about an untrusted site certificate, accept the certificate or click **Yes** to proceed to the IBM Electronic Service Agent graphical user interface.

Results

You can select from the following options to display or modify the IBM Electronic Service Agent operations for this system or partition.

Note: Select **Help** in the upper right corner of any of the panes to view specific information about the pane or the information to enter.

Once you log in to the IBM Electronic Service Agent graphical user interface, click **Activate ESA** under **Main** menu.

The activation wizard takes you through the steps to activate Electronic Service Agent on your system. The activation includes specifying contact information and connectivity information to enable your system to connect to IBM support. For information, see "Activating and configuring IBM Electronic Service Agent" on page 15.

Note: Once you activate IBM Electronic Service Agent on this system, you can no longer see the **Activate ESA** option and you cannot use the **Activation Wizard**

After successful activation of IBM Electronic Service Agent, you can see the following menu options:

- **Main** menu
  - **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 the BMC, OpenBMC devices, discover multiple remote systems, verify the connectivity to a particular system, 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.

  Note:

  Note: The **Service Information** feature is not applicable for x86 systems.

- **Activity Log**

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

- **Settings** menu.

  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 this system or partition to serve as a connection point through which 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 enable or disable sending the extended error data automatically to IBM. By using this pane, you can 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.

- **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.

  Note: The **Service Information** feature is not applicable for x86 systems.

- **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 specify the hardware or software solution information for the system 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.

  Note: The **Problem Filters-Resources Settings** feature is not applicable for x86 systems.

- **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.

  Note: The **Problem Filters-Error Codes Settings** feature is not applicable for x86 systems.

- **UAK Management**

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

  Note: The **UAK Management settings** feature is not applicable for x86 systems.

- **Systems Cleanup**

  Use the **Systems Cleanup** pane to configure the system cleanup settings that are used by IBM Electronic Service Agent to schedule the cleanup of data belonging to remote systems such as the associated heartbeat, hardware inventory, software inventory, and problems data.

- **Tools** menu

  - **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 **Status** pane shows the status of the IBM Electronic Service Agent monitoring, collecting, and reporting services. You can use this pane to suspend or resume IBM Electronic Service Agent.

    - **Suspend**: You cannot do the following operations when Electronic Service Agent is suspended:
      - Send the test problem.
      - Save the system location settings.

- Delete the problems.
- Send authorizations to the IBM ID.
- Delete the systems.
- Verify connectivity setting.
- Verify connectivity and discovery of systems.
- Run an operational test.
- Collect the service information.
- Import configuration settings.
- Save the service contact settings.
- Perform manual check on the expiration date of an update access key.

However, the other IBM Electronic Service Agent graphical user interface functions continue to operate.

- **Resume**: If IBM Electronic Service Agent is suspended, resume it to do all the operations. ESA is resumed automatically after you reboot 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.

Participating in the NPS Survey

The IBM Electronic Service Agent **NPS Survey** window displays list of systems for which the feedback is collected.

About this task

The **NPS Survey** window is displayed only after 30 days of initial login to the IBM Electronic Service Agent. The **NPS Survey** window is displayed every 365 days after the initial invocation. The Net Promoter Score (NPS) measures your experience of the product by asking simple questions like:

- *How likely are you to recommend [IBM Offering] to a colleague or business partner?*
- *What are the reasons for your score?*

Procedure

To provide the feedback, go through the following steps:

1. Select a system from **Select a system** drop-down list.
2. Click **Provide Feedback** to go to the survey URL and provide your feedback.
3. If you are not interested to give feedback, you can click **Not Right Now** to decline the survey. The survey is rescheduled after 365 days.

   Note:

   - If there are multiple systems, you can provide feedback only for the selected systems and click **Not Right Now** for other systems. The survey is rescheduled after 365 days for all the systems in the list.
   - Closing the NPS survey window defaults to "Not Right Now", which means you are declining the survey.
   - Minimizing the NPS survey window allows you to provide your feedback later, but in the same logon session.
   - For the NPS Survey, after you provide feedback for a single system, the feedback pane is not getting refreshed to provide feedback for the other systems. To resolve this issue, see “NPS survey - known issue” on page 130.

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** page displays all the systems that are discovered by the IBM Electronic Service Agent

To filter or search for a particular system that you require, go through the following steps:

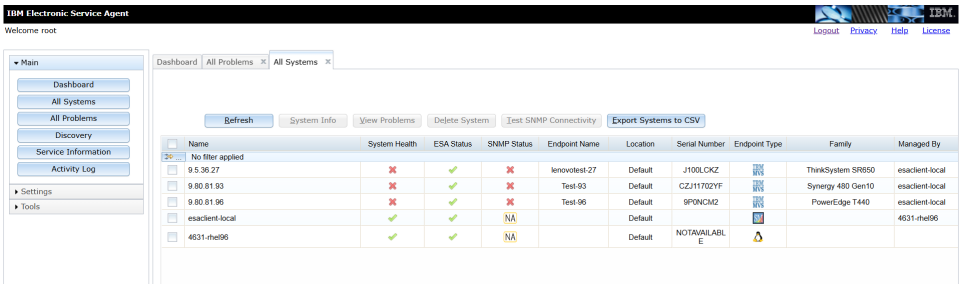
- Click the **Define Filter** icon. The **Filter** window is displayed.
- Specify the rules to filter the systems and click **Filter**. A list of filtered systems is displayed.

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

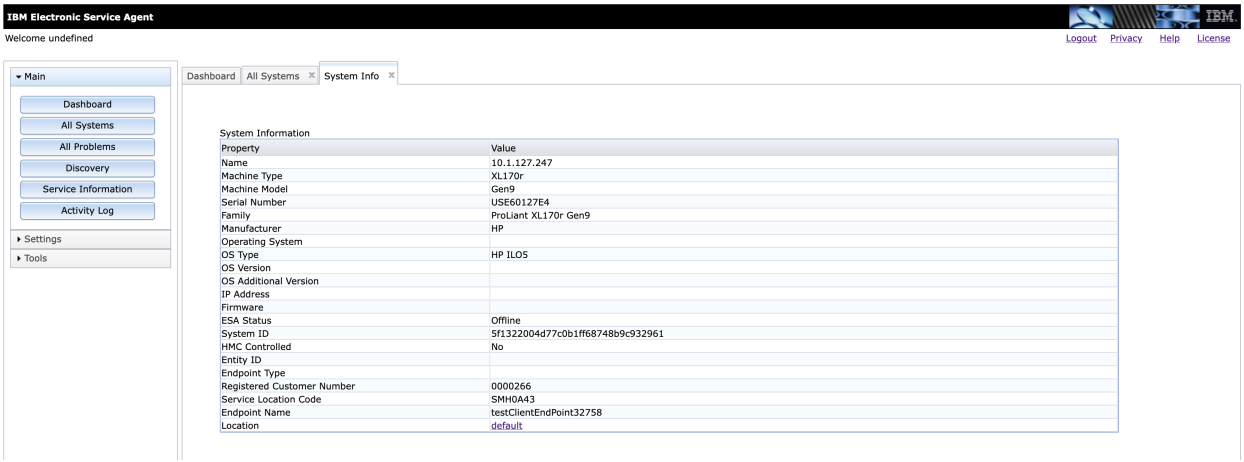
- **Name** - Displays the name of the system that is discovered.
- **System Health** - Determines the health of the discovered device. Click the health of a system to view the problems of the particular system.
  - The icon indicates that the discovered system is working fine.
  - The icon indicates that the discovered system has some problems.
- **ESA Status** - Identifies if ESA can reach the system.
  - The icon indicates that the discovered system is reachable.
  - The icon indicates that the discovered system is not reachable.
- **SNMP Status** - Identifies if the registered systems have SNMP connectivity to ESA.
  - The icon indicates that the SNMP connectivity between ESA and the remote system is active and ESA can receive SNMP traps from the system.
  - The icon indicates that the SNMP connectivity between ESA and the remote system is not active and ESA cannot receive SNMP traps from the system.

    Note: If the registered systems do not use SNMP traps to report problems, the **SNMP Status** column is not visible.

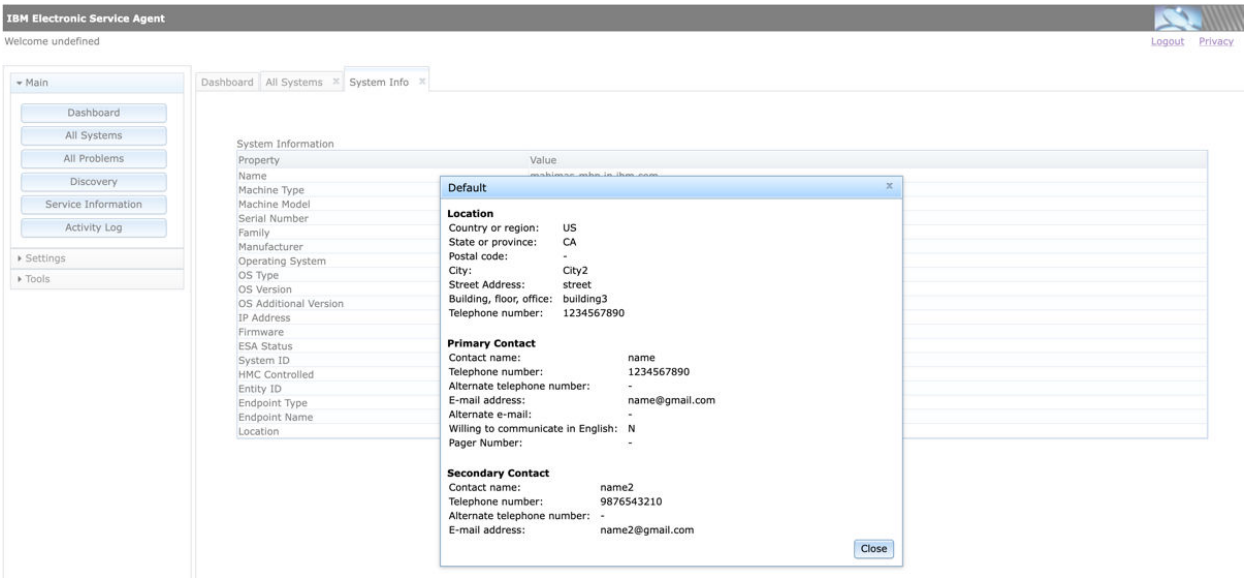
- **Endpoint Name** - Displays the hostname of the target MVS system that is specified when you register a system.
- **Location** - Displays the location of each system that is discovered.



The **System Info** dialog also shows the 'Location' information along-with other fields.



Click the link in the Location field. The location, primary contact, and secondary contact details are displayed in a dialog box as follows.



- **Serial Number** - Displays the serial number of the registered system. For example, *06BD4CA*.
- **Endpoint Type** - Displays the type of target system. For example, AIX, Linux, IVM, IBM Elastic Storage Server (ESS), BMC, or OpenBMC devices. The following are the various device types that ESA supports:

Table 1. ESS Devices	
Device type	**Icon**
BMC	
OpenBMC	
AIX	
Linux	
IVM	
MVS	
ESS Application	
Disk	
Disk Enclosure	
Management Server	
Node	
Physical Server	
Virtual Server	
Other	

- **Family** - Displays the family name to which the endpoint system belongs. For example, *IBM Power System E870*.
- **Managed By** - Displays the parent system name by which the current system is managed.

Note: IBM® Elastic Storage Server (ESS) is a high-performance, GPFS™ network storage disk solution. For more information on ESS devices, refer http://www.ibm.com/support/knowledgecenter/SSYSP8/sts_welcome.html.

Viewing system information

Before you begin

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**, **ESA Status**, **Endpoint Type**, and **Family** of the discovered devices.

Procedure

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 “System Information” on page 34.
5. Click **View Problems** to view the problems of the selected system. For all problems or detailed problem information, see “Displaying problem information” on page 35
6. Click **Delete System** to delete the respective system.
7. Select the registered systems' check-boxes and click **Export Systems to CSV** to export the details (System Health, SNMP Status, and others) of the selected systems.

System Information

The **System Info** page is displayed 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*.
- **Family** - Displays the family name to which the endpoint system belongs. For example, *IBM Power System E870*.
- **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, *3.10.0-862.el7.ppc64le*
- **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)*.
- **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*.
- **Entity ID** - Displays the entity ID of the system. Entity ID is the unique name of the system that is used to identify the system in the database. For example, *EPS/COLC08331739*.
- **Solution Machine Type** - Displays the machine type of the hardware or software solution of the system or partition that is being monitored by the Electronic Service Agent. For example, *8123*.
- **Solution Machine Model** - Displays the machine model of the hardware or software solution of the system or partition that is being monitored by the Electronic Service Agent. For example, *44C*.
- **Solution Machine Serial** - Displays the machine serial number of the hardware or software solution of the system or partition that is being monitored by the Electronic Service Agent. For example, *AB12345*.

  Note: The Solution information details (Type or Model or Serial) are displayed only if you provide the respective details through Rest API.
- For OpenBMC systems, the **Update Password** field is displayed. You might get an email notification that the current password of the OpenBMC is changed, then you can update the OpenBMC system password

from this page. Enter the **New password** and click **Verify & Update**. ESA verifies the connectivity to the OpenBMC system with the new password and updates it. If the password is valid, you get a message - `Password has been successfully updated!`. Else, you get a message - `Failed to connect to the OpenBMC system with the given password`.

- **Endpoint Type** - Displays the target system type. For example, *Linux Primary*.
- **Endpoint Name** - Displays the hostname of the target MVS system that is specified when you register a system.

Displaying problem information

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

Before you begin

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.

About this task

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 are 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 105.

To filter or search for a particular problem that you require, go through the following steps:

1. Click the **Define filter**  icon. The **Filter** window is displayed.
2. Specify the rules to filter the problems and click **Filter**. A list of filtered problems is displayed

To view problems, follow these steps:

Procedure

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:

   - **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.
   - **Severity** - Displays the severity of the problem.
   - **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.
   - **Time of Occurence** - Displays the time stamp of the problem occurrence.
   - **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*.
   - **Local Problem Status** - Displays the reporting status of the problem. The status can be one of the following -
     - *Detected* - ESA identified the problem.
     - *Open* - No action is taken on the problem.
     - *Pending* - The problem is 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 is sent to IBM support.
     - *Closed* - The problem is processed and closed.
     - *Expired* - The IEPD problem is purged.
     - *Email sent* - ESA sends an email notification about the problem to the registered administrator.
     - *Failed to send email* - ESA fails to send an email notification about the problem.
     - *Duplicate* - For any existing problem (same problem for same system) that notifies through email and also that has the **Local Problem Status** as *Email sent*, the problem is reported as duplicate.
     - *Cancelled* - The problem is canceled. A problem will be marked *Duplicate* until an *Email sent* problem is canceled.
   - **Local Problem ID** - Displays the status of the problem, for example, *Opened*, *Closed*, *Detected*, *Failed*, *Reported*, or *Expired*state.
   - **Duplicate Of** - Displays the ID of the problem that it is a duplicate of.

4. Select a problem in the list to take one of the following actions:

   - Click **Refresh Problems** to update the service request status.

     Note: If the **All Problems** tab is active, all problems are refreshed automatically for every 2 minutes.
   - Click **Delete** to delete the problem.
   - Click **Details** to view the problem details. The **Problem Detail** page 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.
     - **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.
- **Dupe Count** - Displays the count of the numbers of the error is duplicated. If the same error is repeated in the 15-minutes time frame, then the error is duplicated.

  Note: Dupe Count field is displayed only if there are duplicate errors.

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*.
- **Problem Notes** - Displays the details of the problem.
- **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 42.

Related concepts

Problem processing overview

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

Related tasks

Sending a test problem

Send a test problem to the IBM Electronic Support website to see whether the problem reporting function is working correctly.

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface

IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli problem

Use the **esacli problem** command to work with problems for the IBM Electronic Service Agent instance.

Discovering systems

IBM Electronic Service Agent can monitor the configuration and discovery of multiple hosts.

Before you begin

The IBM Electronic Service Agent monitors multiple hosts (like OpenBMC, BMC, eBMC, or IBM® Enterprise Storage Server remotely from a Linux server, which is on the same network. The Electronic Service Agent communicates with all the remote hosts through various protocols, for example, uses Rest services for OpenBMC and Enterprise Storage Server systems, and IPMI for BMC systems.

Note: To discover BMC devices, it is mandatory to install the IPMI tool on the ESA installed system.

About this task

When the problems are received, ESA processes them and sends it 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 more information, see "Displaying problem information" on page 35.

Procedure

To discover the 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 eBMC, BMC, OpenBMC, single or multiple remote systems in a single instance.

   Note: The ESA discovers only the IBM BMC, eBMC, and OpenBMC hosts. No other types of systems are supported.

   a) **BMC**

   Problem reporting through IPMI

   i) Enter the BMC **Host Name** or the IP address.

   ii) Enter the admin **User ID** and **Password** of the system.

   Diagnostics data through SSH Additionally to enable EED collection for BMC device, you need to provide sysadmin credentials.

   i) For **Admin User**, enter the BMC system administrator ID.

   ii) For **Admin Password**, enter the password of the system administrator ID.

   Click **Verify Connectivity** to test the connectivity to the BMC systems.

   Click **Discover Now** to discover the respective system. You can view the discovery status in the discovery log table.

   Note: The user IDs are used to create a new user on the BMC and the credentials are not stored anywhere. ESA updates the password for the new user ID (esaXXXXX) periodically.

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

   b) **OpenBMC/eBMC**

   i) Enter the **Host Name** or the IP address of the OpenBMC / eBMC system.

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

   iii) Click **Verify Connectivity** to test the connectivity to the OpenBMC or eBMC systems.

iv) Click **Discover Now** to discover the respective system. You can view the discovery status in the discovery log table.

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

Note: For ESS devices, the Spectrum Scale RAID application is responsible for controlling and monitoring the status of the storage subsystem. When Spectrum Scale RAID determines that a disk in an external storage unit is failed, it manages to move the data from the failed disk. The Spectrum Scale RAID also updates the status of the disk to "prepare for removal". When an accumulation of two disk units within the same resource group is failed, the Spectrum Scale RAID code initiates a call for service by notifying the ESA through a defined RESTful interface. The Spectrum Scale RAID code passes all of the relevant failure information to the ESA code, which then creates a Problem Management Record (PMR) with IBM Support. Each of the failed disks within the resource group has a separate Call Home for service event and resultant PMR. The PMR triggers IBM to initiate a service action and notify the client to make the necessary arrangements for servicing the storage unit. All of the reported failed disks are repaired at the time of service.

c) **Install ESA-Client**

ESA uses SSH connectivity for the initial configuration of ESA client, and ESA client also uses SSH protocol to configure the MVS nodes. The ESA-client is a service monitor that registers itself with MVS systems for receiving notifications when there is a hardware error. Whenever a hardware error is identified, the extended error data is collected by ESA-client and sends it to ESA, which is further sent to IBM for error analysis. ESA does a periodic transmission of heartbeat once in 7 days.

To install ESA-client , you must first enter the `Activation-code` and click **Verify**. In this version, ESA-client needs to be installed on the machine where CSESA is installed.

Note:

Note: The activation code is provided by the MVS Support team, only if there is a contract with IBM.

Once the verification is successful, go through the following steps to install ESA-client:

- Enter the **Server IP** address of the system.
- Enter the **User ID** of the system.
- Enter the **Password** of the system.
- By default, the format of ESA-client is selected as either **RPM** or based on primary system installation type of ESA. If Docker image is chosen, the ESA-client will be installed by default.

  Note: ESA doesn’t support installation of ESA-client in docker format on a remote Power System.

  If ESA installation on Primary System is a **RPM** image, ESA-client also will be installed on the same machine as rpm image.

  If ESA is installed as **Kubernetes/Docker Image** image, ESA-client will be installed by default in the container.
- Click **Install/Upgrade** to install or upgrade an ESA-client. During the installation of ESA-client, *ibm_esaclient* user is created. The *ibm_esaclient* user is used for all the communication from ESA to ESA-client. But for registration, ESA uses the root user credentials.
- Click **Check Status** to view the status of ESA-client.
- Click **Clear** to clear the **Server IP**, **User ID**, or **Password** fields.

Note: You can install multiple ESA-clients.

d) **Advanced**

Discover multiple remote systems

i) **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.

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

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

iv) Click **Clear** to clear the **Discover from local file** or **Discover from remote file** fields.

e) Discovery Logs

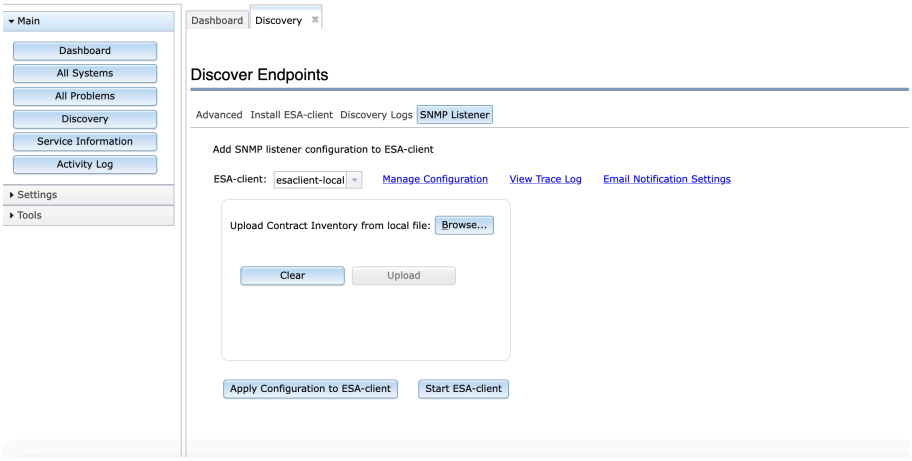
After you discover a system, the discovery log table is updated with the following system information:

- **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.

f) **SNMP Listener**

After ESA-client is verified by using the activation code, you can see the **SNMP Listener** tab. The SNMP listener receives SNMP trap notifications from the MVS systems. Follow these steps to configure the SNMP listener.

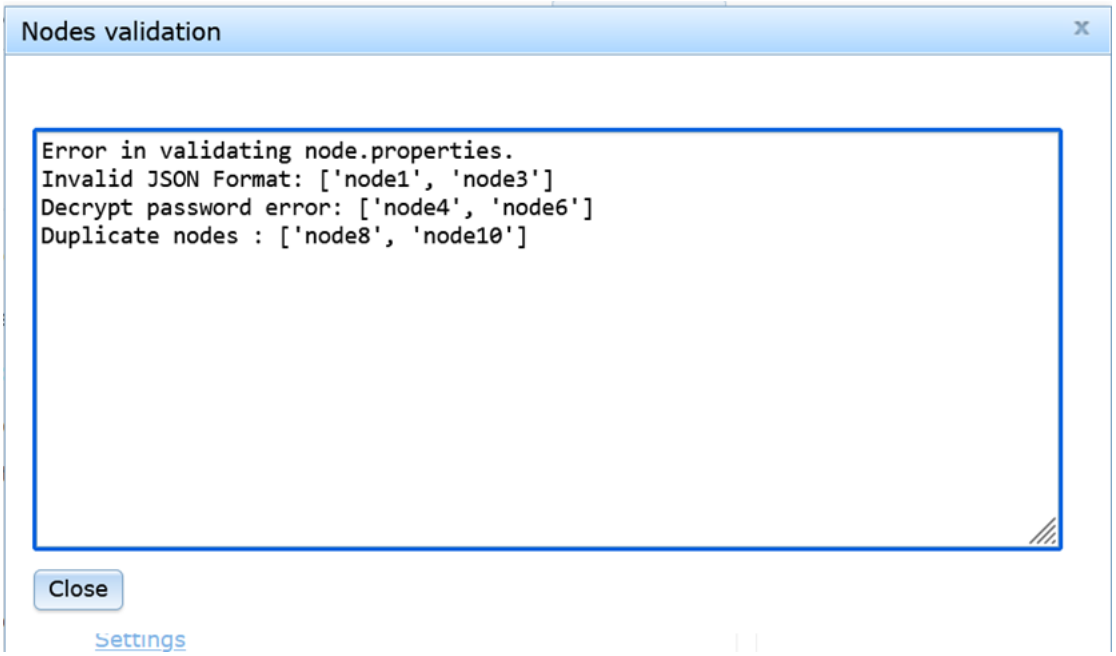


- Select the **ESA-client** from the drop-down list. Click **Manage Configuration** link to view the systems that are configured to the particular ESA-client.
- Click **Manage Configuration** link. The **SNMP listener configuration** window displays the systems that are configured to the particular ESA-client. Each system is displayed as a node in the configuration file in the following format:

```
#node1 =
      {"type": "HP_ILO5", "ipaddress": "x.x.x.x", "username": "YYY",
      "password":"ZZZ", "endpointname": "x.x.x.x"}
```

Click the **Save** button to save these details.

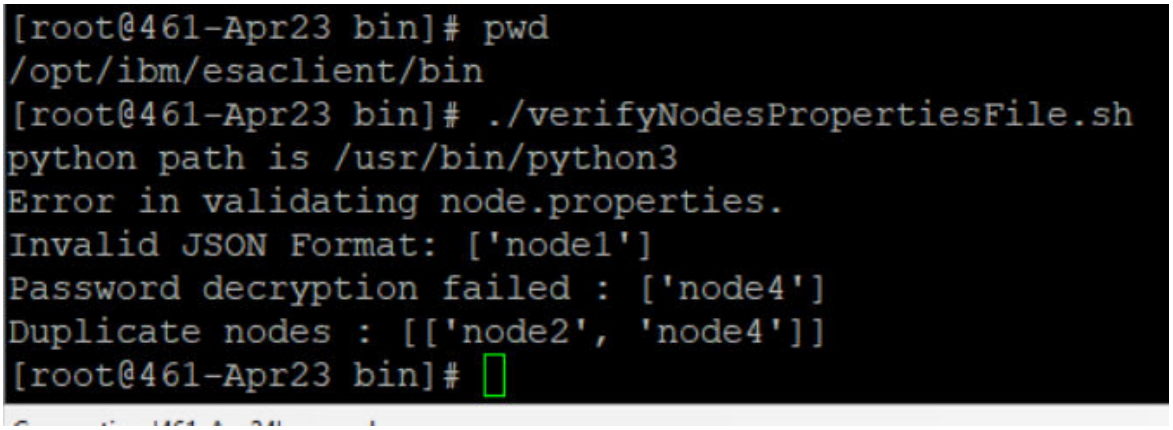
- Click **View Trace Log** link to view the ESA-client trace log. **ESA-client Trace Log** pop-up window is displayed. Click **Close** to close the **ESA-client Trace Log** window.
- Click the **Email Notification Settings** link to configure or enable the email notifications.
- To add contract inventory information, follow these steps:
  - Click **Browse**, then upload *Contract_Inventory.xlsx* or *Contract_Inventory.csv* file.
  - Click **Upload** to upload the contract inventory details.
  - Click **Clear** to clear the field.
- Click **Apply Configuration to ESA-client** to apply the specified system's configuration and contract inventory details to the selected ESA-client. The node details are validated for the valid JSON format, duplicated nodes and password decryption upon clicking this button. It shows the following message in a prompt in case of any error on ESA-client.



Alternatively, the **node.properties** file can also be validated in command-line by using the following script in */opt/ibm/esaclient/bin* folder.

```
verifyNodesPropertiesFile.sh
```

It shows the following message upon running the script if there is any error.



- Click **Start ESA-client** to start ESA-client. ESA-client then starts monitoring the remote systems that are configured, through SNMP traps and reports problems to ESA. ESA sends email

notifications about the problems to the administrator team of MVS systems. The team validates the received problem information, and sends call home problems to IBM Support.

Note:

It is recommended to add a single remote system to a single ESA instance. If a single remote instance is configured in more than one ESA instance, it would corrupt both the environments.

What to do next

On successful discovery of remote hosts, you can view the problems that are reported by each discovered system. For information on problem details, "Displaying problem information" on page 35

Sending a test problem

Send a test problem to the IBM Electronic Support website to see whether the problem reporting function is working correctly.

About this task

Sending a test problem to the IBM Electronic Support website is done through the IBM Electronic Service Agent graphical user interface.

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 121.

To send a test problem to the IBM Electronic Support website, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Main** menu from left navigation.
3. Click **All Systems** tab.
4. Select a system and click **View Problems** or you can directly click **System Health** icon of a particular system. The **Problems** page displays.
5. Click **Send Test Problem**. The message - `Test problem was successfully sent!` displays.
6. Click **Refresh problems** to see whether the test problem shows up in the problem summary list.

Related concepts

Activating and configuring IBM Electronic Service Agent
After the installation of IBM Electronic Service Agent, you must activate and configure IBM Electronic Service Agent.

Related tasks

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

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli test

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

Running an operational test

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

About this task

Checking your connection and the transmission of service information to the IBM Electronic Support website is done using the IBM Electronic Service Agent graphical user interface.

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 121.

To check your connection and the transmission of service information to the IBM Electronic Support website, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Select **Operational Test** tab.
4. 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 tasks

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

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

Collecting and sending service information

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

About this task

You can use the IBM Electronic Service Agent graphical user interface to collect and send service information to the IBM Electronic Support portal.

Tip: You can also use the **esacli service** command to collect and send service information to the IBM Electronic Support portal. For information, see “esacli service” on page 111.

Note: Collecting and sending service information is not applicable for x86 systems.

To manually collect and send service information to the IBM Electronic Support website, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
   See “Using the graphical user interface” on page 26.
2. Click **Main** menu from left navigation.
3. 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.
4. On the **Service Information** page, select the type of service information (Hardware, Software, or System Configuration) that you want to collect.
5. Select the systems for which you want to collect the service information.
6. 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 43.

Results

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

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Running an operational test
Check to see whether your connection and the transmission of service information to the IBM Electronic Support website is working correctly.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli service
Use the **esacli service** command to immediately send inventory to IBM.

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

Collecting extended error data

Extended error data is collected for every serviceable event that is sent to IBM (call home events) from the endpoints. 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 endpoints. For this process, SSH must be running on both endpoint host and ESA.

- After retrieving the extended error data by ESA, it is removed from the endpoint.
- 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

Use the activity log to see all IBM Electronic Service Agent activity for a designated time period.

About this task

You can use the IBM Electronic Service Agent graphical user interface to display the activity log.

Tip: You can also use the **`esacli activity`** command to display the activity log. For information, see "esacli activity" on page 79.

To display the activity log, follow these steps:

Procedure

1. Access and log on to the IBM Electronic Service Agent graphical user interface.
2. Click **Main** menu from left navigation.
3. Click **Activity Log** tab.
4. Select **Enable filter** to display a subset of the activity log based on selected date and time rather.
   a) Select the **Beginning Date** of activities.
   b) Select the beginning **Time** of activities.
   c) Select the **Ending Date** of activities.
   d) Select the ending **Time** of activities.
   e) Click **View Logs** to get the activity log based on the date and time you selected.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

Configuring operational settings

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

About this task

You can configure operational settings using the IBM Electronic Service Agent graphical user interface.

Tip: You can also use the **`esacli export`** and **`esacli import`** commands to configure operational settings. For information, see "Configuring operational tests" on page 63.

To configure operational settings, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Operational Test** tab.
4. Select the settings category for the settings that you want to configure or change. Select **Help** in the upper right corner of the panels if you have questions about the specific panel or the information to enter.

   For information about IBM Electronic Service Agent settings that you can change, see “Using the graphical user interface” on page 26 .

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

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

Exporting a configuration

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

About this task

You can use the IBM Electronic Service Agent graphical user interface to export a configuration.

Tip: You can also use the **`esacli export`** command to export a configuration. For information, see “esacli export” on page 87.

Note: The export function of the IBM 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, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Tools** menu from left navigation.
3. Click **Export Configuration** tab.
4. Click **Export settings** to export the configuration information to a file.
5. Click **Cancel** to return to the **Main** menu.

Related tasks

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

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

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

Importing a configuration

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

Before you begin

For information about creating a configuration file, see "Exporting a configuration" on page 46.

About this task

You can use the IBM Electronic Service Agent graphical user interface to import a configuration file.

Tip: You can also use the **esacli import** command to import a configuration file. For information, see "esacli import" on page 93. You can only use the **esacli import** command to import a local configuration file.

To import a configuration, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Tools** menu from left navigation.
3. Click **Import Configuration** tab.
4. Select **Import Local file** or **Import Remote file**.
5. Enter the name of the configuration file you want to import.
6. Click **Import** to import the configuration information.

Related tasks

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

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

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

Using the IBM Electronic Service Agent command line interface

IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

Checking status

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

About this task

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 117.

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

Procedure

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, view the status through `/opt/ibm/esa/bin/esactl status` command. The command **`systemctl status esactl.service`** is showing the status as *inactive* (which is a known issue) when you log in to the system.

   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 IBM Electronic Service Agent” on page 70
2. Click **Tools** menu from left navigation.
3. Click **Suspend/Resume** tab.

   The **Suspend/Resume** panel is displayed. The **Suspend/Resume** panel shows whether IBM Electronic Service Agent is monitoring this system. From this panel, you can suspend/resume IBM Electronic Service Agent.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli status
Use the **`esacli status`** command to display the status of the IBM Electronic Service Agent instance.

Accessing the IBM Electronic Support portal

Using the IBM Electronic Support portal, you can view service information that is reported by IBM Electronic Service Agent. You can also search all content by 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 to run smoothly.

- http://www-01.ibm.com/support/electronicsupport/: The support portal to view contracts, inventory, heartbeat 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
An IBM ID is needed to view service information that was sent to the IBM Electronic Support website by IBM Electronic Service Agent. Service information can be viewed on the IBM Electronic Support website.

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

Before you begin

Service Contact Information

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 more information, see "esacli contactSettings" on page 84.

About this task

Use one of the following methods to specify the contact information.

- Specify contact information during activation.

  For more information, see "Activating and configuring IBM Electronic Service Agent" on page 15.
- After IBM Electronic Service Agent is activated, you can use the IBM Electronic Service Agent graphical user interface (GUI) to specify contact information. Select **Help** in the upper right of the pages if you have questions about the specific page or the information to enter.

  Tip: You can also use the **`esacli contactSettings`** command to display and specify contact information. For more information, see "esacli contactSettings" on page 84.

Procedure

To specify contact 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 **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**
The name of the country or region in which the contact person is located. The following is an 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. The following is an example: `myuserid@mycompany.com`.

  Alternate email
  Fully qualified alternate email address for the contact person. The following is an 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**
  The 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. The following is an example: `myuserid@mycompany.com`.

4. Click **Save Settings** to save the details.

Related concepts

Activating and configuring IBM Electronic Service Agent
After the installation of IBM Electronic Service Agent, you must activate and configure IBM Electronic Service Agent.

Related tasks

Using the activator command
If you have many systems to activate and configure or there is little or no variation from one system to the next, it is easy to develop a script to activate and configure IBM Electronic Service Agent.

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

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

Updating Multiple Contacts and Locations from ESA

Before you begin

Systems that are managed by an ESA instance can span multiple data centers. IBM Electronic Service Agent addresses these modifications as shown in the following user scenarios. For more information, see Field Description table.

1. If the customer needs to update existing configurations:
   a. The customer uses the *node.properties* file to perform the update.

Procedure

1. The default contact information is provided during the activation of ESA and cannot be deleted. The addition of contacts is possible by using Rest API as follows:

```
curl -X POST 'https://xxx.yyy.zzz.ddd:wxyz/rest/v1/contacts' --header 'Accept: application/
json' --header 'Authorization: Bearer Bearer PrimarySystem:XXXXXXXXXXXXXYYYYYYYYYYYYYYYY' --
header 'Content-Type: application/json' --data '{"contact.type": "UKContact","contact.data":
{"secondary.alternate.telephone.number": "XXXXXYYYYYY","telephone.number":
"YYYYYZZZZZ","secondary.contact.name": "Rahul","email.address":
"test.primary@ibm.com","secondary.telephone.number": "XXXXXYYYYY","contact.name":
"Rohith","secondary.email.address": "test.secondary@ibm.com","alternate.email.address":
"test123@ibm.com","is.communicate.in.english": true,"contact.type.id":
1,"alternate.telephone.number": "XXXXXYYYYYY","pager.number": "yyyyyzzzzz"}}' -k
```

2. After the location is updated, "location": "UK Location1" (default location) is removed from the node config.

   In order to update the location from the node config file for a registered system:

   node1 = {"type": "HP ILO5", "ipaddress": "a.bbb.ccc.ddd", "endpointname": "test", "username": "IBM_Monitor", "password": "password", reconfig: "false", "location": "UK Location1"}

3. View the location details in the **All Systems** page and update.

   The details in this page can be filtered based on user selection. The above steps can be performed to override the default location configuration.

Table 3. Default Configuration

Default location Details	Default Contact Details
name: Default (case sensitive) Id: 0	name: Default (case sensitive) Id: 0

Table 4. Contact Details

Field Name	Is Mandatory	Comments
contact.type	Yes	a. Length<=50 b. Only contain numbers, capital and small case letters, '–' and '_'. c. Case insensitive
contact.name	Yes	Length<=50
telephone.number	Yes	• For US and Canada, 10=<Length<=30, can contain letters or numbers, not contain dash. For all other countries, 5=<Length<=30
email.address	Yes	Valid email format
alternate.email.address		Alt email format
is.communicate.in.english		Y/N (String)
alternate.telephone.number		1)For US and Canada, 10=<Length<=30, can contain letters or numbers, not contain dash. 2)For all other countries, 5=<Length<=30.
pager.number		0=<Length<=30
secondary.contact.name	yes	Length<=50

Table 4. Contact Details (continued)		
Field Name	**Is Mandatory**	**Comments**
secondary.alternate.telephone.number		1)For US and Canada, 10=<Length<=30, can contain letters or numbers, not contain dash 2)For all other countries, 5=<Length<=30
secondary.email.address	yes	Normal email format
secondary.telephone.number	yes	1)For US and Canada, 10=<Length<=30, can contain letters or numbers, not contain dash 2)For all other countries, 5=<Length<=30

Table 5. Location Details		
Field Name	**Is Mandatory**	**Comments**
location.type	Yes	1) 0<Length<=50 2) case insensitive
location.data		
contact.type.id	yes	Contact should be created first using the URL mentioned in #
Country	yes	Check list of valid country codes
State	yes	Check list of valid state codes
postal.code	No	0<Length<=20
City	yes	0<Length<=30
street.address	yes	0<Length<=100
building.floor.office	yes	0<Length<=100
telephone.number		Phone numbers must be 5 to 30 characters in length. Phone numbers for the United States and Canada must be 10 to 30 alpha numeric characters in length and not contain any dashes.

Creating Event Filters

About this task

Systems that are managed by an ESA instance can span multiple data centers. IBM Electronic Service Agent addresses the issues arising from such different systems, for different error codes. For more information, see Field Description table.

To avoid reporting events from specific remote systems to IBM, the event filtering capability of IBM Electronic Service Agent can be leveraged.

For example, if one or more servers are in maintenance mode and problems should not be reported from these servers, a filter can be implemented to suppress all of these events.

It is also possible to suppress all the events from all servers.

Procedure

1. The creation of filters is possible using REST API as follows:

```
curl -X POST "https://<<esa-machine-ip>>:portno/rest/v1/event/filters" -H "accept:
application/json" -H "Content-Type: application/json"  -H 'Authorization: Bearer
PrimarySystem:a8bb9cc90604e6500f259af33db56e0' -d  '{"error.codes": ["2185","3056","2153"],
"event.filter":["All"], "filter.type":"System", "reason":"test"}' -k
```

   The output for above command is as follows:
   `{"filter.id":"d32cd9057e0d46499a2e511028f83ba4","status":{"message":"Filter data added successfully.","code":200}}`

   Following are a few examples:

   a) Create a filter to suppress given set of error codes for all the registered systems.

```
curl -X POST "https://<Host IP>:portno/rest/v1/event/filters" -H "accept:
application/json" -H "Content-Type: application/json" -H 'Authorization: Bearer
PrimarySystem:<Token id>' -d '{"error.codes": ["2185","3046","2153"], "event.filter":
["All"], "filter.type":"System", "reason":"test"}' -k
```

   b) Create a filter to suppress given set of error codes for a specific system.

```
curl -X POST "https://<Host IP>:portno/rest/v1/event/filters" -H "accept: application/
json" -H "Content-Type: application/json" -H 'Authorization: Bearer PrimarySystem:<Token
id>' -d '{"error.codes": ["2185","3046","2153"], "event.filter":["xx.xx.xx.xx"],
"filter.type":"System", "reason":"test"}' -k
```

   c) Create a filter to suppress given set of error codes for a set of registered systems.

```
curl -X POST "https://<Host IP>:portno/rest/v1/event/filters" -H "accept: application/
json" -H "Content-Type: application/json" -H 'Authorization: Bearer PrimarySystem:<Token
id>' -d '{"error.codes": ["2185","3046","2153"], "event.filter":["xx.xx.xx.xx",
"xxx.xxx.xxx.xxx"], "filter.type":"System", "reason":"test"}' -k
```

   d) Create a filter to suppress All Error codes for a specific MVS system.

```
curl -X POST "https://<Host IP>:portno/rest/v1/event/filters" -H "accept: application/
json" -H "Content-Type: application/json" -H 'Authorization: Bearer PrimarySystem:<Token
id>' -d '{"error.codes": ["All"], "event.filter":["xx.xx.xx.xx"], "filter.type":"System",
"reason":"test"}' -k
```

   e) Create a filter to suppress All Error codes for a set of MVS systems.

```
curl -X POST "https://<Host IP>:portno/rest/v1/event/filters" -H "accept: application/
json" -H "Content-Type: application/json" -H 'Authorization: Bearer PrimarySystem:<Token
id>' -d '{"error.codes": ["All"], "event.filter":["xx.xx.xx.xx", "xxx.xxx.xxx.xxx"],
"filter.type":"System", "reason":"test"}' -k
```

2. IBM Electronic Service Agent supports fetching of all event filters, or fetching filters by using filter id or error code. Following are a few examples:

   a) To get all filters:

```
curl -X GET "https://<<esa-machine-ip>>:portno/rest/v1/event/filters" -H "accept:
application/json" -H "Content-Type: application/json"  -H 'Authorization: Bearer
PrimarySystem:a8bb9cc90604e6500f259af33db56e0'  -k
```

   Following is the output:

{"items":[{"filter.type":"SYSTEM","error.codes":["111","222","333"],"event.filter":
["1.2.3.4","2.3.4.5","3.4.5.6","4.5.6.7","5.6.7.8"],"filter.id":"d32cd9057e0d46499a2e511028f83ba
4","reason":"test","create.date":"Wed Aug 14 14:33:10 CST 2024"},
{"filter.type":"SYSTEM","error.codes":["ALL"],"event.filter":
["6.7.8.9"],"filter.id":"87e137a5d68c42d191c6b4af62b28731","reason":"test","create.date":"Wed
Aug 14 14:35:09 CST 2024"},{"filter.type":"SYSTEM","error.codes":["444.555"],"event.filter":
["ALL"],"filter.id":"8bdef3e7730e4e7d98702ff126c7afac","reason":"test","create.date":"Wed Aug
14 14:35:34 CST 2024"}],"status":{"message":"Filter data fetched successfully.","code":200}}

b) To get filters by filter id:

Parameter: filter.id

Example parameter: 4576ba01441a4efa8c0ae618ac85db2a

```
curl -X GET "https://<<esa-machineip>>:port/rest/v1/event/filters/
4576ba01441a4efa8c0ae618ac85db2a" -H  "accept: application/json" -H 'Authorization:
Bearer PrimarySystem:a8bb9cc90604e6500f259af33db56e0'  -k
```

Following is the output:

{"item":{"reason":"test","filter.type":"SYSTEM","create.date":"Thu Sep 12
10:14:01 UTC 2024","event.filter":["ALL"],"error.codes":
["2185","3056","2153"],"filter.id":"4576ba01441a4efa8c0ae618ac85db2a"},"st
atus":{"message":"Filter data fetched successfully.","code":200}}

c) To get filters by error code:

Parameter: error.code

Example parameter: 2185

```
curl -X GET "https://<<esa-machine-ip>>:port/rest/v1/event/filters/error.code/
2185 " -H  "accept: application/json"  -H 'Authorization: Bearer
PrimarySystem:a8bb9cc90604e6500f259af33db56e0'  -k
```

Following is the output:

{"items":[{"reason":"test","filter.type":"SYSTEM","create.date":"Thu Sep
12 10:14:01 UTC 2024","event.filter":["ALL"],"error.codes":
["2185","3056","2153"],"filter.id":"4576ba01441a4efa8c0ae618ac85db2a"},
{"reason":"test","filter.type":"SYSTEM","create.date":"Thu Sep 12 10:17:20
UTC 2024","event.filter":["ALL"],"error.codes":
["2185","3056","2153"],"filter.id":"45a8c5c37a154278ad3500a36ad18628"},
{"reason":"test","filter.type":"SYSTEM","create.date":"Thu Sep 12 10:21:25
UTC 2024","event.filter":["ALL"],"error.codes":
["2185","3056","2153"],"filter.id":"26bca1d9e05645ac994740e32e7956bd"}],"s
tatus":{"message":"Filter data fetched successfully.","code":200}}

It is also possible to fetch filters by using an event filter.

3. The deletion of filters is also possible using REST API as follows:

```
curl -X DELETE "https://<<esa-machine-ip>>:port/rest/v1/event/filters" -H
"accept: application/json" -H  "Content-Type: application/json"  -H
'Authorization: Bearer PrimarySystem:a8bb9cc90604e6500f259af33db56e0'  -d
"[{"filter.id":"4576ba01441a4efa8c0ae618ac85db2a"}]"  -k
```

Following is the output:

{"status":{"message":"[{status=success,
filter.id=4576ba01441a4efa8c0ae618ac85db2a}]","code":200}}

Table 6. Field Description

Field Name	Mandatory	Comments
error.codes	Yes	1-10 error codes or ALL

Table 6. Field Description (continued)		
Field Name	**Mandatory**	**Comments**
event.filter	Yes	1-100 system names or ALL
filter.type	Yes	**SYSTEM**

Specifying system location settings

Specifying the **System Location Settings** information is the another step in preparing to connect to the IBM Electronic Support website.

Before you begin

Tip: You can use the **`esacli locationSettings`** command to display and specify location information. For information, see “esacli locationSettings” on page 96.

Procedure

To specify system location settings, complete the following steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **System Location** to specify location information for the system.
4. Select the **Use service contact information** check box if you would like use the same contact information as that of your service contact. Else, provide the following details:

   ***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.

   Information that is designated with an asterisk (*) is required.
5. 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 the IBM Electronic Support website by IBM Electronic Service Agent. Service information can be viewed on the IBM Electronic Support website.

Before you begin

Important: The first IBM ID that is sent to IBM from IBM 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 Support 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.

About this task

You can use the IBM Electronic Service Agent graphical user interface to authorize users to view service information. Select **Help** in the upper right corner of the panel if you have questions about the information to enter.

Tip: You can also use the **`esacli ibmId`** command to authorize users to view service information collection. For information, see "esacli ibmId" on page 92.

To authorize users to view service information, 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 **IBM ID** tab.
4. The **IBM IDs** field displays the list of authorized IBM IDs to send to IBM support. Select an IBM ID and click **Remove** to remove it from the list.
5. Enter the IBM ID of person authorized to view service information sent to IBM support in the **IBM ID to add** field.
6. Click **Add** to add the ID to the **IBM IDs** list.
7. Click **Send authorizations** to approve the authorization for the list of IBM IDs to view the system details.

What to do next

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

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli ibmId

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

Related information

Accessing the IBM Electronic Support PortalThe 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.

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.

About this task

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.

Tip: You can also use the **esacli connectionSettings** command to configure your service connection. For information, see “esacli connectionSettings” on page 82.

To configure your service connection using the graphical user interface, follow these steps:

Procedure

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 “Common exit point topology” on page 14 for information about using an exit point for IBM Electronic Service Agent. Then go to “Creating the IBM Service and Support proxy” on page 22 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. Click **Verify Connectivity** to test the service connection.
7. When you are satisfied with the connection definitions and order, click **Save Settings** to save the configuration.

Related concepts

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

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

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.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli connectionSettings
Use the **`esacli connectionSettings`** command to set and display information about the connections to IBM.

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.

About this task

You can use the IBM Electronic Service Agent graphical user interface to create the IBM service and support proxy.

Tip: You can also use the **`esacli supportProxySettings`** command to create the IBM service and support proxy. For information, see “esacli supportProxySettings” on page 118.

To create the IBM service and support proxy, follow these steps:

Procedure

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.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

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.

Testing connectivity to IBM
When you have completed configuration of your connectivity settings, test for connectivity to IBM.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli supportProxySettings
Use the **`esacli supportProxySettings`** command to set and display information that configures the Service and Support Proxy.

esacli interfaces
Use the **`esacli interfaces`** command to list the names of the network interfaces.

esacli test
Use the **`esacli test`** command to perform test operations for the IBM Electronic Service Agent instance.

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.

About this task

The Electronic Service Agent communicates with all the remote hosts through SSH protocol. 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.

Procedure

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.

About this task

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 106.

To configure this problem reporting, follow these steps:

Procedure

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 tasks

Using the graphical user interface

The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface

IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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.

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.

About this task

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

Note: The **Service Information** feature is not applicable for x86 systems.

Tip: You can also use the **esacli serviceSettings** command to configure service information collection. For information, see "esacli serviceSettings" on page 112.

To configure service information collection, follow these steps:

Procedure

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.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli serviceSettings

Use the **esacli serviceSettings** command to set and display information about the types of inventory that is collected and the schedule for sending that inventory to IBM.

Configuring operational tests

You can specify that IBM Electronic Service Agent regularly test the connection and transmission of service information to the IBM Electronic Support website.

About this task

You can use the IBM Electronic Service Agent graphical user interface to configure regular operational tests.

Tip: You can also use the **esacli export** and **esacli import** commands to configure regular operational tests by following these steps:

1. Enter the following command:

```
esacli export -f operationalsettings.script
```

2. Edit `operationalsettings.script` and modify the following section with the desired operational test settings:

```
##########################################################################################
# Operational Test Settings
#
# Used to configure the schedule on which Electronic Service Agent will conduct
# an automated operational test communication with IBM.
#
# Properties and values:
# OPERATIONALTEST_ENABLED       Perform automated operational test.
#                               (0=No, 1=Yes)
# OPERATIONALTEST_INTERVAL      Test interval in days.
#                               (1-21)
# OPERATIONALTEST_TIME          Test time of day in 24 hour format.
#                               (HH:MM)
##########################################################################################
OPERATIONALTEST_ENABLED = 1
OPERATIONALTEST_INTERVAL = 1
OPERATIONALTEST_TIME = 21:30
```

3. Save `operationalsettings.script`.
4. Import the changes to modify the operational settings by running the following command:

```
esacli import -f operationalsettings.script
```

For information, see “esacli export” on page 87 and “esacli import” on page 93.

To configure regular operational tests, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Operational Test** tab.

   The **Operational Test Settings** page is displayed.
4. Click **Enable** to automatically test the connection to the IBM Electronic Support website from IBM Electronic Service Agent.
5. Specify the frequency and time of day that you want IBM Electronic Service Agent to run these operational tests.
6. Click **Save Settings** to save your selections.
7. Click **Run operational test** to run an operational test to test the connection to the IBM Electronic Support website.

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

Configuring notifications settings

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

About this task

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 99.

To specify notifications, follow these steps:

Procedure

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. The notification mail includes the endpoint name.
4. Click **Save Settings**.
5. Click **Save and Send Test Notification** to save the settings and send a test notification. The notification mailers will be sent to the primary and secondary contacts that are specified in the

Related tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

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

esacli test

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

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.

Procedure

To specify application settings, complete the following steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Application** to specify or change the hardware or software solution 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.
4. Click **Save Settings** to update the contact information.

Setting the trace level

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

About this task

You can use the IBM Electronic Service Agent graphical user interface to set the trace level.

Tip: You can also use the **esacli logSettings** command to set the trace level. For information, see “esacli logSettings” on page 98.

To set the trace level, follow these steps:

Procedure

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Settings** menu from left navigation.
3. Click **Trace Level** tab.
4. Select the trace level for the message severity you want recorded during IBM 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 tasks

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli logSettings
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.

About this task

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

Note: The **Problem Filters-Resources Settings** feature is not applicable for x86 systems.

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 108.

Procedure

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*, 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 Electronic Service Agent settings that you can change, see "Using the graphical user interface" on page 26 .

Configuring error codes

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

About this task

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

Note: The **Problem Filters-Error Codes Settings** feature is not applicable for x86 systems.

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 resourceFilters" on page 108.

Procedure

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*, 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 -

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 Electronic Service Agent settings that you can change, see “Using the graphical user interface” on page 26 .

Configuring UAK Management settings

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

About this task

Note: The **UAK Management settings** feature is not applicable for x86 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 new 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:

1. The **UAK Management settings** feature is applicable only for POWER8 and later versions.
2. For the HMC-controlled systems, HMC ESA updates the access keys, but not the stand-alone ESA that is installed on the Power System.

You can configure UAK management settings by using the IBM Electronic Service Agent graphical user interface. To configure UAK management settings, follow these steps:

Procedure

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, and updates the access key if the expiry is with in 30 days.

   Note: If the account was renewed and a new key is available, ESA auto-downloads and updates the access keys.
5. Specify the **Scheduled Time** and **Frequency** to 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 (and later) servers on which ESA is installed.
   - **Name** - Displays the hostname of the POWER8 (and later) system.
   - **Processor Type** - Displays the type of processor of the POWER8 (and later) system.
   - **Firmware Access Key Expiration Date** - Displays the expiry date of the firmware access key.
   - **OS Access Key Expiration Date** - Displays the expiry date of the OS access key.

     Note: The OS access key expiration date displays the expiry date only for **AIX on POWER10** and later. For the prior versions of POWER10 systems, the OS access key expiration date is not applicable.
   - **Last Checked** - Displays the timestamp 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.

Configuring system cleanup settings

You can configure system cleanup settings for IBM ESA to schedule the data cleanup of remote systems and the associated heartbeat, hardware inventory, software inventory, and problems data.

About this task

Systems cleanup is a background job to delete the remote systems for which heartbeat is not received. By default, the systems cleanup job is disabled. But if you would like to clean up the non-reachable systems, you can enable these settings.

Procedure

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 **Systems Cleanup** tab. The **Systems Cleanup Settings** page is displayed.
4. Select the following options according to which you would like to trigger the systems cleanup.
   a) **On**: The systems cleanup job triggers according to the following settings.
      - **Time Period**:
        i) Select the **Time**
        ii) Select the period as **Daily**, **Weekly**, **Monthly**, or **Quarterly**.
        iii) Select the **Day of week**, **Day of month**, or **Month of quarter** according to the selection of period.
      - **Last transaction older than (days)**: Select the number of days to delete the system's data, which has the last transaction date older than the specified number of days. The default number of days delete the system's data is 90 days.

      Note: The **Event horizon** field is disabled.
   b) **Off**: The systems cleanup job does not trigger to clean up any systems and all the fields are disabled.
   c) **Conditional on**: The systems cleanup job triggers according to the following settings.
      - **Time Period**:
        i) Select the **Time**
        ii) Select the period as **Daily**, **Weekly**, **Monthly**, or **Quarterly**.
        iii) Select the **Day of week**, **Day of month**, or **Month of quarter** according to the selection of period.
      - **Last transaction older than (days)**: Select the number of days to delete the system's data, which has the last transaction date older than the specified number of days. The default number of days delete the system's data is 90 days.
      - **Event horizon**: If the number of **systems are more than** the specified number, the systems cleanup job triggers.
5. **Save Settings** - Click to save the changes that are made to the page.

Deactivating IBM Electronic Service Agent

IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you want to deactivate IBM Electronic Service Agent until you choose to restart it, or when you want to deactivate only certain IBM Electronic Service Agent functions. There are several methods for deactivating IBM Electronic Service Agent, depending on the situation.

Use the following table to determine the appropriate method for deactivating IBM Electronic Service Agent.

If you want to...	You should...	To start using IBM Electronic Service Agent again...
Stop monitoring for problems and collecting and sending service information, but still use the graphical user interface functions	Suspend IBM Electronic Service Agent	Resume IBM Electronic Service Agent
Stop monitoring for problems, collecting and sending service information, and using all graphical user interface functions until you restart the system or manually restart IBM Electronic Service Agent	Stop IBM Electronic Service Agent	Start IBM Electronic Service Agent or restart the system on which IBM Electronic Service Agent is installed
Stop monitoring for problems, collecting and sending service information, and using all graphical user interface functions until you manually restart IBM Electronic Service Agent	Disable IBM Electronic Service Agent	Start IBM Electronic Service Agent

Suspending and resuming IBM Electronic Service Agent

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

Before you begin

Few of the operations are stopped when IBM Electronic Service Agent is suspended. However, the other IBM 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 120 and “esacli resume” on page 110.

About this task

If IBM Electronic Service Agent is in suspended state implies that ESA suspends all communication to IBM.

Procedure

To suspend or resume IBM Electronic Service Agent, follow these steps:

1. Access and log in to the IBM Electronic Service Agent graphical user interface.
2. Click **Tools** menu from left navigation.
3. Click **Suspend/Resume** tab.
4. Click **Suspend** or **Resume**. If IBM Electronic Service Agent is suspended, you cannot do the following operations:
   - Send the test problem.
   - Save the system location settings.
   - Delete the problems.
   - Send authorizations to the IBM ID.

- Delete the systems.
- Verify connectivity setting.
- Verify connectivity and discovery of systems.
- Run an operational test.
- Collect the service information.
- Import configuration settings.
- Save the service contact settings.
- Perform manual check on the expiration date of an update access key.

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 tasks

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

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

Using the graphical user interface
The IBM Electronic Service Agent graphical user interface is an intuitive way to manage and control IBM Electronic Service Agent. It uses standard graphical controls to access IBM Electronic Service Agent functions and includes online help for each pane. You can access the graphical user interface on the system that is running IBM Electronic Service Agent or from any remote system that can access the same local or remote network.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli start
Use the **esacli start** command to start Electronic Service Agent.

esacli stop
Use the **esacli stop** command to stop Electronic Service Agent.

esacli suspend
Use the **esacli suspend** command to suspend Electronic Service Agent.

esacli resume
Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

Stopping and starting IBM Electronic Service Agent

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

Before you begin

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

About this task
To stop or start IBM Electronic Service Agent, follow these steps:

Procedure
1. Log in to the system as `root` or sign on using a root-authorized user ID.
2. At the command prompt, enter either of the following commands:
   - To stop IBM Electronic Service Agent, enter the following command:

     `systemctl stop esactl.service`

     IBM Electronic Service Agent is temporarily stopped, and will restart when the system is rebooted.
   - To start IBM Electronic Service Agent, enter the following command:

     `systemctl start esactl.service`

Related tasks

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

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli start
Use the **`esacli start`** command to start Electronic Service Agent.

esacli stop
Use the **`esacli stop`** command to stop Electronic Service Agent.

esacli suspend
Use the **`esacli suspend`** command to suspend Electronic Service Agent.

esacli resume
Use the **`esacli resume`** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

Disabling IBM Electronic Service Agent

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

Before you begin
Problem monitoring and collecting, and sending service information is stopped when IBM Electronic Service Agent is stopped, along with the IBM Electronic Service Agent graphical user interface functions. However, if IBM Electronic Service Agent is stopped, it will restart when the system is rebooted. If you want to permanently deactivate IBM Electronic Service Agent, you should disable IBM Electronic Service Agent rather than stopping it. IBM Electronic Service Agent will remain disabled until it is manually started.

About this task
To disable IBM Electronic Service Agent, follow these steps:

Procedure
1. Log in to the system as `root` or sign on using a root-authorized user ID.

2. At the command prompt, enter the following command:

```
systemctl disable esactl.service
```

IBM Electronic Service Agent is disabled until manually started. For information about starting IBM Electronic Service Agent, see “Stopping and starting IBM Electronic Service Agent” on page 71

Related tasks

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

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

Related reference

Using the IBM Electronic Service Agent command line interface
IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

esacli start
Use the **esacli start** command to start Electronic Service Agent.

esacli stop
Use the **esacli stop** command to stop Electronic Service Agent.

esacli suspend
Use the **esacli suspend** command to suspend Electronic Service Agent.

esacli resume
Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

Unconfiguring IBM Electronic Service Agent

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

About this task

Attention: Unconfiguring IBM Electronic Service Agent is a destructive operation that discards configuration data on the local system. If possible, export the configuration so that the customer contact and system location information can be restored. When IBM 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 systems data, you must again associate an IBM ID with the system.

To unconfigure IBM Electronic Service Agent, follow these steps:

Procedure

1. Log in to the system as `root`.
2. At the command prompt, enter the following command:

```
/opt/ibm/esa/bin/unconfig.sh
```

Related tasks

Exporting a configuration

You can export IBM 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 IBM Electronic Service Agent

Before you uninstall IBM Electronic Service Agent, determine whether you want to save the configuration information to use for another system or later on this system.

IBM Electronic Service Agent can be uninstalled from your system using a Linux command. Uninstalling removes the IBM Electronic Service Agent code and configuration information. The configuration information contains contact and location information, and operational settings.

You can choose whether to save your configuration information before you uninstall IBM Electronic Service Agent. If you plan to install IBM Electronic Service Agent again later and want to use the same configuration information, or use the same configuration information for another system, you should save the configuration information for later use.

Related concepts

Installing IBM Electronic Service Agent

Install IBM Electronic Service Agent to enable problem detection, reporting, and transmission of service information to the IBM Electronic Support website.

Uninstalling IBM Electronic Service Agent and saving configuration information

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

Before you begin

The configuration information contains contact and location information, and operational settings.

About this task

To save the configuration information and uninstall IBM Electronic Service Agent, follow these steps:

Procedure

1. Export the configuration information from IBM Electronic Service Agent and save the file. For information about how to export the configuration information, see Exporting a configuration.
2. Use your normal process for uninstalling software to uninstall IBM Electronic Service Agent. The IBM Electronic Service Agent fileset is `esagent.pLinux`.
3. Enter the following RPM uninstallation command:

```
rpm -e esagent.pLinux
```

Related tasks

Exporting a configuration

You can export IBM 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 IBM Electronic Service Agent without saving configuration information

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

Before you begin

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

About this task

To uninstall IBM Electronic Service Agent without saving the configuration information, follow these steps:

Procedure

1. Use your normal process for uninstalling software to uninstall IBM Electronic Service Agent. The IBM Electronic Service Agent fileset is `esagent.pLinux`.
2. Enter the following RPM uninstallation command:

```
rpm -e esagent.pLinux
```

Related tasks

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

Using the IBM Electronic Service Agent command line interface

IBM Electronic Service Agent operations can be performed from a Linux command-line prompt.

The basic command to run is `/opt/ibm/esa/bin/esacli`. Except where otherwise noted, **`esacli`** subcommands can only be used following activation of IBM Electronic Service Agent. For information about activating IBM Electronic Service Agent, see “Activating and configuring IBM Electronic Service Agent” on page 15.

Related tasks

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

esacli

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

Synopsis

`esacli` *`subcommand subcommand-options`*

Description

The **`esacli`** command enables you to control the locally running IBM 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}.
- **61**: Not a valid option value. Option: {option}.
- **62**: Token already exists.
- **63**: Cache could not be updated.
- **64**: Please provide a valid system ID.

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.
  connectionSettings   Configures connectivity to IBM through proxy servers.
  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.
  interfaces           Lists the network interface cards.
  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 Electronic Service Agent status.
  stop                 Stops ESA.
  supportProxySettings Configures and displays Service and Support Proxy
                       settings.
  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

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

esacli activate

Use the **esacli activate** command to set the configuration settings necessary to activate the Electronic Service Agent instance.

The parameter validation that is performed will match the validation performed by the Electronic Service Agent web interface.

```
esacli activate {-o organization} {-n name} {-e email} {-p phone} {-c country}
{-q phone} {-d country} {-a address} {-m city} {-s state} {-z postal_code} {-b
building} [-i IBMID]
```

Description

The **esacli activate** command allows you to set the configuration settings necessary to activate the Electronic Service Agent instance. If the Electronic Service Agent instance was activated previously, then this command will simply update the configuration settings to the values provided.

Options

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

-b | --location.building {*building*}
Specifies the building, floor, and office where the system is located.

-c | --contact.country {*country*}
Specifies the name of the country or region for the contact person. The country must be specified as a valid two letter code as defined by ISO-3166.

-d | --location.country {*country*}
Specifies the name of the region or country where the system is located. The country must be specified as a valid two letter code as defined by ISO-3166.

-e | --contact.email {*email*}
Specifies the email address for the contact person.

-f | --port {*port_number*}
Specifies the port on which ESA listens for connections. The default port is 5024.

-i | --ibmid {*IBMID*}
Specifies the IBM ID to be associated with the system.

-m | --location.city {*city*}
Specifies the name of the city where the system is located.

-n | --contact.name {*name*}
Specifies the name of the person in the organization responsible for the system.

-o | --organization {*organization*}
Specifies the name of the organization that owns or is responsible for the system.

-p | --contact.phone {*phone*}
Specifies the telephone number where the contact person can be reached. A valid phone number must include at least 5 but not more than 30 characters. A valid phone number if the contact country is set to the United States or Canada must contain at least 10 but not more than 30 digits (any dashes, spaces, or parenthesis will automatically be removed if specified).

-q | --location.phone {*phone*}
Specifies the telephone number where the system is located. A valid phone number must include at least 5 but not more than 30 characters. A valid phone number if the location country is set to the United States or Canada must contain at least 10 but not more than 30 digits. Any dashes, spaces, or parenthesis will automatically be removed if specified.

-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.

Exit status

The following table contains the codes returned by this command.

- **0**: The operation completed successfully.
- **1**: The 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.
- **19**: An option value was not provided when required.
- **22**: An invalid email address was specified.
- **23**: An invalid country was specified.
- **24**: An invalid phone number was specified.
- **25**: An invalid state or province was specified.
- **26**: An invalid postal code was specified
- **27**: An invalid IBM ID was specified.
- **28**: Activation failed.
- **100**: An internal error occurred.

Examples

- Successful activation

  This example illustrates running the **esacli activate** command successfully.

```
esacli activate -o Acme -n "Jon Smith" -e smith@acme.com -p 123456790 -c US
-q 0987654321 -d US -a "123 1st St." -m Chicago -s IL -z 60601 -b Bldg15
```

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. 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-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 tasks

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

Related reference

How to read syntax diagrams
Review the conventions used in syntax diagrams to understand the command descriptions.

esacli backup

Use the **esacli backup** to take a backup of the configuration settings, discovered systems, and detected problems in IBM Electronic Service Agent.

Synopsis

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

Description

The **esacli backup** command takes a backup of the configuration settings, detected problems, discovered systems to a file that can be used to restore an ESA configuration. This command generates a `.backup` file that can be used by the **esacli restore** command. This command displays a message - `/root/esa.esabkp created successfully` on successful completion.

Options

-f | --file file_name

Specifies the name of the archive file (`.esabkp`) to which the configuration settings are written. The file can specify either an absolute path or a path relative to the current working directory. The file cannot exist unless the replace option is specified.

-r | --replace ""

Specifies the file to which the configuration settings are written which might 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}

- **18**: An option was set more than once. Option: {option}
- **19**: An option value was not provided when required. Option: {option}
- **59**: The backup operation failed. Reason: {reason}.
- **20**: The output file could not be created. Reason: {Reason}

Examples

- This example illustrates taking the backup of ESA configuration

```
esacli backup -f esa.esabkp
/root/esa.esabkp created successfully
```

esacli connectionSettings

Use the **esacli connectionSettings** command to set and display information about the connections to IBM.

Synopsis

```
esacli connectionSettings [-d [script]]

esacli connectionSettings {–t direct}

esacli connectionSettings {–t proxy} {-h hostname} {-p port} [-u user] [-w password]
[-r connection_number]

esacli connectionSettings [-k connection_number]
```

Description

The **esacli connectionSettings** command sets and displays information about the connections to IBM. This command configures connectivity to IBM either directly and through a proxy server. Electronic Service Agent can be configured with up to three connections. 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 connectionSettings values, follow these steps:

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

   ```
   esacli connectionSettings -d
   ```

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

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

-t | --type direct or proxy
Specifies if the connection to IBM is made through a direct connection or through a proxy connection

-h | --hostname ***IP address or hostname***
Specifies the host name or IP address of the proxy server

-p | --port ***integer between 1 and 65535***
Specifies a proxy server port

-u | --userid ***user***
Optional. Specifies a proxy user ID

-w | --password ***password***
Optional. Specifies a proxy password. The command will prompt for the password if the option but not the value is provided.

-r | --replace ***integer 1-3***
Replaces the existing connection by number. Connection numbers are viewed using the display option of this command to retrieve the Connection number field.

-k | --remove ***integer 1-3***
Deletes an existing connection by number. Connection numbers are viewed using the display option of this command to retrieve the Connection number field.

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}.
- **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.
- **47**: Unable to update connection settings. Reason: {reason}

Examples

- List connections

  This example shows how to display the connections.

```
esacli connectionSettings -d
Connection List
    Connection Number: 1
    Type: Direct

    Connection Number: 2
    Type: Proxy
    Proxy IP address or host name: proxy.ibm.com
    Proxy Port: 5026
    Destination user name: user1
Password: *******

    Connection Number: 3
    Type: Proxy
    Proxy IP address or host name: proxy2.ibm.com
    Proxy Port: 5026
    Destination user name: user1
```

- Add a direct connection to IBM

This example shows how to add a direct connection to IBM.

```
esacli connectionSettings –x true
```

- Add a proxy connection to IBM

  This example shows how to add a proxy connection to IBM.

```
esacli connectionSettings set –x false –h proxy.ibm.com –p 5026 –u user1 –w password
```

- Replace first connection with a proxy connection to IBM

  This example shows how to replace the first connection with a proxy connection to IBM.

```
esacli connectionSettings set –x false –h proxy.ibm.com –p 5026 –u user1 –w password –r 1
```

- Remove the first connection to IBM

  This example shows how to remove the first connection to IBM.

```
esacli connectionSettings–k 1
```

Related tasks

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.

Related reference

How to read syntax diagrams

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

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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 10 - 30 alphanumeric characters in length. Other telephone numbers must be 5 - 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 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}
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **42**: Invalid value {value} specified for the {option} option.
- **50**: The primary and secondary contacts can not 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

Using the activator command
If you have many systems to activate and configure or there is little or no variation from one system to the next, it is easy to develop a script to activate and configure IBM Electronic Service Agent.

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

Related reference

How to read syntax diagrams
Review the conventions 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

Configuring operational settings
You can configure operational settings for IBM Electronic Service Agent to perform the functions that are important to your service environment.

Related reference

How to read syntax diagrams
Review the conventions used in syntax diagrams to understand the command descriptions.

esacli generateClientKey

Use the **esacli generateClientKey** command to generate client key for the specified ESA-client or primary system.

Synopsis

```
esacli generateClientKey {[-i]} {system id}
```

Description

The **esacli generateClientKey** command allows you to generate client key for the specified ESA-client or primary system.

Options

-f | --force
Forces ESA to generate client key.

-i | --id
Generates client key for the specified ESA-client.

Note: If `-i | --id` option is not specified, ESA generates client key for the primary system.

Exit status

The **esacli generateClientKey** command returns the following codes.

- **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}.

Examples

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

```
esacli generateClientKey
1b7bf67bfbcdd52448df773824e7feee
```

```
esacli generateClientKey -i systemId
f673da94949907466a9a866be8e473da
```

esacli generateToken

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

Synopsis

```
esacli generateToken {[-i ]} (client ID)
```

Description

The **esacli generateToken** command enables you to generate an access token. This token is used to authenticate to ESA and update the settings of ESA, once ESA is activated.

Options

-i | --id
Generates token for the specified client ID, 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}.
- **14**: A required option was not provided. Option: {option}.

- **18**: An option was set more than once. Option: {option}.

Examples

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

```
esacli generateToken -i PrimarySystem
{"expiry-interval":"1440","access-key":"54cf6fe79583bd38dca762be29683b3d","token-
id":"57d061f0f6002dcb98c4a6f537a46dd8","expiry-in":"1440","created-date":"1701421805708"}
./esacli generateToken -i 11.11.11.11
```

```
esacli generateToken -i 11.11.11.11
Cannot generate token. System is not yet registered.
```

esacli help

Use the **esacli help** command to request information about using the **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 subcommand specified

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

```
esacli help
Provide command help.
Usage: esacli help [subcommand]
Subcommands:
  activity             Show activity log entries.
  connectionSettings   Configures connectivity to IBM through proxy servers.
  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.
  interfaces           Lists the network interface cards.
  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.
  supportProxySettings  Configures and displays Service and Support Proxy
                        settings.
  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 9:09 AM" -e "7/24/12 9:09 AM"
 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

Review the conventions 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}
- **30**: The IBM Electronic Service Agent instance is currently suspended.

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

Related reference

How to read syntax diagrams
Review the conventions used in syntax diagrams to understand the command descriptions.

esacli import

Use the **esacli import** command to import the configuration settings for the IBM 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 IBM 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 IBM 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.

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}
- **30**: The IBM Electronic Service Agent instance is currently suspended.

Examples

- Successful import

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

```
esacli import -f import.file
```

Related tasks

Configuring operational settings
You can configure operational settings for IBM Electronic Service Agent to perform the functions that are important to your service environment.

Importing a configuration
You can import an IBM 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
Review the conventions used in syntax diagrams to understand the command descriptions.

esacli interfaces

Use the **esacli interfaces** command to list the names of the network interfaces.

Synopsis

```
esacli interfaces
```

Description

The **esacli interfaces** command lists the names of the network interfaces. This command is used as an input source for input for the **esacli supportProxySettings** command.

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.

Example

- Lists interface

  The example illustrates displaying the network interfaces.

```
esacli interfaces
 # Interface IP Address
 1 eth2      fe80:0:0:0:214:5eff:fe96:a4c6%4
 2 eth2      2002:905:150e:251:214:5eff:fe96:a4c6%4
 3 eth2      9.5.10.138
 4 lo        0:0:0:0:0:0:0:1%1
 5 lo        127.0.0.2
 6 lo        127.0.0.1
```

Related tasks

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.

Related reference

How to read syntax diagrams
Review the conventions used in syntax diagrams to understand the command descriptions.

esacli supportProxySettings
Use the **esacli supportProxySettings** command to set and display information that configures the Service and Support Proxy.

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. 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 | systemID |
LPARID
EPS/BOUB24924961 | sa6p05 | 9117|MMA | 10F94EB |
1.1.111.111,2002:905:150e:301:214:5eff:fe5f:1a24,
fe80::214:5eff:fe5f:1a24 | PrimarySystem | 17
EPS/BOUB24925162 | sa6p12 | 8286 | 41A | TU00010 | fe80::42f2:e9ff:fe5a:8dec,9.5.31.12,
fe80::42f2:e9ff:fe5a:8dec,192.168.122.1 | PrimarySystem | 12
```

- List entity Id associated with a specific host

```
esacli lsentityIds -h sa6p05
EntityId | HostName | MachineType | MachineModel | SerialNumber | IPAddresses | systemID |
LPARID
EPS/BOUB24924961 | sa6p05 | 9117 | MMA | 10F94EB |
1.1.111.111,2002:905:150e:301:214:5eff:fe5f:1a24,
fe80::214:5eff:fe5f:1a24 | PrimarySystem | 10
```

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 allows 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 desired 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.

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

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

-p | --location.phone ***phone***
Specifies the telephone number where the system is located. 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.

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 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}
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **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
Specifying IBM Electronic Service Agent service contact information is the first step in preparing to connect to the IBM Electronic Support website.

Related reference

How to read syntax diagrams
Review the conventions 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 desired 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
Trace level determines the message severity that is recorded during IBM Electronic Service Agent activity.

Related reference

How to read syntax diagrams
Review the conventions 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 will send 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 desired 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 will prompt 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 will replace 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 additional email recipient

```
esacli notificationSettings –add “email1@ibm.com”
```

Related tasks

Configuring notifications settings

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

Related reference

esacli test

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

esacli opNotificationSettings

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

Note: This command should be run only when directed by IBM service and any email address which is set must end with `ibm.com`.

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 opNotificationSettings values, follow these steps:

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

   ```
   esacli opNotificationSettings -d
   ```

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

   ```
   esacli opNotificationSettings -d script > opnotifications.script
   ```

   Note: For Windows systems, create a batch file in the following format: **esacli opNotificationSettings -d script > opnotifications.bat**.
3. Edit the `opnotifications.script` file to specify the wanted 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 if notification is enabled or not. The default is true.

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

-p | --port *port*
Specifies an SMTP server port.

-u | --userid *user*
Specifies an SMTP user account.

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

-m | --email *email address*
Specifies an email where operational test notifications are sent. This email address must end with `ibm.com`.

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.

Examples

- 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: *********
    Address: 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 opTestSettings

Use the **esacli opTestSettings** command 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 that must 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 `esacli help opTestSettings` command.
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 required 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 value 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 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 performed is specific to the problem identified by the problem ID. Otherwise, the list of all open problems is displayed.

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}.
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **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 139e0629965-1573f832:
        Status:           Open
        Service request:  28507379000
```

- 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 tasks

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

Related reference

How to read syntax diagrams
Review the conventions 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 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 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 desired 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 tasks

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.

Related reference

How to read syntax diagrams
Review the conventions 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 restore

Use the **`esacli restore`** to restore the configuration settings, discovered systems, and detected problem's information in IBM Electronic Service Agent.

Synopsis

```
esacli restore {-f file_name}
```

Description

The **`esacli restore`** command imports the configuration settings, discovered systems, and detected problems for IBM Electronic Service Agent instance from the backup file. This command displays a message - `The operation completed successfully.` on successful completion.

Options

`-f | --file file_name`

Specifies the name of the `.esabkp` file from which the configuration settings are imported. The e**`sacli backup`** command can be used to generate a file with the proper format for the **`esacli restore`** command. The file can specify either an absolute path or a path relative to the current working directory..

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}

- **21**: The input file could not be read. Reason: {Reason}
- **30**: IBM Electronic Service Agent instance is currently suspended.
- **60**: The restore operation failed. Reason: {Reason}.

Examples

- This example illustrates restoring the ESA configuration

```
esacli restore -f esa.esabkp
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

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

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

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

Related reference

esacli start
Use the **esacli start** command to start Electronic Service Agent.

esacli stop

Use the **esacli stop** command to stop Electronic Service Agent.

esacli suspend
Use the **esacli suspend** command to suspend Electronic Service Agent.

esacli service

Use the **esacli service** command to immediately send inventory to IBM.

Synopsis

```
esacli service [-d]

esacli service {–t type} {-c}
```

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 on primary system.

-t | --type ***type of service information***
Specifies the type of service information that is collected. Options are `hardware`, `software`, `sysconfig`, or `"system configuration"`.

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}.
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **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.
```

Related tasks
Collecting and sending service information

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

Related reference

How to read syntax diagrams
Review the conventions 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 that is 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 that is 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 desired 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 case insensitive.

-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, such as Monday Tuesday, Wednesday, and so on.

-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"`.

-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 tasks

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.

Related reference

How to read syntax diagrams

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

esacli solutionInformation

Use the **esacli solutionInformation** command to set and display the hardware and software information that is required to verify the entitlement of the solution.

Synopsis

```
esacli solutionInformation {[ -d ]}

esacli solutionInformation { [ -e  false]}

esacli solutionInformation {[-hw false]}

esacli solutionInformation {[-sw false]}

esacli solutionInformation [-e true] [-hw true] {-t type} {-m model} {-s serialVersion} [-sw
true] {-c compID} {-di division} {-p productID}
```

Description

The **esacli solutionInformation** command sets and displays hardware and software information that is required to verify if the solution is entitled for the required support. When the [-d] (display) option is specified, the new settings are displayed. This command also displays the current settings when the command is run with no flags and options.

Options

-d | --display
Specifies that the setting values must be displayed.

-e | --enable ***true or false***
Specifies to enable or disable the solution information for entitlement. By default, the value is *true*.

-hw | --hardware ***true or false***
Specifies to enable or disable the hardware solution information. By default, the value is *true*.

-sw | --software ***true or false***
Specifies to enable or disable the software solution information. By default, the value is *true*.

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

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

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

-c | --comp ID ***Company ID***
Specifies the company ID of the software.

-di | --division ***Division***
Specifies the division of the software

-p | --productID ***Product ID***
Specifies the product of the software.

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}
- **42**: Invalid value {value} specified for the {option} option.
- **55**: Option {option} is not a valid option when {option} is set to {value}.

Examples

- Display the solution information.

```
esacli solutionInformation [-d]
Use solution informaiton for Entitlement: true
Hardware Solution: true
Type: 9110
Model Number: 51A
Serial Number: 10607EA
Software Solution: true
CompID: 42A
Division: TU00010
Product ID: 8288
```

- Sets the solution information.

```
esacli solutionInformation -e true -hw true -t 9110 -m 51A -s 10607EA -sw true -c 42A -di
TU00010 -p 8288
esacli solutionInformation -e false
```

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

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

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

Related reference

esacli stop
Use the **esacli stop** command to stop Electronic Service Agent.

esacli suspend
Use the **esacli suspend** command to suspend Electronic Service Agent.

esacli resume

Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

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.

```
esacli status
The system is being monitored.
System properties:
    Name:              spartacus
    Type:               9117
    Model:              MMA
    Serial Number:     10F94EB
    Manufacturer:      IBM
    Partition ID:      4
    Operating System:  linux
    Entity ID:         EPS/BOUB10829163
    Product Version:   2.1.0.0 vpl-2.1.gwsa120824
```

Related tasks

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

Related reference

How to read syntax diagrams
Review the conventions 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 IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to stop or start IBM Electronic Service Agent.

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

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

Related reference

esacli start
Use the **esacli start** command to start Electronic Service Agent.

esacli suspend
Use the **esacli suspend** command to suspend Electronic Service Agent.

esacli resume
Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

esacli supportProxySettings

Use the **esacli supportProxySettings** command to set and display information that configures the Service and Support Proxy.

Synopsis

```
esacli supportProxySettings [-d [script]]

esacli supportProxySettings {-e false}

esacli supportProxySettings [-d [script]] [-e true] [-i interface] {-p port}
[-u user] [-w password]
```

Description

The **esacli supportProxySettings** command sets and displays information that configures the Service and Support Proxy. 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 supportProxySettings values, follow these steps:

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

   ```
   esacli supportProxySettings -d
   ```

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

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

-e | --enable true or false
Specifies whether the service and support proxy is enabled.

-i | --interface any | *name of interface*
Specifies a network interface to use. Use the **esacli interfaces** command to list the names of the network interfaces. If this option is not specified, the Service and Support proxy will be configured with any interface.

-p | --port *integer between 1 and 65535*
Specifies a proxy server port.

-u | --userid *user*
Specifies a proxy user ID. If used, Basic HTTP authentication is enabled.

-w | --password *password*
Specifies a proxy password. If used, Basic HTTP authentication is enabled. The command will prompt for the password if the option but not the value is 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}.
- **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.
- **56**: Interface {interface} not valid. Reason: {reason}.

Examples

- Lists service and support proxy settings

```
esacli supportProxySettings –d
  Service and support proxy
     Interface:                                    Any
     Server port:                                  5555
     Require HTTP basic authentication:            true
     User name:                                    user11
     Password:                                     *********
```

- Sets service and support proxy settings using any interface

```
esacli supportProxySettings -e true -p 5026

esacli supportProxySettings -e true -p 5026 -u user1 -w password
```

- Sets service and support proxy settings with an interface name

```
esacli supportProxySettings -e true -i "eth0" -p 5026  -u user1 -w password
```

- Sets service and support proxy settings using a list of numbers

```
esacli supportProxySettings  -e true -i "1,2" -p 5026 -u user1 -w password
```

  These numbers were determined by running the **esacli interfaces** command.

Related tasks

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.

Related reference

esacli interfaces
Use the **esacli interfaces** command to list the names of the network interfaces.

How to read syntax diagrams
Review the conventions 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 suspend** command suspends all communication from Electronic Service Agent to IBM. When ESA is suspended, you cannot do the following operations: .

- Send the test problem.
- Save the system location settings.
- Delete the problems.
- Send authorizations to the IBM ID.
- Delete the systems.
- Verify connectivity setting.

- Verify connectivity and discovery of systems.
- Run an operational test.
- Collect the service information.
- Import configuration settings.
- Save the service contact settings.
- Perform manual check on the expiration date of an update access key.

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**: The 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

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

Disabling IBM Electronic Service Agent
IBM Electronic Service Agent is automatically started when the activation process is complete. However, there might be times when you need to disable IBM Electronic Service Agent.

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

Related reference

esacli start
Use the **esacli start** command to start Electronic Service Agent.

esacli stop
Use the **esacli stop** command to stop Electronic Service Agent.

esacli resume
Use the **esacli resume** command to resume monitoring of the system by Electronic Service Electronic Service Agent.

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 | -p -s <system ID>}
```

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 on primary system.

-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 99.

-p -s <system ID>
Specifies that creation of a test problem is to be performed on the given system ID.

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}.
- **29**: The IBM Electronic Service Agent instance has not been activated.
- **30**: The IBM Electronic Service Agent instance is currently suspended.
- **33**: Connectivity test failed.
- **34**: Notification test failed. Reason: {Reason}
- **35**: Operational test failed
- **36**: Test problem creation failed.
- **45**: Mutually exclusive arguments used together.
- **64**: Please provide a valid system ID.

Examples

- Connectivity test

  This example illustrates running the **esacli test** command to perform a connectivity test.

```
esacli test -c
Performing Connectivity Verification Test
success  Bulk_Data_1          www6.software.ibm.com         170.225.15.41    443
success  Bulk_Data_2          www.ecurep.ibm.com            192.109.81.20    443
success  Gateway_1            eccgw01.boulder.ibm.com       207.25.252.197   443
success  Gateway_2            eccgw02.rochester.ibm.com     129.42.160.51    443
success  Problem_Report_1     www-945.ibm.com               129.42.26.224    443
success  Problem_Report_2     www-945.ibm.com               129.42.34.224    443
success  Problem_Report_3     www-945.ibm.com               129.42.42.224    443
success  SP_Config_1          www.ibm.com                   129.42.56.216    443
success  SP_Config_2          www.ibm.com                   129.42.58.216    443
success  SP_Config_3          www.ibm.com                   129.42.60.216    443
```

```
success  SP_Config_4          www-03.ibm.com               204.146.30.17    443
success  SP_Config_5          www.ibm.com                  129.42.56.216     80
success  SP_Config_6          www.ibm.com                  129.42.58.216     80
success  SP_Config_7          www.ibm.com                  129.42.60.216     80
success  SP_Config_8          www-03.ibm.com               204.146.30.17     80
15 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 on primary system

  This example illustrates running the **esacli test** command to create a test problem.

```
esacli test -p
Test problem created successfully with problem ID 12ce558daaf-3d3ed62a.
```

- Notification test

  This example illustrates running the **esacli test** command to create a test notification.

```
esacli test -n
Test notification sent successfully.
```

- Create test problem on given system ID

  This example illustrates running the **esacli test** command to create a test problem on a given system ID.

```
esacli test -p -s e6b02337b3807f187902a2efff9586e9
Test problem created successfully with problem ID 12ce558daaf-3d3ed62a.
```

- Failed to create test problem on given system ID

  This example illustrates running the **esacli test** command to create a test problem on a given invalid system ID.

```
esacli test -p -s abcd
Please provide a valid system ID.
```

Related tasks

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.

Running an operational test
Check to see whether your connection and the transmission of service information to the IBM Electronic Support website is working correctly.

Configuring operational tests
You can specify that IBM Electronic Service Agent regularly test the connection and transmission of service information to the IBM Electronic Support website.

Sending a test problem
Send a test problem to the IBM Electronic Support website to see whether the problem reporting function is working correctly.

Collecting and sending service information

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

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

Related reference

How to read syntax diagrams
Review the conventions 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 will send notifications when errors occur.

esacli updateCache

Use the **esacli updateCache** command to update Cache for the all systems and problems.

Synopsis

```
esacli updateCache
```

Description

The **esacli updateCache** command refreshes the cache with the recent changes to the systems and problems.

Exit status

The **esacli updateCache** returns the following codes:

- **0**: The operation completed successfully.
- **10**: Unsupported option was specified. Option: {option}.
- **63**: Cache could not be updated.

Examples

- Successful update

  This example illustrates running the **esacli updateCache** command successfully.

  ```
  esacli updateCache
  The operation completed successfully.
  ```

- Update failed

  This example illustrates failure of updating the Cache.

  ```
  esacli updateCache
  0063: Cache could not be updated.
  ```

install_update_ipmitool

Use the **install_update_ipmitool** command to install or update the IPMI tool to enable BMC discovery in IBM Electronic Service Agent.

Synopsis

```
install_update_ipmitool
```

Description

The **install_update_ipmitool** command is located in the location /opt/ibm/esa/bin/. The **install_update_ipmitool** command installs or upgrades IPMI tool on the IBM Electronic Service Agent installed system to enable BMC discovery by ESA. The command searches whether IPMI tool is already installed or not. If not, it searches in *yum/zypper* and try to installs. It then verifies the successful execution of the IPMI tool and displays the message - Please restart ESA as ipmitool has been installed/upgraded.

Options

--force
This option must be supplied with *rpmFilePath* (*https*, *http*, *ftp*, *localFilepath*), tries to upgrade the IPMI tool on the IBM Electronic Service Agent installed system by using the *rpmFilePath* even though IPMI is installed.

rpmFilePath - Using the rpm file path that you can install or upgrade the IPMI tool.

Exit status

The following table contains the codes that are returned by this command.

- **0** - The operation completed successfully.
- **-1** - The operation failed
- **4** - Incorrect combination or options provided.

Examples

- `./install_update_ipmitool`
- `./install_update_ipmitool --force`
- `./install_update_ipmitool ipmitool-1.8.11-0.20.30.1.ppc64.rpm`
- `./install_update_ipmitool --force ipmitool-1.8.11-0.20.30.1.ppc64.rpm`
- `./install_update_ipmitool http://hostname:portNo/ipmitool-1.8.11-0.20.30.1.ppc64.rpm1`
- `./install_update_ipmitool ftpurl`
- `./install_update_ipmitool httpsurl`

install_update_java

Use the **install_update_java** command to install or update IBM Java to perform call home operation.

Synopsis

```
install_update_java
```

Description

The **install_update_java** command is located in the location /opt/ibm/esa/bin/. The **install_update_java** command installs or upgrades IBM Java on the IBM Electronic Service Agent installed system to perform call home operation by ESA. The command searches whether IBM Java is already installed or not. If not, it searches in *yum/zypper* and try to installs. It then verifies the successful execution of the Java command and displays the message - Please restart ESA as IBM Java has been installed / upgraded.

Options

`--force`
This option must be supplied with *rpmFilePath* (*https*, *http*, *ftp*, *localFilepath*). It tries to upgrade IBM Java on the IBM Electronic Service Agent installed system by using the *rpmFilePath* even though IBM Java is installed.

rpmFilePath - Using the rpm file path that you can install or upgrade IBM Java.

Exit status

The following table contains the codes that are returned by this command.

- **0** - The operation completed successfully.
- **-1** - The operation failed
- **4** - Incorrect combination or options provided.

Examples

- `./install_update_java`
- `./install_update_java --force`
- `./install_update_java java-1.8.0-ibm.ppc.rpm`
- `./install_update_java --force java-1.8.0-ibm.ppc.rpm`
- `./install_update_java http://hostname:portNo/java-1.8.0-ibm.ppc.rpm`
- `./install_update_java ftpurl`
- `./install_update_java httpsurl`

Troubleshooting IBM Electronic Service Agent

Follow these general troubleshooting guidelines when you monitor IBM Electronic Service Agent.

Unable to log in to ESA web UI (RHEL 7)

Whenever you face log in issues with ESA web UI, use the following commands to clear the firewall:

1. **`firewall-cmd --zone=public --add-port=5024/tcp --permanent`**
2. **`firewall-cmd --zone=public --add-port=5028/tcp --permanent`**
3. **`firewall-cmd --reload`**

Change the SNMP listener port on the ESA system

If the default SNMP listener port (5028) on the ESA system is not available, you can change it to any other port available. Follow the steps to change the port number:

1. Edit the file `/opt/ibm/esa/workspace/.metadata/.plugins/com.ibm.esa.core/config/snmp.listener.settings.*`.

   Note: If you have multiple files, select the file with the recent timestamp.
2. Modify the value for the *snmplistener.port*. By default, the value is 5028, as shown in the code here -

   `property name="snmplistener.port" type="java.lang.Integer">5028`

   Example

```
property name="snmplistener.port" type="java.lang.Integer">5030
```

3. Restart Electronic Service Agent.
4. Rediscover each of the system so that the new port is updated on each of the endpoints.

Change the SNMP listener community on the ESA system

You can change the default community of the SNMP listener through the following steps:

1. Edit the file `/opt/ibm/esa/workspace/.metadata/.plugins/com.ibm.esa.core/config/snmp.listener.settings.*`.

   Note: If you have multiple files, select the file with the recent timestamp.
2. Modify the value for the *snmplistener.community*. By default, the value is public, as shown in the code here -

   ```
   property name="snmplistener.community"
   type="java.lang.String">publicproperty name="snmplistener.community"
   type="java.lang.String">public
   ```

   Example:

   ```
   property name="snmplistener.community"
   type="java.lang.String">publicproperty name="snmplistener.community"
   type="java.lang.String">communityname
   ```
3. Restart Electronic Service Agent.
4. Rediscover each of the system so that the new port is updated on each of the endpoints.

Discovery action failed as the name or service is not known

If there is an issue with system configuration, you might get this error. For SSH to work, the system must resolve its own hostname. Follow these steps to make the system reachable to its hostname:

1. Log in to the respective system.
2. Open the `etc/hosts` file.
3. Map the system's hostname to its IP address. For example:

   ```
   10.10.10.10 indesa.ind.ibm.com
   ```

Set the IBM Electronic Service Agent trace level

Adjusting the trace level by using the IBM Electronic Service Agent graphical interface enables you to set the message severity that is recorded during IBM Electronic Service Agent activity. Working with an IBM Support representative to analyze the messages might help you diagnose problems. If the trace level is set to Severe or Error, you might want to change it to Warning or Information to gather more information about the problem. For more information, see “Setting the trace level” on page 65.

View the activity log to see that the problems were recorded

The activity log shows the date and time that a problem occurred, and a description of the problem. See “Displaying the activity log” on page 45.

If a problem occurs when the system attempts to electronically send a problem or service information to the IBM Electronic Support website, you might have many possible reasons why the transmission might not be successful. IBM Electronic Service Agent depends on functions of the operating system to be working correctly. This includes managing the IBM 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 the IBM Electronic Support website

Service information collection activity shows the type of service information that is collected , when it was last collected, and when it was last sent.

If service information is being collected or transmitted, the last collected and last sent activity is not shown 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 perform the following steps:
   a. Start the connection profile
   b. Connect to the IBM Electronic Support website
   c. Send the service information

To verify that the information was sent to the IBM Electronic Support website, see "Displaying the activity log" on page 45.

Issue in launching the IBM Electronic Service Agent graphical user interface

If you cannot access the IBM Electronic Service Agent graphical user interface, follow these steps:

1. Log in to the system as `root`.
2. Check whether IBM Electronic Service Agent is active on the system by entering the following command:

   `systemctl status esactl.service` .

   The IBM Electronic Service Agent status is displayed.
3. If IBM Electronic Service Agent is not active, enter the following command to start IBM Electronic Service Agent:

   `systemctl start esactl.service`
4. If IBM Electronic Service Agent is not active and still cannot access the graphical user interface, enter the following command to check whether a firewall is blocking the port:

   `/opt/ibm/esa/bin/esafirewall status`

   The status of the firewall is displayed. For example:

   ```
   # /opt/ibm/esa/bin/esafirewall status
   Firewall is friendly with ESA UI (port =1025).
   ```
5. If the firewall is not friendly, add a new firewall rule by entering the following command:

   `/opt/ibm/esa/bin/esafirewall enable`

Getting support for IBM Electronic Service Agent

You can post questions about any of the IBM Service and Productivity Tools, including IBM Electronic Service Agent, on the developerWorks® PowerLinux Community at the following web address:

https://www.ibm.com/developerworks/mydeveloperworks/groups/service/forum/topics?communityUuid=fe313521-2e95-46f2-817d-44a4f27eba32

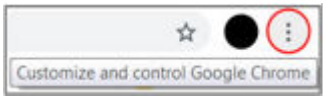
For issues or problems with IBM Electronic Service Agent for Linux, contact your hardware service provider via 1-800-IBM-SERV. Your problem will be addressed by the IBM Electronic Service Agent support team.

Issue in loading Dashboard page

If you logged in to ESA, and later reinstalled and upgraded ESA, you might be able to log in to ESA, but the **Dashboard** page might take long time or even fail to load. This problem might occur because of the browser's cache and SSL certificates.

To troubleshoot this problem, clear the browser's cache and SSL certificates, and then login to ESA again. Complete the following steps to clear the browser's cache and SSL certificates on various browsers:

- Google Chrome

  1. Click the **Customize and Control Google Chrome** more options icon 

 and click **Settings**.
  2. In the **Search settings** field, enter `Cache`, and then click **Clear browsing data**.
  3. From the **Time range** list, select `All time`, and then click **Clear Data** to clear cache.
  4. To clear SSL, enter `proxy` in the **Search settings** field of the **Settings** page, and then click **Open proxy settings**.
  5. In the **Internet Properties** window, click the **Content** tab, and then click **Clear SSL State**.
- Internet Explorer

  1. Click the **Settings** icon and click **Internet options**.
  2. In the **Internet options** window, click the **General** tab.
  3. In the **Browsing history** area, select **Delete browsing history on exit** option and click **Delete** to delete the browsing history.
  4. In the **Content** tab of the **Internet options** window, click **Clear SSL state** to clear SSL, and click **OK**.
- Mozilla Firefox

  1. Click **Tools** > **Options**.
  2. In the **Find in Options** field, enter `Cache`. In the **Cookies and Site Data** section, click **Clear Data**.

Proxy Issue

If all your ESA transactions are failing, verify that the DNS is resolvable and the DNS is enabled for outbound communication.

Concurrent execution exception

If you are not able to send, test email of the SMTP notifications from the **Notification Settings** page, check whether the hostname is configured properly in the following files:

- `/etc/resolv.conf`
- `/etc/hosts`

If the hostname is not configured, complete the following steps to troubleshoot the problem:

1. Enter **`search <customer system domain name>`** in the `/etc/resolv.conf` file.
2. Enter the hostname in the `/etc/hosts` file.
3. Run the following commands:
   a. **`/opt/ibm/esa/bin/esacli stop`**
   b. **`/opt/ibm/esa/bin/esacli start`**
4. Run the **`nslookup <hostname>`** command to verify the IP address of the system.

Notification test failure

An error message similar to the following example might be displayed when you run the notification test command (**/opt/ibm/esa/bin/esacli test -n**) or notification test failure in ESA GUI.

```
0034: Notification test failed. Reason: java.lang.LinkageError: loading
constraint violation: loader "com/ibm/oti/vm/BootstrapClassLoader@602f2e78"
previously initiated loading for a different type with name "javax/
activation/DataHandler" defined by loader "org/eclipse/osgi/internal/loader/
EquinoxClassLoader@d49364bb"
```

To troubleshoot the problem, run the following commands:

1. SSH to the system as root and stop ESA by using the following command:

   /opt/ibm/esa/bin/esacli stop.
2. Edit the file `/opt/ibm/esa/runtime/conf/esa.properties` and add **org.osgi.framework.bootdelegation=javax.*** in a new line at the end of the file.
3. Start ESA by using the following command:

   /opt/ibm/esa/bin/esacli start.

NPS survey - known issue

For the NPS Survey, after you provide feedback for a single system, the feedback page is not getting refreshed to provide feedback for the other systems.

To resolve this issue, go through the following steps:

- Mozilla Firefox
  1. Open your browser and go to **Options** → **Privacy & Security** → **Cookies and Site Data.**
  2. Click **Manage Permissions**. The **Exceptions - Cookies and Site Data** window is displayed.
  3. In the **Address of Website**, enter *https://survey.medallia.eu* and click **Block**.
  4. Click **Save Changes** to apply the exceptions.
  5. Access the IBM Electronic Service Agent graphical user interface.
- Google Chrome
  1. Click the **Customize and control Google Chrome** icon and click **Settings**.
  2. In the **Privacy and security** page, click the **Site Settings**.
  3. Under the **Permissions** area, click **Cookies**.
  4. In the **Block** section, click **Add**.
  5. In the **Add a site**, enter *https://survey.medallia.eu* and click **Add**.
  6. Access the IBM Electronic Service Agent graphical user interface.
- Microsoft Edge
  1. Click the **Settings and more** icon and click **Settings**.
  2. In the **Privacy & security** page, go to the **Cookies** section and select **Block only third party cookies** option.
  3. Access the IBM Electronic Service Agent graphical user interface.

IBM Electronic Service Agent instance is not accessible

If ESA is activated on a port other than 5024, the ESA user interface might not be accessible and the command-line might display an incorrect status:

```
/opt/ibm/esa/bin/esacli status

0001: IBM Electronic Service Agent instance is not running.
```

To resolve the issue, upgrade ESA to the latest version (4.5.6 or later). For older versions (before 4.5.6) of ESA, follow these steps:

1. `/opt/ibm/esa/bin/esacli stop`
2. `echo 'port=<<port_number>>' >> /opt/ibm/esa/ecc/data/security.properties`
3. `/opt/ibm/esa/bin/esacli start`

Example

```
/opt/ibm/esa/bin/esacli stop
echo 'port=6060' >> /opt/ibm/esa/ecc/data/security.properties
/opt/ibm/esa/bin/esacli start
```

IBM Electronic Service Agent failed to report problems in version 4.5.5

Restart ESA service to resolve the issue temporarily. To avoid the issue to reoccur, upgrade to ESA version 4.5.6 or later.

Unable to start Electronic Service Agent

For the ESA versions earlier to 4.5.9, if ESA does not start even after you try multiple times, do the following steps.

1. Navigate to the `/opt/ibm/esa/runtime/conf` directory and check if **`login.failure.properties`** file exists in the folder.
2. If the **`login.failure.properties`** file exists, delete the file and start ESA. ESA starts successfully.

Note: This issue is fixed in the ESA versions 4.5.9 and higher.

Problems are not reported by ESA

1. Verify the connectivity to ESA.

   For more information, see Testing Connectivity to IBM.
2. Check if the Access-token is expired or the file is corrupted:
   a. Check if the `/opt/ibm/esaclient/data/common/access-token` file is not corrupted.
   b. If corrupted, please copy the access-token file from a backed-up ESA-client folder (Link to Periodic backup of the ESA data from best practices).
   c. Restart ESA-client from ESA and check if transactions are working as expected.
   d. Check the ESA-client log `/opt/ibm/esaclient/logs/trace.log` to check for any error related to access-token file.
   e. Contact support if the error still persists.
3. The Access-token file is corrupted but the one in backup is also not working:

   This is not a recommended approach and should be the last one to try out when there is no alternative to fix the issue with access-token file. This assumes that there is a backup of working version of ESA and only the access-token file in the backup has issue. This does not give a 100% guarantee that the client will be restored successfully. In that case, the ESA-client has to be reinstalled and all the machines should be re-registered.
   a. Perform a backup of `/opt/ibm/esaclient`.
   b. Uninstall **esaclient** from the command line.
   c. Install esaclient from CSESA UI:
      i) `rpm -qa | grep esaclient`
      ii) `rpm -e esaclient-1.2.3-1.noarch`
   d. Copy the conf folder from the backup to `/opt/ibm/esaclient/conf`.

e. Copy the common folder from the backup to `/opt/ibm/esaclient/data/common`.

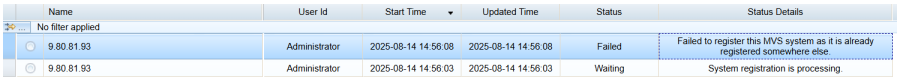
f. Restart ESA-client from UI and check if the ESA-client is restored properly.

Failure of MVS Server Registration with IBM_Monitor user error: Failed to register this MVS system as it is already registered somewhere else

The error message

```
"Failed to register this MVS system as it is already registered somewhere else."
```

appears in the Discovery logs as follows:



Name	User Id	Start Time	Updated Time	Status	Status Details
No filter applied					
9.80.81.93	Administrator	2025-08-14 14:56:08	2025-08-14 14:56:08	Failed	Failed to register this MVS system as it is already registered somewhere else.
9.80.81.93	Administrator	2025-08-14 14:56:03	2025-08-14 14:56:03	Waiting	System registration is processing.

This issue might happen if the MVS server is already registered with another ESA instance. In case you want to proceed with registering the MVS server with the current ESA instance, please follow the below steps:

Check if the `IBM_Monitor` user is already created on the MVS server and the SNMP alert destination does not contain the ESA IP(new), remove the IBM_Monitor user on the MVS server and proceed with registration by clicking the Start ESA-client button from the **Discovery** >> **SNMP Listener** screen.

Remote machines(HP/Lenovo/DELL) are getting failed to register with entitlement exception

This error says that the machine does not have a valid entry in the `Contract_Inventory.xlsx` file. Please work with the support team to get the latest `Contract_Inventory.xlsx` file.

For more information, see the Contract_Inventory file description.

Unable to delete the SNMP alert destination on the Lenovo server

While deleting a registered Lenovo server from ESA, the system is not getting removed from the SNMP alert destination on the Lenovo server.

This happens if the ESA host IP is the only registered SNMP alert destination in Lenovo. This will be fixed upstream.

Steps to follow to restore a corrupted ESA-client

1. Perform a backup of `/opt/ibm/esaclient` directory.
2. Uninstall the ESA-client rpm using the following command:
   `rpm -e <esaclient rpm>`
3. Install ESA-client from CS-ESA UI.
4. Copy the `conf` folder from backup (which is taken in step 1 above) to `/opt/ibm/esaclient` directory.
5. Copy the `data` folder from backup (which is taken in step 1) to `/opt/ibm/esaclient`.
6. Ensure that ESA-client is restored successfully by verifying:
   a. **All Systems** tab to verify all registered systems.
   b. All details under **Manage Configuration** tab.
   c. Check the problem creation for one of the remote systems.

GI-Module Error while activating ESA - ModuleNotFoundError: No module named 'gi'

After installing ESA, during activation/configuration phase if python is not pointing to OS-default python, then GI-module error is observed.

The following ESA functions will also give the same error if not pointing to OS-default python:

1. Enabling firewall on the configured ESA port.
2. Enabling ESA as a proxy server.
3. Configuring ESA on a port other than 5024.

To resolve the issue, ensure the system's Python (**python3 -V**) points to the OS-default python.

Verify that **python3 -V** consistently displays the OS-default python.

Example of Error use-case:

```
The Electronic Service Agent Web User Interface is now available at
 https://<<hostaname>>:5024/esa
Traceback (most recent call last):
 File "/bin/firewall-cmd", line 24, in <module>
 from gi.repository import GObject
ModuleNotFoundError: No module named 'gi'
 The UI port (5024) may be blocked by firewall.
Use /opt/ibm/esa/bin/esafirewall command to expose
ESA webui to remote browsers.
```

Related tasks

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

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.

Setting the trace level
Trace level determines the message severity that is recorded during IBM Electronic Service Agent activity.

Frequently Asked Questions (FAQs)

About ESA

1. What is IBM Electronic Service Agent and when is it used?

   Answer: IBM Electronic Service Agent is a no-charge software tool that resides on your system to automatically and continuously monitor, collect, and submit hardware problem information to the IBM Electronic Service Agent website. IBM Electronic Service Agent can also routinely collect and submit hardware, software, and system configuration information, which might help IBM Support in diagnosing problems. Refer to IBM Electronic Service Agent - IBM Documentation for more information.

2. What platforms does IBM Electronic Service Agent support?

   Answer:

   a. ESA supports AIX, Linux(PLinux and X86) and AIX

   b. ESA also has docker/Kubernetes support

   For more information, see ESA Overview for different features that ESA supports in each of these platforms.

   How to install ESA?

   a. ESA installation on Power Linux, X86 as rpm:

   - ESA rpm is downloadable from the location: https://www.ibm.com/support/pages/esa/us-en/downloads. Download to the machine where ESA has to be installed and use the command: rpm -ivh <<esagent.rpm>>
   - ESA installation on docker/Kubernetes: for more information, see Kubernetes Configuration Guide.

How to upgrade ESA?

a. Upgrade rpm:

i) Ensure that all the prerequisites for the new version are satisfied.

ii) Execute the command: rpm -Uvh <<esa.rpm>

b. Upgrade docker/kubernetes:

- To upgrade in IKP environment:
- i) Delete the existing deployment.

ii) Get the existing deployment using command: `kubectl get deployments` and delete using command `kubectl delete deployment <deployment-name>`

iii) Update the image name in `esa-deployment.yaml` file. In our environments, its named as `new-esa-deployment-withpvc-nfs.yaml`.

iv) Apply the YAML file using the command: `kubectl apply -f new-esa-deployment-withpvc-nfs.yaml`

v) Wait for a while, then check for Pods, `kubectl get pods` and Pod should be in running state.

vi) Login to UI and Activate ESA. ESA-Client also will be available.

- For more information, see Kubernetes Configuration Guide.

3. Are these progressive updates, can we update from any backdated version to the current version?

   Answer: If all the prerequisites of the current version are satisfied, it is possible to update from a backdated version to the current version (say 4.6.0-2 to 4.6.1.2). But, we recommend doing the upgrade from the last available version to the current version.

4. What are the prerequisites to install ESA?

   Answer:

   a. Software requirements:

   i) Java17

   ii) Perl-XML-Parser

   b. Ports used:

   i) 5024 – For ESA WEB UI

   ii) 5026 – optional to setup an ESA proxy

   iii) 5028 – optional and for KVM systems only

   c. Firewalls to be enabled:

   For ESA to communicate successfully, your external firewall must allow outbound packets to flow freely on port **80** and port **443**. You can use Source Network Address Translation (SNAT) and masquerading rules to hide the ESA system's source IP address.

   On your firewall, you might choose to limit the specific IP addresses to which the ESA system can connect. The section 'IBM Server Address List' contains the list of IP addresses and ports of the IBM servers. For more information, see IP Addresses details.

5. Can we configure ESA to use port other than 5024?

   Answer: Yes. For more information on how to change ports, see Interactive activation and Command activation pages.

6. Once installed, can we downgrade the ESA version, that is, can we roll back to the previously installed version.

   Answer:

   No, it is not possible to downgrade ESA version in Power Linux and X86 systems.

7. What is the suspend/resume functionality in ESA?

Answer: ESA in suspended state will not transmit any information (problems, hardware/software inventory, heartbeat) to IBM. Only after resuming a suspended ESA instance, information can be transferred again. For more information, refer to ESACLI Suspend and ESACLI Resume pages.

8. Is there a command to enable or disable ports using ESA?

   Answer: Yes, Use the following command:

   `/opt/ibm/esa/bin/esafirewall`

   This command allows you to unable or disable ports as needed.

   ```
   Usage:  /opt/ibm/esa/bin/firewall [enable]/[status]/[clear] <port>
   ```

   enable: will open the port for incoming traffic.
   status: shows whether the given port is open for incoming traffic.
   clear: will clear the rules added by this command.

   ```
   For Example, /opt/ibm/esa/bin/esafirewall enable 5024
   ```

9. How to get support for ESA or raise a support ticket?

   Answer: To raise a support ticket, follow these steps:

   Visit the support portal: https://www.ibm.com/mysupport/s/?language=en_US

   a. Click on 'Open Case' and provide your IBM ID.
   b. Fill in all the required fields on the form.
   c. Under Product, select "Electronic Service Agent".
   d. Choose the appropriate Severity level.
   e. Provide a clear and detailed case description.
   f. Click Submit Case to complete the process.

ESA Client Installation and Configuration

1. How to validate if connectivity to IBM is fine?

   Answer: For details, see Testing Connectivity to IBM page.

2. What is ESA-client and is it required on all platforms?

   Answer: ESA-client provides a provision to register remote MVS (DELL, HP, Lenovo) machines to ESA and reports the hardware problems from these registered machines to CSESA. ESA-client is a SNMP trap listener which listens for the SNMP traps on the port 162(default) and reports these traps as problems to the ESA application. This is a Python based application.

3. How to install and configure ESA-client?

   Answer: For more information, refer to Installing the ESA application page.

4. Is ESA-client the only option to register remote endpoints with ESA?

   Answer: Remote end-points can also be registered using the ESA Rest APIS. However, when ESA-client is used, it connects to remote systems and receives the information required to register the systems with CSESA, such as machine name, serail, and model. Clients which do not use the ESA-client should develop their own methods of getting these essential parameters in order to register systems with ESA. Also, ESA-client operates as an SNMP Listener and receives traps from the MVS systems (HP, Lenovo, and DELL), parses these traps, processes them, and reports to ESA-server, which then sends this problem to IBM backend.

5. Is it possible to install ESA-client on a machine different than ESA?

   Answer: No, this configuration is not supported in the current version.

6. How to start / restart ESA-client ESA?

Answer: ESA-client should be started/re-started from ESA UI. For more information, see SNMP Configuration Settings.

7. Does ESA-client automatically restart when the ESA application is restarted?

   Answer: No, ESA-client will not be restarted while restarting ESA.

8. How to install PIP inside python virtual environment?

   Answer: While installing ESA-client, after installing all the dependencies in the python virtual environment, PIP will be removed.

   For installing new modules, PIP has to be installed manually. You need to manually install PIP using the command: `/opt/ibm/esaclient/esaclient-venv/bin/python3 -m ensurepip --upgrade`

   before installing any other python module.

9. What common causes should be investigated when ESA-client when it is not functioning as expected and the logs provide very limited information?

   Answer: Ensure that the installed versions of rustc and cargo are the latest and match each other
   #rustc --version
   `rustc 1.84.1 (e71f9a9a9 2025-01-27)(Red Hat 1.84.1-1.el9)`
   cargo --version
   cargo 1.84.1 (66221abde 2024-11-19)

MVS (HP, Lenovo, DELL) System Registration

1. How do we register MVS systems in ESA?

   Answer: For more details, see Manage Configuration page.

   Note:

   It is not recommended to add the same MVS system to multiple ESA instances. It would corrupt the ESA configuration.

   Important:

   a. EED collection for DELL systems is supported only for iDRAC 9 above firmware level 4.0.0.0.
   b. Lenovo System Registration and EED collection for Lenovo systems is only supported above firmware level 9.

2. What is `contract_inventory.xlsx`?

   Answer: `Contract_inventory.xlsx` lists systems with valid contracts. To be successfully registered, a remote system must have a matching serial number in the contract inventory file.

   - To effectively report a problem, details such as 'customer number' and 'productSLC' must have valid values (as registered in the back-end) against the serial number of the machine from which the problem is reported.
   - This file should not be edited manually.

3. Can we update the `contract_inventory.xlsx` file after the systems are registered?

   Answer: Follow the below given steps to update `contract_inventory.xlsx`.

   a. Go to “Discovery” and “SNMP Listener” panel.
   b. Upload new `Contract_Inventory` file and apply the configuration to ESA-Client.
   c. Run the below command:

   ```
   /opt/ibm/esaclient/esaclient-venv/bin/python3 /opt/ibm/esaclient/lib/restAPI/
   UpdateEndPointsFromContractInventory.py
   ```

4. How to check if system registration is failed?

Answer: The system registration status can be found on the discovery log page in the UI. For more information, see Discovering Systems page.

5. What are the possible causes for a MVS server registration to get failed?

   Answer: Following are some of the reasons.

   a. Credentials entered in the file (from Manage configuration) are not correct for the given MVS server.

   b. There is no connectivity to the MVS server from ESA.

   c. The details such as Serial and Model collected from the MVS server are not compliant with what ESA expects.

   d. MVS server's serial is not listed in the `contract_inventory` file.

   Note:

   In case of first-time registration, ensure that while registering a MVS server, check if there is already an `IBM_Monitor` user created on the MVS server, and the SNMP alert destination does not contain the current ESA host IP. The registration would be failed in this case.

6. Can I register a single MVS node on two ESA instances?

   Answer: You should not register the same MVS node on two MVS instances, this would lead to corrupt environment.

7. Can I re-register the remote machines (HP/Lenovo/Dell)?

   Answer: Yes, the remote machines (HP/Lenovo/DELL) can be re-registered. Change the `reconfig` flag to true in **Manageconfiguration** Panel. For more details, see Manage Configuration page.

   a. If `reconfig` flag is true:


```
[NODES]
node1 = {"type": "HP ILO5", "ipaddress": "x.x.x.x", "username": "IBM_Monitor", "password": "<Encrypted-password>", "endpointname": "Test-1",
"isEncrypted": true, "reconfig": "true"}
node2 = {"type": "Dell iDRAC9", "ipaddress": "x.x.x.x", "username": "IBM_Monitor", "password": "<Encrypted-password>", "endpointname": "Test-2",
"isEncrypted": true, "reconfig": "true"}
```


   b. After successful registration:


```
[NODES]
node1 = {"type": "HP ILO5", "ipaddress": "x.x.x.x", "username": "IBM_Monitor", "password": "<Encrypted-password>", "endpointname": "Test-1",
"isEncrypted": true, "reconfig": "false"}
node2 = {"type": "Dell iDRAC9", "ipaddress": "x.x.x.x", "username": "IBM_Monitor", "password": "<Encrypted-password>", "endpointname": "Test-2",
"isEncrypted": true, "reconfig": "false"}
```


   In case if Lenovo has been registered once, the default interval to change the password is 24 hours. This default value can be modified by changing the minimum password change interval in the User/LDAP settings from Lenovo UI.

ESA Problem Reporting

1. What is a Primary System?

   Answer: A system on which ESA is installed and activated is called the Primary System.

2. What kind of problems do ESA report?

   Answer: ESA reports the hardware problems identified.

3. What is the prerequisite for a problem to be reported by ESA?

   Answer:

   For reporting problems from a standalone system (Primary system) , ESA should be installed, activated and configured. For more information, see the Installation page.

   To report problems from a remote system, system should be registered with CSESA, with correct contact and location details. It should be a valid system registered with the backend, see Specifying Service Contact information page.

4. Can we by-pass ESA-client and still use ESA for problem reporting?

Answer:

ESA-client shall be used in cases where hardware issues from remote systems are sent as SNMP traps. ESA-client listens on the port 162, receives these traps and reports to CS-ESA which informs the IBM back-end.

ESA Rest APIs can also be used to report problems to ESA.

5. Is there an option to configure ESA to not report problems from a specific system?

   Answer: For more information, see Creating Event filters page.

6. Is there an option to configure ESA to not report problems for certain error codes?

   Answer: For more information, see Creating Event filters page.

7. Will Problem data (Extended Error Data) be automatically collected and sent to IBM as part of problem reporting?

   Answer: Yes, once a hardware problem is reported from any of the supported devices/systems, EED will be collected and transmitted to IBM along-with the problem.

8. Do customers receive notifications about the status of the problem transmission?

   Answer: Yes. Customer can configure the notification settings using ESA UI/CLI. For more information, see Configuring Notification settings.

9. How do you test the problem reporting feature of ESA?

   Answer:

   Select the **All Systems Panel**>>**View Problems**. Select the **Send Test Problem** button at the bottom of the screen.

   This sends a test problem for the selected system. EED will also be collected and transmitted for this problem.

10. How to verify if the register MVS systems can send traps to ESA-client?

    Answer: Select the *SNMP Status* field from the **All Systems** Panel. This indicates whether or not there is SNMP connectivity between the distant system and ESA. To get the most recent status, choose the remote system and click on **Test SNMP Connectivity**.

11. When and how to use contact and location REST APIs?

    Answer: For detailed information, refer to Updating Multiple Contacts and Locations page.

12. Is it possible not to report an issue from a certain system or for a particular error code?

    Answer: For detailed information, refer to Creating Event Filters page.

13. Do we support all v1, v2 and v3 traps while receiving events?

    Answer: No, ESA currently supports only SNMP v1 and v2 traps. SNMP v3 traps are not supported.

View Details from ESA GUI

1. How to login to ESA UI?

   Answer: Login to the ESA web UI using the URL: `https://<<machine-name>>:<<5024>>/esa`

   .

2. Is it possible for a user other than *root* to access ESA UI?

   Answer: Yes, for Linux and X86, ESA employs PAM authentication, and any user in the ESA group on the system can log in. ESA generates a default user named *esaadmin*. ESA does not handle the passwords for these users. Create a password for the *esaadmin* account and use it to log into the ESA UI.

   For docker/kubernetes, ESA provides a CLI command to create and manage login to the ESA UI. For more information, see Kubernetes Configuration Guide.

3. How to view system details from ESA UI?

   Answer: For details, refer to Displaying System Details page.

4. How to view problem details from ESA UI?

   Answer: For details, refer to Displaying Problem Information page.

5. When to use import/export feature of ESA?

   Answer: The export capability can be used to save all of the values configured for a given ESA instance to a file. Another ESA can import this configuration by using the file exported by the export feature.

6. When to use backup/restore feature of ESA?

   Answer: Backup feature can be used to take a backup of the current ESA instance. It is advisable to take periodic backups, and restore feature can be used to reconstruct the ESA configuration including the backup file created. For more information, see Backup CLI page.

7. Can we access ESA logs from UI?

   Answer: ESA and ESA-client logs can be downloaded from the ESA UI. For more information, see the `Tools >> IBM Electronic Support >> Collect Logs` page.

Problems filtered out at ESA-client

The reason could be that the serial number of the failing MVS server is not available in the new contract inventory uploaded.

Remove the Administrator privilege for IBM_Monitor on HP/Lenovo/DELL

1. If a system is registered in 463 where IBM_Monitor user is created with Administrator privilege, would the privilege be reduced automatically once we upgrade to 464?

   Answer: No, for the previously registered systems the following script should be run:

   For newly registered remote machines in ESA 4.6.4 release, if Dell, Lenovo are registered, then the privilege for `IBM_Monitor` user should be Operator for Dell, custom to Lenovo Server.

   For the remote machines which are registered before ESA 4.6.4 release, there is a script `change_IBMMonitor_privilege.sh` file under `/opt/ibm/esaclient/bin` path.

   a. Take a copy of `/opt/ibm/esaclient/conf/common/node.properties` file.

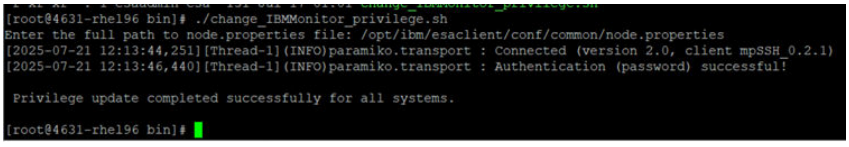
      ```
      cp /opt/ibm/esaclient/conf/common/node.properties <<custom_dir>>/
      node.properties
      ```

   b. Execute the following script:
      `/opt/ibm/esaclient/bin/change_IBMMonitor_privilege.sh`

   c. The execution of the script asks for `node.properties` file path. Provide the complete path of the file created in step 1:
      `/<directory where this file exists>/node.properties`

   d. After the execution of the script, the privileges undergo a change:

      i) If the privileges are changed for all systems successfully, you can see the message in console as follows:
      `Privilege update completed successfully for all systems.`

      ii) If the privileges are not changed successfully for all systems, you can see the message in console as follows:
      `Privilege update failed for the following IPs:`

```
[root@4631-rhel96 bin]# pwd
/opt/ibm/esaclient/bin
[root@4631-rhel96 bin]# ./change_IBMMonitor_privilege.sh
Enter the full path to node.properties file: /opt/ibm/esaclient/conf/common/node.properties
[2025-07-21 11:56:15,174][Thread-1](INFO)paramiko.transport : Connected (version 2.0, client mpSSH_0.2.1)
[2025-07-21 11:56:17,372][Thread-1](INFO)paramiko.transport : Authentication (password) successful!
Error when ssh login remote system using paramiko. Will try login using pxssh. Hostname is 9.80.81.96. BaseExcept
ion: Bad authentication type; allowed types: ['publickey', 'keyboard-interactive']
Error when ssh login remote system using pxssh. Hostname is 9.80.81.96. BaseException: password refused

 Privilege update failed for the following IPs:
9.80.81.96

Failed IPs saved to: /opt/ibm/esaclient/logs/failed_privilege_ips.log
[root@4631-rhel96 bin]#
```

The log file `failed_privilege_ips.log` can be seen in `/opt/ibm/esaclient/logs`.

```
[root@4631-rhel96 logs]# cat failed_privilege_ips.log
9.80.81.96
[root@4631-rhel96 logs]# pwd
/opt/ibm/esaclient/logs
[root@4631-rhel96 logs]#
```

Best Practices

Pausing Monitoring during Electrical Maintenance and System Upgrades

It is recommended to suspend the call home alerts when a system, or a set of systems, are involved in electrical maintenance activities or planned for system upgrades. This helps in avoiding multiple and false positive call home cases. Those activities generate traps that lead to open call home cases. After the activities, the system's health needs to be checked for any potential error and the call home shall be re-enabled.

Configuring the Contacts in ESA according to the Contact Profile in Salesforce

In order to get the contact information reflected in the CSP cases, contacts defined in ESA tool must match to the contact profile configured in ESA. Fields that need to match completely are:

- Contact name (matching includes lower/upper cases)
- Email address

When a secondary email address is needed in the HW case, update the contact profile from the IBM Support portal. Secondary email address in the HW case is always same as the one configured in the contact profile in IBM Support, and not the secondary contact defined in ESA.

For checking the contact profile defined and add a secondary email address, it is needed to login to Support portal with the IBM ID.

How to create IBM ID and login to Support portal

1. Kindly create a new IBM ID and use your email address with corporate domain.

   URL to register your new IBM ID: https://www.ibm.com/account/us-en/signup/register.html
2. After the successful registration of the IBM id, please submit access request for your respective customer account, by clicking on **Request access** button at: https://www.ibm.com/mysupport/s/supportaccess
3. Complete all the required fields (like product: DB2 or AIX, customer number ICN = 7 digits long, country = where customer account is registered) and submit for approval.
4. After approval by respective account admin, you will be able to view/access cases for that account on Support portal (https://www.ibm.com/mysupport/s/).

   The step-by-step guide and video instructions for easier navigation can be found here too:

   https://www-01.ibm.com/support/docview.wss?uid=ibm10740675

Double-checking Systems' Locations for the Devices

It is mandatory that the country-code defined in the system location, is the same as the country related to the account number, otherwise the HW case will not be opened.

Important:

It is strongly recommended that the system location/address defined for each system is double checked for avoiding delays, part deliveries and service appointments scheduled for wrong addresses.

Periodic backup of the ESA data

Please take a backup of the following folders periodically:

- `/opt/ibm/esa`
- `/opt/ibm/esaclient`

Please take backups of the above folders on a regular basis. This assures that if the system crashes for some reason, we could use the backed up files to restore the system's state.

Process to follow if Support Ticket Creation Attempt fails

How to identify if the case creation has failed

Check the status of the problem from any of the following:

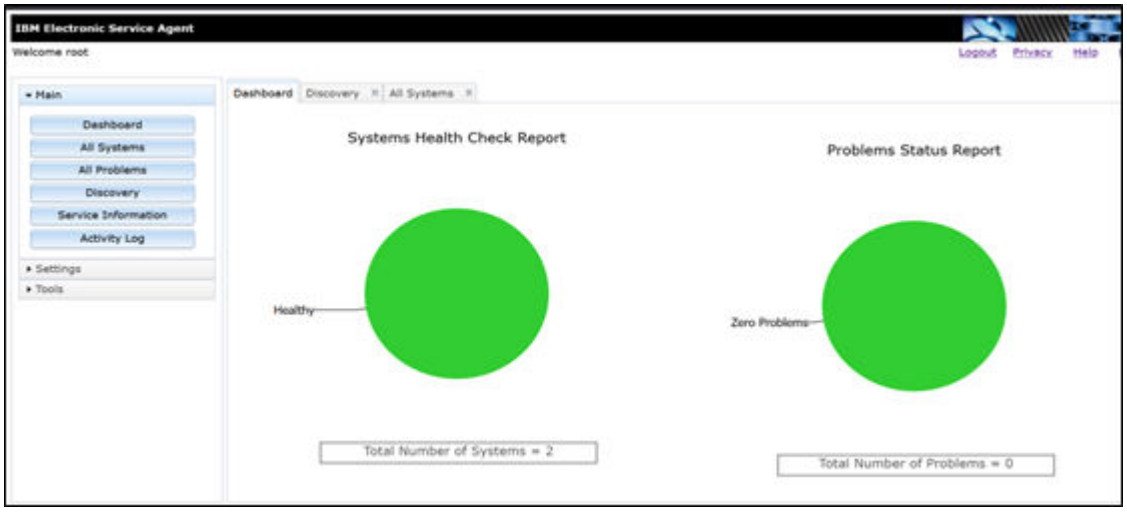
1. Navigate to the **All Problems** panel
2. Check the Failure E-mail notification received for a problem (in case email notification is configured). For more information, see Steps to Configure E-mail in Notification Settings.
3. Check the list of failed problems retrieved using REST APIs: `curl -X GET "https://<<esa-machine-ip>>:5024/rest/v1/event/status:all" -H "accept: application/json"`

Table 7.

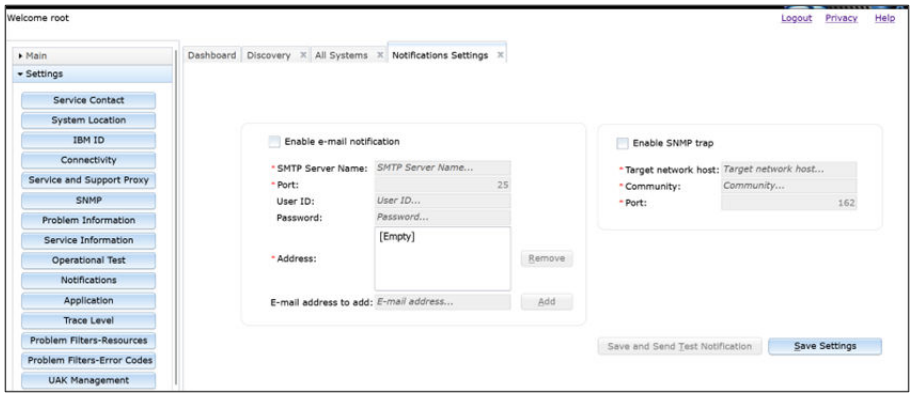
Actions to be taken	
If the E-mail notification is configured	1. An E-mail is sent to all the configured email addresses, this E-mail should be forwarded to the IBM support. 2. Also attach the '*/opt/ibm/esa/log'* folder in zip with the above E-mail.
If the E-mail notification is not configured	1. Compress the contents of '*/opt/ibm/esa/log'* log folder as zip. 2. Take a snapshot of the **Activity log** from UI. 3. Send the above contents to the IBM support.

Steps to Configure E-mail in Notification Settings

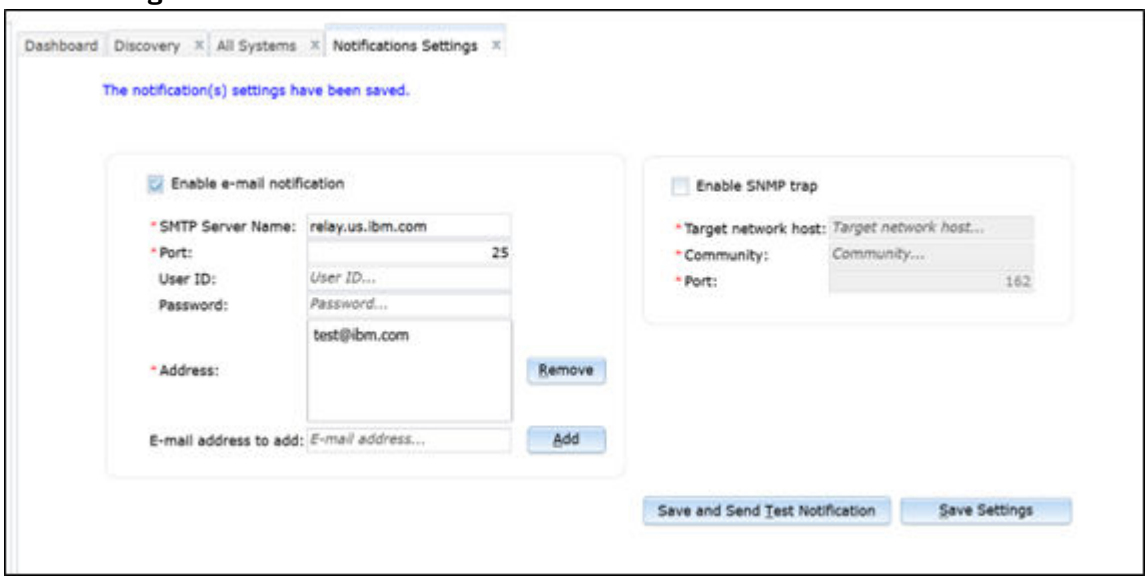
1. Login to ESA UI.



2. Navigate to the **Notifications** page in **Settings** window.



3. Enable E-mail notification and enter valid SMTP server name, add valid E-mail address and click the **Save Settings** button.



4. Click the **Save and Send Test Notification** button to get **Test Notification** to configured E-mail addresses.

MVS server registration in two IBM Electronic Service Agent instances

Question: Is it possible to register one MVS server in two ESA instances? Will there be any error message if the customer attempts this configuration?

Answer: No, a MVS server cannot be registered in two different ESA instances. This is due to two reasons:

1. Registering the same MVS system in two different ESA instances, would corrupt both the ESA environments.
2. ESA does not permit registering the same MVS server in two different ESA instances. SNMP alerts will not flow from the MVS server to the ESA, if the configuration is corrupted by registering the same MVS server in multiple ESA instances.

Reference information

This section includes additional reference materials related to IBM Electronic Service Agent.

How to read syntax diagrams

Review the conventions 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.

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