Electronic Service Agent

for

pSeries HMC

User's Guide

Note
Before using this information and the product it supports, read the Notices and Trademarks information in Appendix D.

Third Edition (January 2003)

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Edition Notice

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About this user's guide

This guide provides overview information, setup, configuration instructions, and use information.

Terminology

You need to be familiar with the following terms in this manual:

Hardware Management Console (HMC)

The HMC allows you to perform many hardware management tasks for your managed system, including configuring logical and affinity partitions.

IBM Service Agent Server (SAS)

The SAS is located within the IBM company. It is the machine to which the HMC sends information to IBM. There are two SAS systems. A Primary and a Backup. If access or failure occurs on primary then retry is done on the backup SAS.

Gateway HMC

The Gateway HMC is the system where Service Agent modem is installed, this is the default configuration. The Gateway machine contains the central database and the processes for controlling the Service Agent modem and communications to IBM.

Client HMC

The client HMCs are the additional machines that use the Gateway HMC to call IBM. The clients do not have modem attached directly to them, and must be configured as client HMC.

Service Focal Point (SFP)

Product application that resides on HMC & AIX that delivers information to Service Agent that needs to be reported to IBM. SA does no data collection in a HMC environment, it only delivers the information that SFP directs it to handle.

Register machines

All HMC's should be registered using the primary CPU machine type, model and serial number. (Do Not Use the PC type, model, s/n.)). See *How to register a machine* in Chapter 5 or you can view the *Registering parameter details* in Appendix A.

AIX Service Agent

The standard AIX Service Agent may be installed on the AIX operating system in the HMC environment but will know that it is in a HMC controlled complex. Currently it should only be installed if System Performance data can not be collected by SFP.

AIX Service Director

The standard AIX Service Director should NOT be installed on the AIX operating system in the HMC environment. This would cause multiple reporting of faults.

Understanding Service Agent

This chapter presents general information about Electronic Service Agent for pSeries Hardware Management Console.

What is Service Agent?

Service Agent (SA) is an application program that operates on a pSeries Hardware Management Console (HMC) and accepts information from the Service Focal Point (SFP). It reports serviceable events and associated data collected by SFP to IBM for service with no customer intervention. The SA Gateway HMC maintains the database for all the SA data and events sent to IBM, including any SA data from other Client HMCs.

Since licenses are checked by the IBM Service Agent Server (SAS) whenever a call is made to IBM, only machines on IBM Warranty or MA can use Service Agent to report errors. Other non Service data would still be reported to the appropriate collection points within IBM.

What does Service Agent do?

Here are some of the key things you can accomplish using Electronic Service Agent for HMC:
  - ? Automatic problem reporting; service calls placed to IBM without intervention
  - ? Automatic Extended Error Data (EED),Vital Product Data (VPD), and Performance Data (PM) to IBM
  - ? Automatic customer notification
  - ? Network environment support with minimum telephone lines for modems.

What models are supported?

This level of Service Agent supports **all Models** of **HMC** controlled **pSeries.**

How does Service Agent work?

The Hardware Management Console machines have Service Agent installed along with the HMC Code. Updates to SA will be done with new releases of HMC Code. Once SA configuration information has been completed and the modem connected and tested with HMC registration, SA Daemons wait for SFP to tell it to call home. The User Interface may be invoked to monitor status of

events and activities called into IBM. Manual functions and test connections may be performed. Maintenance of information that is contained within SA database can be scheduled or purged manually.

The figure below illustrates a typical Service Agent monitored network.
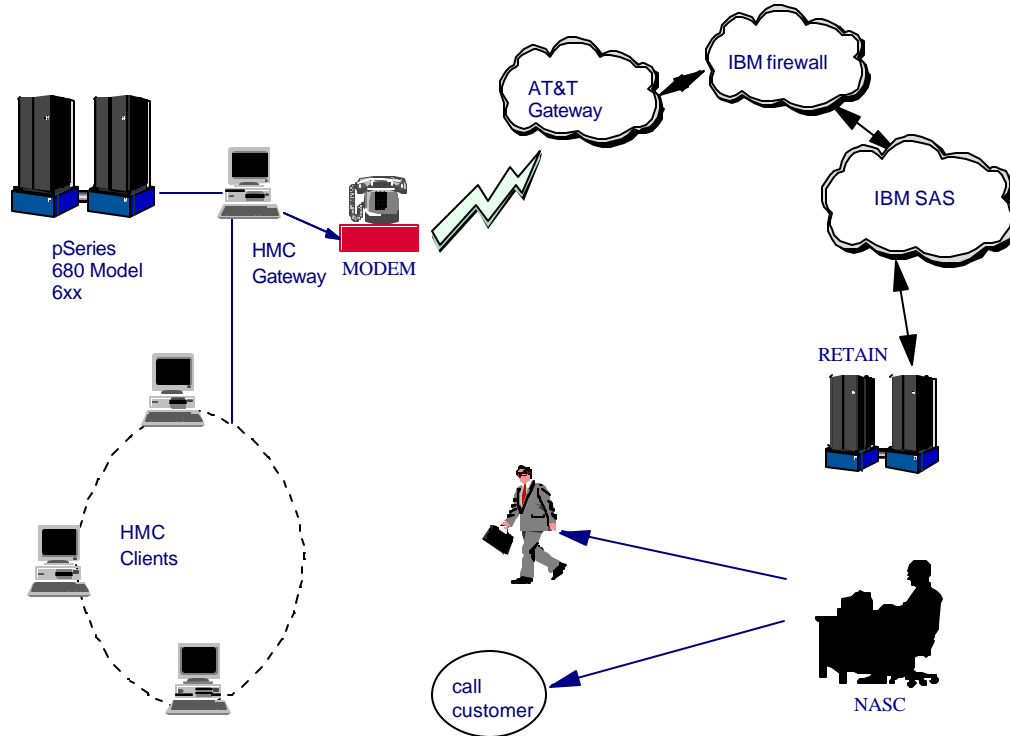
Understanding modems and TCP/IP
The current implementation of SA requires the Gateway HMC to have a modem attached to one of the serial ports. This will allow the Dialer to utilize a local area call to connect to AT&T Gateway to access the IBM SAS. Usually IBM supplies the modem for this attachment and appendix C shows the proper basic modem setup. The modem must be properly configured from the SA user interface Dialer menu prior to making calls.

The Gateway HMC Service Agent uses TCP/IP addressing to communicate with its other HMC Client machines if they exist. Using IP addressing, Service Agent receives information from its' client HMC systems and then forwards (from the Gateway server) that information to the IBM Service Agent Server through a call to the Dialer. This call requires a local modem on the machine you intend to use as your gateway server. Selection from the HMC Service Applications for Service Agent allow for changes to the SA mode, gateway server or client. This requires you to have knowledge of the naming conventions and IP addressing used at the local complex. This same selection will facilitate HMC hostname changes for SA.

Understanding the SA Processes

There are three major components or processes that make up the Service Agent system:

? The Electronic Server System (ESS) process running only on the Gateway HMC

? The On Demand Server (ODS) process

? The User Interface

Electronic Server System (ESS) process

The ESS process runs <u>only</u> on the Gateway HMC and handles all requests for data input and retrieval from the centralized database.

On Demand Server (ODS) process

The On Demand Server runs on all HMCs defined and handles all Service Agent communication activities for that host. The ODS sends data to the ESS process as necessary, or makes a call to the IBM Service Agent Server (SAS).

 Events from the SFP are reported to IBM directly using a modem that is attached to the Gateway server. The dial out times are fully configurable within the *Graphical User Interface*. Service Agent also dials to IBM to report that it is healthy, once in every healthcheck interval.

Graphical User Interface (GUI)

The Graphical User Interfaces allows the user to setup and define HMCs that Service Agent monitors. The GUI is invoked from Web-based System Manager (WSM) by selecting Service Agent from the Service Applications. Then from the WSM menu select TASKS for Service Agent User Interface (SAUI) - registration/customization item.

It is used for advanced functions and customization of the system as well as configuration for complex systems and multilevel networks. A logon password is utilized which is defaulted to "password".   It is recommended this password be changed after the initial install and stored in a safe place for security purposes. See Chapter 4, *"Learning about the SA Configuration interface"*, for more information.

Additionally Service Agent can send e-mail notifications to contacts relating all or limited machine problem information. The e-mail notification functions must be configured before they become active. See Chapter 5, *"Advanced Configuration Tasks"*, for information on how to configure e-mail notifications.

Activating Service Agent

This chapter explains how to start up the Electronic Service Agent for pSeries for HMC.

Obtaining Service Agent

Service Agent for HMC is part of the HMC software and it comes either pre-installed, or is part of the recovery CD.

Starting Service Agent

Service Agent processes will be turned off on a new system or after recovery. On new installs the HMC hostname is a default name and should have been assigned a new name to fit the customers network environment. Once the hostname is assigned and the determination as to the type of SA, Gateway or Client, has been made, use the Service Applications: Service Agent menu from WSM to make the changes to SA mode and to activate SA.

On the 'Change SA mode panel' for a gateway server, both the Gateway and Client hostname should be the same. If settings are for client, then the client hostname will match this HMC hostname, and the Gateway hostname will have to be updated to reflect the HMC SA gateway host.

Use the Service Agent panel for starting the processes when the account is ready to support SA. On the HMC Gateway the modem and phone line should be connected. Check the physical connections to determine this. If HMC is a client then start SA only after the network is setup properly. Do not start SA processes if the network is not configured on the HMC.

Anytime that the HMC hostname is changed, the SA application should be stopped and the Change SA mode should be used to correct the hostname setting for SA. After this mode change, the SA application can be started again. If this is a client HMC then the SA Gateway database needs to be changed to reflect the new client hostname, before starting the client SA.

Preparing for E-mail alerts. Your HMC must have local or network attached E-mail service. E-mail service is required if you want to use E-mail Alerts. E-mail Alerts can be configured using the Service Agent configuration interface. You can learn how to configure E-mail alerts in Chapter 5, *configuration tasks - How to add an E-mail alert*.
Note: Service Agent send mails with the support of an existing Mail Server on the network. It is not a smtp server by itself.

Stopping and Restarting the Service Agent process

There may be times you want to stop or restart the Service Agent daemon process.

Stopping the Service Agent daemons on the HMC

Follow the steps below to stop the Service Agent daemon on the Gateway server:

- ✎ Bring up the Service Agent Panel from the HMC User Interface
- ✎ Click Stop Processes

You have now ended the all Service Agent daemon processes, and removed the inittab entries.

Restarting the Service Agent daemons on the HMC

After you have stopped the Service Agent daemons, you will have to restart them on both the Gateway server and the client machines. Follow the steps below to restart the Service Agent daemons on the HMC machines:

- ✎ Bring up the Service Agent Panel from the HMC User Interface.
- ✎ Click on the Start Processes option

You have now created new inittab entries for the ESS & ODS daemons processes which will restart the Gateway HMC Service Agent processes. Only the ODS daemon is started on a client HMC.

Learning about the Service Agent User Interface

The Service Agent User Interface (SAUI) is used for various functions. For example, setting local user notification entries and customization of the system as well as configuration for complex systems.

This chapter provides a list of Service Agent Configuration tasks and the How To . . information to accomplish those tasks.

Following are examples of some of those tasks:
- ✍ Adding machines to be monitored
- ✍ Customer location information
- ✍ Setting Alerts
- ✍ Configuring dialer
- ✍ Administration functions to SA database

Accessing the Service Agent User interface

The GUI is invoked from Web-based System Manager (WSM) by selecting Service Agent from the Service Applications. Then from the WSM menu select TASKS for Service Agent User Interface (SAUI) - registration/customization item.

Logging on

The SA User Interface requires a password to gain access to the application . The initial default password is **password**.

The administrator should change this password to one that is unknown to anyone but himself and or authorized personnel to protect the Service Agent configuration setup from unauthorized modifications. Typing a wrong password causes an error message to be displayed indicating the password entered does not match the one expected.   If the error message comes up, click **OK** and retype your entry to try again. You have up to six chances to type the password correctly. On the sixth mismatch, the logon quits and the User Interface must be selected from WEBSM again. While Service Agent is waiting for input and matching the password, a *Prompting for Password* progress window is displayed. After a successful password match, the user interface is displayed.

Understanding the Configuration screen

The user interface is divided vertically into two panes – a navigation pane on the left and a detail
viewing pane on the right.

The buttons at the top of the navigation pane are called *category selectors*. Each category determines
the type of information that is displayed in the detail window to the right. The very top buttons (located
in the Menu bar) are the *File* and *Help* dropdown buttons. From the *Menu* bar, selecting the *File*
dropdown enables an *Exit* option. Also in the Menu bar is the *Help* dropdown. Clicking the *Help*
dropdown displays the *Show Help* and the *About* options.

At the very bottom of the navigation pane are two buttons labeled Add and Delete. These buttons are
highlighted when enabled.

To edit the detail information to the right, click in a field and make the necessary changes. Mandatory
fields are indicated by an exclamation mark; Fields which cannot be changed are flagged with a
padlock. Click the **OK** button at the bottom of the detail pane to save your changes, or click **Cancel**
to abandon your changes. If you fail to click **OK** before switching to a different screen your changes
are not saved. This is equivalent to clicking **Cancel**.   After clicking **OK** , if you have missed any
mandatory fields or if you have entered data which is incorrect for the field, a window pops up listing the
problematic fields. Mandatory fields which have not been completed are marked with an exclamation
(**!**) ; invalid data is marked with an **X**.   Additionally, the field name in the property sheet turns red.
Also, if you are selecting an item from a list, you can type the first letter of the desired item to move
quickly through the list.

Category Selectors

There are four category selectors available which determine the type of information displayed in the
detail window when a category button is selected. They are:

- ✎ View / Edit Properties
- ✎ View Error Events
- ✎ View Licensing Info
- ✎ View Internal Errors

In many cases the right hand detail screen may be blank. This is because the selected category may not
have any information available.
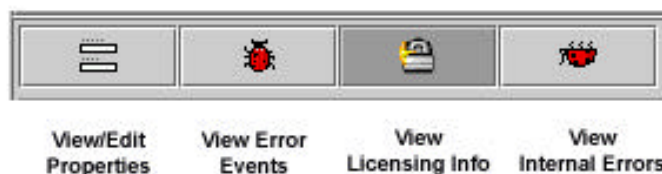
View/Edit Properties button

The View / Edit Properties button is identified by the icon that looks like a equals (=) mark. While the category is selected, all *Properties* buttons of the navigation pane on the left side are active and available.

This view also provides Node information pertaining to any machine selected.

View Error Events button

The View Error Events button is identified by the icon that looks like a red bug. Selecting this category along with the Network properties button displays a table of all of the errors Service Agent has recorded within it's defined network. Error Event or PMRs associated with individual machines can be displayed by selecting this button and an individual machine.

Note: The table may be reorganized by dragging column titles to where you wish them to be displayed. Sorting is automatic from the first column, dragging the column to the left most table position sorts the table on the selected title.

The following list describes the content of the Service Agent Errors Events summary, the Internal Errors are also listed in this category:

Host   The name of the machine for which information is being displayed.

Timestamp   The year, month, day, and time the Error Event occurred.

Icons   Icon quick indicators to status.

Status   Status indicates the current state of a selected error. Possible states are:

Pending
Indicates an entry that is set to be sent to IBM. It is the initial status state which triggers the Service Agent CallController to connect to the IBM SAS. If the status is some other state, setting it to pending again causes the entry to be resent.

held
Indicates that the Error Event determined to be reportable was held rather than reported to IBM.

open

Indicates that the Error Event was sent to IBM and a Problem Management Report (PMR) was generated.

duplicate

Indicates an attempt was made to open a PMR that was already opened. If the same Type, Serial number, Description, and error number is opened before a previous PMR with the same error is closed a duplicate status is returned.

failed

Indicates that the Error Event failed in the attempt to open a Problem Management Report (PMR).

closed

Indicates that the Event previously opened with IBM has been closed.

PMR# / PMR Number

PMR stands for Problem Management Report. The number in this field is the PMR number returned from IBM when an Event or problem was opened.

Error# / Error Number

This could be the 8 digit unique id from the error log entry that was captured, or the Service Reference Number (SRN) generated by the diagnostic analysis of error.

Description   Description of the error that was generated.

Resource   The logical resource name of the component that failed.

Type   The System type of the node on which the error occurred. (eg 7040)

Class   Describes whether the error occurred in hardware or software, is an operator message, or is undetermined. Following are the definitions for the class descriptors:

H   Indicates the error is a hardware failure.
O   Indicates the error is an operator message.
S   Indicates the error is a software failure.
U   Indicates the error is undetermined.
SURVLANC Surveillance error. Normally this is not reported to IBM
OS Meaning the error has occurred on the operating system.

Dups   Counter of duplicated error events that occurred since the original entry was generated and opened.

Last   Last time the Error Event occurred.

When Status Checked
> Last time the opened status of a specific error event was checked for closure.

Detail Error Event Pane
> The lower right panel displays details of selected event in a scrollable pane and contains all of the previous listed summary fields plus the following detail entries.

Error Details   Contains specific details for the error that occurred.

Status Details Contains results of transmission attempts to IBM for a specific error event or PMR entry.

 View Service Agent Internal Errors button

The View Service Agent Internal Errors button is identified by the icon that looks like a red bug that is on it's back (feet up).   Selecting this category along with the Network properties button displays a table of all of the internal errors and exceptions Service Agent has detected while running functions. Both internal program exceptions and external access failures for host creation or program running are displayed.

The following list describes the content of the Service Agent Internal Errors category:

Host   The name of the machine for which information is being displayed.

Timestamp   The year, month, day, and time the error occurred.

Error# / Error Number The number the system affiliates with the type of error generated.

Error Details Contains specific details of error that occurred.

Status Details Contains results of transmission attempts to IBM for a specific error event or PMR entry.

When Status Checked
> Last time the opened status of a specific error event was checked for closure.

Details   Display any appropriate error information about the internal error if available.

ID   Internal identification number. Typically " -1".

Description   Description of the error that was generated.

Resource   The logical resource name of the program component that failed.
                   Typically this will be "exec".

Class / Error Class   Typically this field indicates "none".

Detail Error Event Pane
   The lower right panel displays details of selected event in a scrollable pane.

View Licensing Information button

The View Licensing Information button is identified by the icon that looks like a padlock. Selecting this category, along with the Network properties button, displays a table of license status information for all machines defined. Specific tables associated with individual machines can be displayed by selecting this button and an individual machine.

The following list describes the content of the licensing information category:

HeartBeat
   The HeartBeat status indicates whether a monitored machine has reported to the Gateway within the defined time limit. A good HeartBeat is indicated by a Green Flag reflecting that the machine has good communication with Gateway.
   A missing HeartBeat is indicated by a Red X.   The Red X indicates the client is not communicating with the Gateway within the specified time limit. Some reasons for missing the HeartBeat include, different version levels between the Gateway and the monitored machine, the Client code (ODS) not running or needing to be restarted, possible slow network delays causing the client to miss it's HeartBeat window, or the node is down.

   To adjust the HeartBeat window, go into the Linux Hardware Service template on the individual machine and change the HeartBeat and/or the HeartBeat Delay accordingly. To be notified when a machine misses a HeartBeat, you can set the heartbeat flag in the E-mail Notification template.

LockStatus

The LockStatus status indicates whether a system has been locked out and all errors detected are ignored or whether it is unlocked and the machine is being monitored.

A Green Flag indicates the system is unlocked and is being monitored. A Red X indicates the machine is locked out and is being ignored.

To lockout a machine go the *Administration* folder and access the *Lockout Machines* function. Select the machine you wish to lock out and click the **lock** button. This in turn changes the LockStatus to a Red X.

After completing the task on the locked out system, you <u>MUST</u> unlock the machine by accessing the *Lockout Machines* function again, select the locked machine, and click the **unlock** button.

Status

The Status field indicates the Linux Hardware Service Template status of the machine. Refer to the section on the Linux Hardware Service Template for detail explanation of the Status.

Expiry   This is the date the enable license expires.
Node   The name of the machine for which information is being displayed.

Vendor   The name of the company that manufactured the selected machine or device.

Module   This field indicates the name of the Module or Template that is licensed.
                         An example of this is the Linux Hardware Service template.

Comment

This is a general comment field containing additional information pertaining to the licensed template.

Standard Template Pane

The lower right panel displays details of selected item in a scrollable pane.

Add and Delete Buttons

The Add and Delete buttons (located at the bottom of the navigation pane) are enabled and disabled depending upon which property button is selected. In addition, different options are displayed under these buttons depending upon the actual functions available to the selected property.

Property Selections

Properties are located in the Navigation Pane below Category Selectors and above the Add and Delete buttons. Click any Property selection to see corresponding information in the detail pane on the right or additional function selections. If a property selection has a key pointing to the right, it means there may be another level of detail below it. Click the key to expand the view. A key pointing down indicates that all lower levels are displayed. To hide that level, click the key again. You can use this hierarchy to view information at different levels; for example, you can view data for the entire network or department, or just for an individual machine.

Table Sorting Order

When information is presented in a table, as in an error list, you can change the sort order by dragging a column title left or right as needed. The table is sorted based on the contents of the first column using the columns to the right to break ties. Click a row to display details of the entry.

Network Property

The property selection labeled Network is considered the main infrastructure property of the Service Agent system. This property displays the hierarchy tree used to view and configure information for individual machines and groups. When the Network property in the Navigation pane is highlighted, the Add button at the bottom is enabled.

Configuration tasks

This chapter contains many How To....s of various tasks that you can perform from within the Configuration interface.   The tasks are grouped into the following categories:

- ? How to add or create additional configuration entries
- ? How to remove or delete configuration entries
- ? How to test certain configuration functions
- ? How to perform other Service Agent functions

How to add or create additional configuration entries

How to add a client HMC

__ 1. Select **Network** property.
__ 2. Click **Add**.
__ 3. Click **Child sub-menu**.
__ 4. Click **Machine entry** of the *Child sub-menu*.
__ 5. Complete all the required fields for the selected machine.
__ 6. Click **OK** to save the data.

How to create a department of monitored HMCs

__ 1. Click **Network**.
__ 2. Click **Add**.
__ 3. Click **Child**.
__ 4. Click **Department**.
__ 5. Type the **name** you want to use to describe this department or group.
(This example uses DEPT1 as the department name.)
__ 6. Click **OK**.
__ 7. Click **DEPT1** (or the name you used to create your department).
__ 8. Click **Add**.
__ 9. Click **Child**.
__ 10. Click **Machine**.
__ 11. Fill out the *Node Info* template and click **OK**.
This new monitored machine (designated by the name you give it) appears indented under the DEPT1 department name.

How to define resource filters
Resource filters allow you to specify certain devices so that they are not reported to IBM. This is particularly needed if the device is a non-IBM device not covered under warranty or a maintenance agreement (MA). You can define resource filters for your network or for specific monitored machines. This example uses a specific monitored machine.

__ 1. Click on a specific monitored machine.
__ 2. Click **Add**.
__ 3. Click **Form**.
__ 4. Click **Resource Filter**
__ 5. Type the *name of the resource* to filter or a *range of resources*.
__ 6. Click **OK**.
__ 7. Verify your *Resource Filter(s)* by locating the Resource Filter template in the details pane.

How to specify thresholds
Thresholds provide you with a way to prevent certain errors (for a network view or a monitored machine view) from being reported (by Service Agent) to the IBM Service Agent Server.

Go to *Thresholds* in Appendix A to see how to find out how to determine errors (their id or number) that you can then use in defining thresholds.

__ 1. Select either the *Network folder* or a *monitored machine*.
__ 2. Click **Add**.
__ 3. Click **Form**.
__ 4. Click **Threshold**.
__ 5. Type the correct data into the *Threshold template*.
__ 6. Click **OK**.
__ 7. You can verify your Threshold entry. Scroll the details pane to the *Filter Lists folder*.
__ 8. Click **Thresholds**
__ 9. Scroll until you locate the error that you just added .

How to specify the physical location of a machine
Specifying the physical location of a machine helps service representatives provide prompt, quick service to monitored machines.

__ 1. Click the **Network** property folder.
__ 2. Click **Add**.
__ 3. Click **Form**.
__ 4. Click **Location**.
__ 5. Type the correct data into the *Location* template.
__ 6. Click **OK**.
__ 7. Scroll the details pane to verify that the *Location* template was completed.

How to lockout Service Agent on a machine

The Lockout Machines template allows turning off or locking out SA on an individual machine.

CAUTION: The locked out system will not report any errors until the lock is removed. Be sure to unlock the system after all maintenance work is performed.

___ 1. Under the Administration folder, click **Lockout Machines**.
___ 2. From the detail pane, select the monitored machine or machines on which you want to lockout Service Agent.
___ 3. Click **lock**.
___ 4. To verify the lockout, click the **Network** folder, then click the **Pad Lock** icon to display status. The machine's status should show a red X, indicating it is locked.

How to add an E-mail alert

___ 1. Select a monitored machine for which you want to create an Email alert folder. (Email Alert is common for all the sa clients on the same gateway, irrespective of where we add the Email alert mechanism)
___ 2. Click **Add**.
___ 3. Click **Child sub-menu**.
___ 4. Click **Email alert**.
___ 5. Change the default e-mail address to whom you want to send the e-mail to.
You can send an alert to multiple e-mail addresses by separating the e-mail addresses with a comma. For example, joe@host.companyname.com, carol@abcit.com, jill@companyname.com .

___ 6. If the selected host has a different Mail Server, type the name of that server as the value for Email Server.
___ 7. Change the *Email Wait Time in Minutes* field to something quicker than 15 if you want to check the function or receive notification sooner. You can not use a value of 0.
___ 8. Set to **True** the types of alerts of which you want to be notified. For more information and a description of the alert types, refer to *Appendix A "Advanced Configuration Details - E-mail Alerts".*
___ 9. Click **OK**.

> **Note**: Different E-mail alerts can be customized for particular users. For example, you may want employee A to be notified of CAUTIONS and employee B to be notified of INTERNAL ERRORS. Only one Email alert is normally needed for any events which might happen on any of the systems using this gateway. Adding Email Alerts to individual nodes, does NOT provide details specific to that nodes.

How to remove or delete configuration entries

How to remove a machine
__ 1. Select **Network** property.
__ 2. Select the **machine** to remove.
__ 3. Click **Delete**.
__ 4. Click **Yes** to complete the removal.
        Note: This only removes the client HMC from the Service Agent configuration.

How to test certain configuration entries

How to send a test PMR to the IBM Service Agent Server
__ 1. In the Test Tools folder, click **TestPMR**.
__ 2. Select a *machine* and click **Generate** to create and send a test PMR to the IBM Service
        Agent Server.
__ 3. Reply Yes to the prompt of whether to connect to IBM now or later.
__ 4. Click the **Calllog** property to monitor the TestPMR progress for success or failure.
__ 5. Look for the Red bug icon beneath the monitored machine property. It should be prefaced by
        the error string 000-000.

How to test Email
Note: You have to have an E-mail alert defined prior to sending a test e-mail. See *How to add an
E-mail alert* in the above example.

__ 1. Select a monitored machine for which you want to create a Test Emails folder. You must
        expand the view of the monitored machine by clicking the key next to the machine name.
__ 2. Click **Email alert icon**.
__ 3. Scroll to *Test Emails Enabled* field.
__ 4. Click the **Test Emails Enabled** check box to toggle the value to True.
__ 5. Click **OK**.
__ 6. Repeat steps 1 through 5 to send test e-mail's to other e-mail addresses.
__ 7. Expand the **Test Tools** property.
__ 8. Click the **TestEmail** icon.
__ 9. Click **Send**.
        Note: E-mail is sent after the time-delay (set when created the e-mail alert) expires.
__ 10. Scroll (while in the Email folder) to *Test Emails Enabled* and click the **Test Emails Enabled**
        check box to toggle the value to False.
__ 11. Check with the person(s) who are designated to receive the e-mail alerts to see if they did
        receive the alert(s).
        Note: The e-mail test alert instructs the recipient to contact the system administrator.

How to perform other Service Agent functions

How to determine your Service Agent version
__ 1. From the Service Agent interface, click **Help**.
__ 2. Click **About**.
__ 3. About displays the Service Agent version number.
    Note: This displays the level of code installed on the Gateway server. Selecting the Environment item under the expanded node shows the Service Agent code level for that machine.

How to send Vital Product Data (VPD) to IBM
__ 1. From the Manual Tools folder, click **VPD**
__ 2. Select a *monitored machine* for which you wish to send VPD.
__ 3. Click **send VPD**.
    Send VPD sends VPD to IBM at the next regularly scheduled time.

How to cleanup (remove some data from) monitored logs

You may want to cleanup monitored logs if they are getting too large or you only want to keep certain data.

__ 1. Expand the **Administration key**.
__ 2. Select **Purge Data**.
__ 3. Toggle to True the data you want to purge:
    ✐CallLog data
    All entries posted to the CallLog. For example, when a call is made to IBM, a record is created in the CallLog. This function removes ALL data in the CallLog.
    ✐Purge Error Warning
    Any warning messages (non-error messages (yellow triangles)) are purged.
    ✐Purge Internal Errors
    Any errors with the upside-down Red Bug icon posted beside them are purged.
    ✐Closed PMRs
    Purges any PMRs marked as closed.
    ✐All The PMRs
    Purges all PMRs.

__ 4. Click **Purge** to purge all data marked as True.
    Note: If there is a large quantity of data to purge, this activity could take some time to complete. You will not see any screen updates while this activity takes place.

How to clear pending request to the IBM Service Agent Server (SAS)
Normal workings of Service Agent can create request to the SAS. They can be queued for immediate or later processing. To clear any current or pending request follow the steps below:

__ 1. Click the **Administration** property folder.
__ 2. Click **Purge**.
__ 3. Toggle **The OutGoing Queue** to True.
__ 4. Click **Purge**.
   Note: You will not see any screen updates while this activity takes place.

Service Agent Security

This chapter discusses how security for Service Agent works with the following areas:

? PPP and modem security
? Global Dialer and Network
? IBM Service Agent Server

Understanding Serial Interface

The stty port and modem security are both configured to *not* auto-answer the modem or allow login access from the stty port. Service Agent only allows outbound calls to be created from the customer's location. At no time will the IBM Service Agent Server (SAS) attempt to call the customer's HMC electronically.

Service Agent, from the client through the IBM SAS, uses an IBM Certified Secure Network structure (using the Gateway ppp) to run the Service Agent Dialer application as a secure IP network to the IBM internal complex. The Certified Secure Network structure protects both IBM and our Service Agent Client networks from malicious attacks attempted by other users of the shared public infrastructure.

Global Dialer networking to IBM SAS

The purpose of this is to provide an overview of the security methods in place for the AT&T account SA uses. This is a special form of SecureIP with an AT&T managed Site Interface Gateway (SIG). This service has features specific to the transport medium, whether broadband or narrowband. The differing features are specifically noted where necessary:

? SecureIP (verification of data at source and destination)
? Remote Client Personal Firewall feature (verification of attempted access to client machine)
? Authorization (verification of permissions for data to enter the IBM network)

SecureIP is defined as a secure method of sending data across a shared public infrastructure. In this case, data travels from the remote client machine across a portion of a shared network (either PSTN or Broadband) to the IBM network. The IPSec protocol, as defined by the Internet Engineering Task Force (IETF) RFC2041, provides the architecture and the standards for encryption and authentication. In short, the IPSec protocol adds additional headers to the IP packet, providing a means of additional verification of the packet.

For verification, the Authentication Header (AH) is used to help ensure IP data packet integrity. The AH provides a mechanism to validate that the data packet came from the expected source and it was not modified in transit.

The Site Interface Gateway (SIG) provides the network interface from a remote client machine to the IBM Intranet. A user initiates a logon request through the dialer. At the time of initiation, the user specifies an account, user ID, and password. The dialer carries out the user request by communicating with the AT&T SecureIP driver. The request is sent through the IPSec to the SIG, which establishes a session with the Remote Access Service (RAS) Interface Gateway (RIG). The RIG provides an interface to the AT&T Service Manager, which carries out user verification. The RIG then establishes a connection to the IBM SA Server. This gateway structure prevents any additional IBM internal attempts to establish communications to the calling client hosts.

Appendix A.   Configuration details

This appendix describes the details of the Advanced Configuration folders, templates, template parameters and their fields.

This information is presented in the order you view the Advanced Configuration user interface.

- ? Network
- ? Gateway HMC server
- ? Monitored Client HMC
- ? Administration
- ? Filtering
- ? ManualTools
- ? Test tools

Network folder

The Network folder allows you to update the contact information for callback from the IBM Service Center for problems that are received. The *Name*, *Phone Number*, and *E-mail* address of the contact are required. In addition, the *Queue Country* where the Gateway server is located is also required. After the data has been typed, click **OK** to save the data.

Note: The country value selected is utilized to properly identify the systems and open Problem Management Reports (PMRs) based upon internal country codes.   The country selected must match with the IBM customer number. If the Country code is incorrect, the PMR is either rejected or sent to an improper queue.

See Telephone Number if network dispatch is different from required Contact Phone Number line 2, this will allow proper dispatch.

Network Template:

Parameters	Description
IBM Contact	
! Name	Name of a person IBM may contact for PMR discussions. (Required)
! Phone Number	Phone number of contact. (Required)
! Email	E-mail address of contact. (Required)
Address	
! Queue Country / Region	Physical Country Location of the systems that PMRs will be open against. This will generally be the same country the contact person resides in. However, if different the country where the Service Agent network is located should be used. (Required)
Organization	Name of company. (Optional)
Organizational Unit	Name of group or division (Optional)
Street	Street location where SA is installed. (Optional)
Locality	City, Town, or Village where SA is installed. (Optional)
State Or Province	State/Province where SA is installed. (Optional)
Postal Code	Zip or postal code where SA is installed. (Optional)
Customer	
Customer Number	IBM customer number. (Optional).
Telephone Number	**Additional Phone number for local informational purposes. This will override the primary contact phone number for call back proposes. This number should be a number located where the machine is located. If different from the Primary number.**
Number	Will override the primary contact phone number entered above
Contact Context	
Comment	Any comments that may help in communication between the company and IBM concerning support for the Service Agent monitored systems.
Standard Template Settings	Default Template settings use across all monitored systems.
Err Lease in Days	This timer determines how long to keep and maintain host detected error entries within Service Agent database.
Additional Entries	Additional data may be added to this folder with the use of Add-Form
Forms	Location, Threshold, Filter, additional comments, contacts, addresses will reflect as Tab entries on base form.

Using the Add button from the Network folder

When the Network folder is selected you can add additional information about your Network to the Service Agent program using the *Add* button. This additional information can be viewed, through the Network folder's details list.

Node Info template parameters and descriptions

The selection of Machine under the Child option of the Add function will allow you to add Client HMC machines to your SA Network. The Node Info template allows you to define specific information about new machines that you want to add to your network of monitored machines. The following table defines and describes the parameters:

Node Info

Parameters	Description
! Name	Enter the fully qualified hostname of the system to be added. This is the hostname the Gateway will see it as.
IP address	If entered must be in proper IP number format ###.###.###.###
Processor ID	(ProcessorID) of the HMC machine, should auto fill.
! Type	Required input- 4 digit brass tag number located on the exterior of the primary HMC. (eg. 7040)
! Serial Number	Required input - Last seven characters of the brass tag serial number located on the primary HMC.
! Model	3 character model number of the primary HMC - required.
Manufacturer	(Optional) Manufacturer of unit. (eg. IBM)
InstallationType	**N/A**, SA Code is not distributed within the HMC Network.
Primary Server (Locked)	Used for internal functions within Service Agent for Gateway and sub-host communication. Indicates primary host, that sub-host reports to (may have to be fully qualified name).
Secondary Server	(This functions currently not active)
Tertiary Server	(This functions currently not active)

Client HMC could have been added under a Department sub-grouping by first building a department using Add-Child-Department option. Prompt to enter a department Name and save it by clicking the OK, Cancel will return with no action taken to the database.

Adding additional system information using forms

Additional information may be added to a Network, Department, or Node by selecting the Add button and then the Form button at the bottom of the navigation pane and making a selection.

The following selections may take affect across the whole network hierarchy, department or on a individual machine basis, depending upon the Property selection made. Forms added to a Machine take priority over a Department grouping and Forms added to a Department take priority over the Network.

Available Forms:

Address

Select the *Address* form to add additional address information to the Network, Department, or Machine.

Comment

Select the *Comment* form to add additional comment information to the Network, Department, or Machine.

Contact

Select the *Comment* form to add additional comment information to the Network, Department, or Machine.

Location

Select the *Location* form to add additional location information to the Network, Department, or Machine as to the physical location of the system. Specific entries available are Building, Floor, and Room location.

Resource Filter

You can define resources for which you do not want to report errors.   For example, a hard disk that is not under a IBM warranty or maintenance agreement. Generally, resource filters are defined at the machine level but they can also be set at the network and department level. Enter the logical resource name of the device to be ignored. Add one resource form per device or range of devices. For example, ("hdisk0, hdisk1, tok0, tok1"). See Chapter 5 for more information on how to define resource filters

Settings

Select the *Settings* form to add additional Standard Template Settings entries to the Network, Department, or Machine. The *Err Lease in Days* is the only selection currently.

Telephone Number

Select the *Telephone Number* form to add additional phone number information to the Network, Department, or Machine.

Threshold

Select the *Threshold* form to add additional error thresholds to the Network, Department, or Machine. Error events detected by Service Agent use internal threshold levels, defined by IBM, that must be exceeded before an action is taken (Ignore, Create Pending, or Create Held). In some cases, false error events may be detected due to system configuration or unusual process activities

which give false returns. If this happens, thresholds can be added for the specific error Thresholds Property Selection

Available Threshold Entries:

Error ID	The Error ID can be a SRN number generated by the Diagnostics, a system error log error identifier, or a system error log error label. The Error ID or SRN number will be displayed in the "Error Number" field of the "Error Event" if available.
	Note: A threshold Error ID or SRN must be an exact match. If the Error ID detected by Service Agent contains upper or lower case characters the same characters must be entered for the thresholds. All characters displayed in the Error ID of a PMR entry must be typed as the Threshold error. This would include any hex notation such as *0x* if present.
Action	Action to be taken when this error occurs:

0	Create Pending	Create error event to be transmitted to IBM
1	Create Held	Create an error event with Held status so it does not get sent to IBM. You would then have to manually change the status to Pending to send it or delete it if you were not interested in it.
2	Ignore	Ignore this error; do not report it.

Count	The number of occurrences of the error before the action is taken.
Days/Hours/ minutes	The frequency of the count; for example, you might only want to act on the error after it happens 3 times in 1 day, or 2 times in 45 minutes.

Call Log folder

The Call Log template displays the results of connections and transmissions to the IBM SAS. By viewing this log during the dialing or initial phase of a connection, real time updates are logged. Once connection is made and requests have been transmitted, a summary count of the request types and whether they were transmitted successfully are logged.

The summary counts overlay the description entries made during the connection phase.

Note: The summary counts only relate to whether the transmission was successful or not. It does NOT indicate whether the specific request was accepted or failed due to some internal process checking or rejection. To determine the results of a specific request, if available, you must look at the specific entry for the request in question. A successful result on the transmission does not necessary indicate a positive reply for a specific request.

CallLog Display Columns:

Column	Description
Description	This column displays real time connection updates as the connection is made. Once the connection has ended final Success/Fail results are logged here.
Start Time Stamp	Time Stamp of when the transmission started.
End Time Stamp	Time Stamp of when the transmission ended
Type	Type of call, LIC (padlock), PMR, VPD Icon symbols
Snd	This column is not used.
Rcy	This column is not used.
Try	This column displays how many times or retries it took to make the connection.
Status	Icon status of transmission, Green Flag = OK
TTY Baud	If baud rate established, posted connect speed or <none>

Table may be sorted on any field by dragging that field to the left side of table columns.

Gateway folder templates

Node Info template

Parameters / Fields	Description
Node Info	**Same as Network level**

Errorlog template

When Service Agent receives a valid Error Event it puts the event in a template within a PMR folder beneath the host (as viewed using the Service Agent interface) it was reported on. The information defined in this template is used to open a PMR and to maintain it's returning status and PMR number. When viewing an expanded machine Error Event, templates are indicated by an icon in the shape of a bug along with the SRN or error number of the event and its description. Selecting a individual error template displays its contents in the detail pane to the right. These entries are removed when the "Err Lease" value specified in the detail pane of the "Network" selection is reached.

Parameters and Fields	Description
PMR	
Timestamp	Time stamp when Error Event was first created
PMR Number	Problem Management Report (PMR) number returned from IBM.
Status	This field depicts the current status of the Error Event and the results of the PMR request. This field can be set to any of the entries in the status table. **0 Pending** This status indicates an entry that is set to be sent to IBM. It is the initial status state which triggers the Service Agent CallController to connect to the IBM SAS. If the status is some other state, setting it to Pending again causes the entry to be resent. **1 Open** This indicates a PMR was opened in the IBM support center for this machine. **2 Closed** This indicates a PMR was closed in the IBM support center for this machine. **3 Held** This status indicates the Error Event entry was held. No connection to IBM was made for this status state. **4 Duplicate** This status indicates an attempt was made to open a PMR that was already opened. If the same Type, Serial number, Description, and error number is opened before a previous PMR with the same error is closed a Duplicate status is returned. **5 Failed** This status indicates an attempt to open a PMR with IBM failed for some reason. See the Status Details field for specific details on the error.
TYPE	Failing Device Type, error was detected on. PMR is opened against this TYPE.
SERIAL	Failing Device Serial number, error was detected on. PMR is opened against this SERIAL.
MODEL	Failing Device Model number, error was detected on. PMR is opened against this MODEL.
Error Number	The Error Number is the actual error number found in the error log or the SRN number generated by the concurrent diagnostics on the machine.
Description	This is the short verbal description of the error indicated from the system error log or the diagnostic data files.
Resource	This is the name of the resource the error occurred on.
Duplicate Count	This count indicates how many times the error has occurred since it was originally opened. See **note** following chart.
Last Occurrence	This is the time stamp of the last occurrence of the Error Event.
Error Details	This field contains the detail description of the Error Event that occurred.
Status Details	This field contains the detail description of the status results. If the status is set to FAIL due to some communication problem with the SAS this field would contain the associated error message.
When Status Checked	Last time the status of a opened PMR was checked.
errClass	Classification of the PMR.

Note: Duplicate Count -- Every time a duplicate error occurs, a check is made to see if the original creation date of the OPENed PMR is greater than 24 hours. If so, then the local status of the PMR is set to *PENDING* and an attempt is made to contact IBM again. If the PMR was closed at IBM, a new PMR number will be generated replacing the original one. If the PMR is still open, then the local status will be reset to *OPEN* and the original PMR number will be maintained For tracking purposes the original PMR number is appended to the details text of the PMR when the PMR is replaced.

Dialer template

The dialer template allows you to define the modem parameters and field values for communication to the IBM Service Agent server. In this template, required fields are marked by the "!" character as in other screens within Service Agent. However there is no verification of required fields for the modem parameters since a modem is not required for local setup of the rest of the Service Agent program. Although it is highly recommended to configure the modem from within the Basic interface at the time of installation it is not a requirement. The dialer comes into play when you are ready to register your systems and open problem reports (PMRs) and send them to IBM automatically.

Dialer

Parameter	Description
Location	The country/city the modem is calling from. By opening this table and selecting the country then clicking Details the local country data will be displayed. Highlight the town closest to your location, and press the Select pushbutton. Additional fields are automatically filled in if available. Some countries may have a nationwide or a fee-based 1-800 number available to use. If a local location number from the Location table is not available, look under Nationwide or Fee for a possible toll access number to use instead of a number from the Location table.
Primary Phone Number	The phone number the modem uses to call out is populated according to the location selected. Change this phone number only if needed. **Note**: Depending upon the local phone exchange, this number may need to be modified to utilize your outgoing number and area code requirements.
Location	The country or city the modem is calling from for additional dial attempts if primary should fail for 3 attempts. Use same procedure as for primary selection.
Secondary Phone Number	The phone number the modem uses to call out in the event the primary phone number fails. **Note**: Depending upon the local phone exchange, this number may need to be modified to utilize your outgoing number and area code requirements.
Account	The Service Agent network login account assigned by IBM. May vary depending upon Location. Will be **automatically** filled with valid phone number selection.
User ID	The Service Agent network login user ID. Will be **automatically** filled.
Password	The Service Agent network login password. Will be **automatically** filled.
Primary	The IP address for the Service Agent Server. Will be **automatically** filled.

Route IP Addr SAS					
Secondary Route - IP Addr SAS	The IP address for the Service Agent Server. Will be **automatically** filled.				
TTY Port	The port number the modem is physically connected to (0,1,2,3) (ttyS1 for com2 on HMC)				
Baud Rate	The maximum value the TTY modem will be set at for connection:				
Modem	The modem's reset and initialization string values are populated according to the modem selected. Change these values only if needed. **Tip:** Type the first letter of the modem to move quicker through the list.				
	0		6	19,200	
	1	1,200	7	28,800	
	2	2,400	8	33,600	
	3	4,800	9	38,400	
	4	9,600	10	57,600	
	5	14,400	11	115,200	
Reset String	The modem's reset string values are populated according to the modem selected. Change these values only if needed.				
Init String	The modem's initialization string values are populated according to the modem selected. Change these values only if needed.				
Dial Type	Select the dial type of this modem (tone or pulse).				

Environment template

The Environment template displays the various environment and revision levels of the supporting system and execution files on the machine. The revision levels information is gathered every time the ODS process is started on the machine. The Environment information is transmitted with each connection to the IBM Service Agent Server for error analysis and update notification. These entries are locked and cannot be modified.

Parameters / Fields	Description
java Vendor	The java builder running on HMC, usually IBM Corporation
java Version	The java level running on HMC
Operating System	Linux is the operating system running on HMC currently
OS Version	The build and level of operating system
System Architecture	Architecture of system running HMC
Language	Language environment setting on HMC
Service Agent Version	The release, version, and fix level of SA running on this HMC
Service Agent Type	Type of SA running on this HMC, (HMC vs AIX)
Lockout	If set to True, SA is effectively disabled on this HMC

CallController template

The CallContoller template contains the entries and timers used to coordinate the call notification and external communication attempts among the monitored machines when an event or error is detected.

Parameter	Description
Pending Timer in Minutes	When an event or problem is detected its status is set as Pending. The value specified for the Pending Timer determines how many minutes to wait for additional events to be generated before taking action and attempting to make an external connection to the IBM SAS. For example if an error is detected at 1 PM, Service Agent will wait until 1:15 PM before calling out to IBM and placing a Problem Management Report.
Check Open Status in Days	When an error event is set to an OPEN status the value specified in this field determines how many days to wait before checking the status of the PMR on the SAS server side. When the PMR is closed at IBM the local status is updated.
Health Check Timer in Days	The value specified in this field determines how often (in days), Service Agent should call into the IBM SAS for a health check. It indicates that everything is OK and the reason SA hasn't called in before is because there were no errors to report. SA will automatically connect to the SAS, if it hasn't done so for some other reason, when the time specified expires. Whenever a connection is made to the SAS the countdown for this timer is reset in order to keep outgoing connections down to a minimum.
Max Attempts	This value determines how many attempts to make a connection to the IBM SAS before giving up and setting the **PENDING** status of the events to **FAIL** and clearing the call queue.
Current Attempt	This value indicates the current connection attempt the CallController is on. When this count equals the Max Attempts count., the Entries in the Call Queue are set to FAIL and the queue is cleared.
Retry Timer in Seconds	This value determines how many seconds to wait before making the next connection attempt. If the Max Attempts is set to 3 and the Retry Timer is set to 60, then the CallController sleeps between each attempt for sixty seconds until the Max Attempts value is reached. {For example, Attempt-1, Sleep(60), Attempt-2, Sleep(60), Attempt-3, (Clear Queue & Set Status)}
Primary URL	This entry determines the IP address and Port number of the IBM SAS server. This value is defined by the IBM SA program and should not be modified as a general rule.
Secondary URL	This entry determines the IP address and Port number of the IBM SAS secondary server. This value is defined by the IBM SA program and should not be modified as a general rule.
Connection Idle Timeout	This value determines how many minutes to wait before breaking the connection to the SAS if it becomes idle.

Available buttons for CallController template:

Button	Description
OK	This button located at the bottom of the detail pane is active once data has been entered or changed in a field. Click this button to save all data.
Cancel	Click Cancel to cancel the current operation. Screen is refreshed to original data.
Delete	This button, located at the bottom of the detail pane, becomes active when an entry in

	the detail pane is selected. Click the Delete button to delete a selected entry.

Linux Hardware Service template

Standard Template	Description

Status	This entry displays the License status of the hardware template. This entry could be one of five different status states.
	0 Proposed -
	    This state is the initial default state of a newly define machine.Iindicates the system is only proposed and not licensed. No action will be taken until the status is set to Pending.
	1 Pending -
	    This state indicates the system is staged to be licensed. Upon the next connection to the IBM SAS a license request will be made for this host.
	2 Expired -
	    This state indicates the maximum licensed date has passed and the license is expired. Reregister the system to get a new licensed status. Licensed functions are disabled. When a system is expired Service Agent automatically connects and requests a new license.
	3 Corrupt -
	    This state indicates the license status is corrupt or damaged. For example if the return from License request was a bad transmission the status will be set to corrupt. Reregister the system to get a clean license status. Licensed functions are disabled with this status.
	4 Licensed -
	    This state indicates the machine is licensed. All functions requiring a license are activated.
	5 Denied -
	    This state indicates the system was denied for some reason and a license to activated this template is refused. All functions requiring a license are disabled. Refer to the template comment field or the specific calllog entry for details. You must remove and redefine the machine to remove the Denied status state.
	If the template is not licensed, those functions requiring licenses are not run.
	Functions requiring a licensed status are the hardware monitoring functions.

Expiry	This is the date the license expires.
License	This the unique license number associated with the machine. This license number will not work with any other defined host.
Comment	General status response comments from IBM Service Agent server.
Heart Beat Enabled	Enables or disables Heart Beat process on client machine. A True value indicates Heard Beat is enabled.
Heart Beat	Timer to determine how often the gateway should expect a heartbeat from the host. If the host misses a heartbeat a notification is sent if Email alert is set. Actual time is an approximate value of HeartBeat + Delay.
Heart Beat	Value added to the Heartbeat to compensate for Network delays and differences

Delay in Minutes	in systems. Minimum value is 2 minutes.
Vpd Enabled	Enables or disables Vital Product Data (VPD) collection. True value indicates Enabled.
Vpd Interval	This timer determines how often to check for Changes in the Vital Product Data on a host. This data is then transmitted to IBM Service Agent server for diagnostic and error analysis. - Days, Hours, Minutes, Seconds
Create Internal Err for Unformatted Events	Flag to determine if Event comes from Service Focal Point without proper formatting. This will then be logged as an internal SA failure. Enabled if checked True
Error Enable	Flag to determine if the error events from SFP will be sent to Service Agent. The Hardware Template must be licensed for this to be active.
Error Interval	This timer determines how often to check for errors or problems. - Days, Hours, Minutes, Seconds
Enable the Automatic transmission of EED	Flag to determine if the EED will be automatically transmitted with error events. Enabled if checked True.

Available Buttons for Linux Hardware Service Template:

Button	Description
OK	This button is located at the bottom of the detail pane and is active once data has been entered or changed in a field. Click this button to save all data entered.
Cancel	Click this button to cancel the current operation.
Delete	This button is located at the bottom of the detail pane and becomes active when an entry in the detail pane that can be deleted is selected. Once an entry that can be deleted is selected, click Delete to remove it.

Performance Management

Note: The IBM Performance Management for AIX product must be installed on each machine (or each LPAR) for Service Agent to pick up the performance data and send to IBM.

The *IBM Performance Management For AIX* product, installed on the AIX system, gathers and creates data files for the following system activities:

? Disk usage; a summary of disk usage of physical volumes and space on the file system
? IO data; Input/Output statistics for disks and CD-ROMs
? Networking data; network statistics for defined interfaces
? Virtual memory and CPU statistics

The Performance Management module in Service Agent on the defined clients helps gather these data from the monitored systems, sends the data to the Gateway machine, and then to IBM for further analysis.

Performance Management template:

Performance Management Parameters	Description
Enable gathering of PM from this system	The value of this parameter will be initially set to false and if the customer needs to send the Performance data to IBM, they should turn this on. Once this is turned on, SA starts collecting PM from each of the monitored partitions on a daily basis.
Default time of day to collect data files	This parameter will allow the customer to set a time for the data collection. Normally this is set to a time between 2AM - 5 AM.
Enable generating Internal errors	This option can be used to generate internal errors when the PM data collection or PM transmission fails. Email Alerts can be configured to notify about the se internal errors.

CEC template

List of available machines supported by this HMC which have VPD or MicroCode information posted. Select the available Type_Serial_Model machine that you wish to review. The CEC template will be displayed with all fields locked available for viewing only. If the "Resource is Active" is checked as True, then the associated VPD data or Microcode information may be reviewed from their respective scroll bar windows on template.

Monitored machines folder

When a Client HMC is added to the network, the following templates are associated with that monitored machine.

Node Info template

Note: Remember, if you add a Client HMC to the SA HMC Gateway, you must change that HMC to Client mode. Use **Change Service Agent mode - (server/client)** from **Service Agent - Hardware Management Console** of **Service Applications.**

Parameters / Fields	Description
Node Info	Same as Network Node Info

Errorlog template

PMR Parameter	Description
Errorlog	Same as Gateway Errorlog.

Environment template

Parameters / Fields	Description
Environment	Same as Gateway Environment.

Linux Hardware Service template

Standard Template	Description
Hardware Service	Same as Gateway Hardware Service.

Additional machine templates

Additional templates can be added to every machine (both gateway server and monitored) to provide various functions and options customizing Service Agent to the individual company needs. To access these templates select your Gateway server or a monitored machine and click **Add** and then click **Child.**

Call Controller template

The Call Controller template, by default is installed on the gateway server for optimum performance of the Service Agent system. As a general rule this should not be changed. However, if necessary, for load balancing of the Network any machine can run the Call controller.

CAUTION: There should only be one Call Controller assigned within the Service Agent System.   Do not operate with more than one template at a time. Results are undefined and could result in damaging the Service Agent databases.

Dialer template

The Dialer template, by default, is installed on the gateway server for optimum performance of the Service Agent program. As a general rule this should not be changed. However, if necessary for load balancing of the Network, any machine can run the Dialer Template. In order for the dialer to work it must be on the same machine as the Call Controller. See the Dialer section in **"Templates for Gateway"** for specific entry details.

E-mail Alert

By adding an E-mail Alert template, Service Agent can send an e-mail message to contacts relating all or limited machine problem information. You can define as many e-mail contacts as you require, but an e-mail server must be active and accessible.

Email Alert Template

Email Alert	Description
E-mail Address	The E-mail address of the contact you wish to alert.
E-mail Subject	The default subject line for messages.
E-mail Server	The hostname of the mail server to be used.
E-mail Wait Time In Minutes	This field determines how long to wait in order to gather any additional notifications that may be generated. When the time specified is reached, all notifications are combined into one e-mail notification and sent to the e-mail address.
	Set the following flags True/False accordingly. *Set Urgent flag for marking mail urgent.*
Cautions Enabled	An *Error Event* occurred that is considered a caution or informational entry. A PMR is not generated for it.
Failed Enabled	A SA *Error Event* transmission failed to open a PMR on the IBM SAS.

Held Enabled	A SA *Error Event* entry was created and set to a Held status.
Pending Enabled	A SA *Error Event* entry was created and set to a pending status.
Opened Enabled	A SA *Error Event* transmission OPENED a PMR on the IBM SAS.
Closed Enabled	A SA *Error Event* transmission CLOSED a PMR on the IBM SAS.
Internal Errors Enabled	An internal operating problem has occurred. (e.g. inability to read a required file, or run a command, or anything that goes wrong with the operation of Service Agent).
Duplicate Enabled	Notification if a duplicate PMR is attempted to be opened.
Licensing Enabled	A notification will be send 0, 30 or 60 days prior to the date when License Key gets expired.
PTF Updates Enabled	The machine has received notification that PTF Updates are available for download.
SA Updates Enabled	The machine has received notification that Service Agent Updates are available for download.
Heart Beat Enabled	The machine failed a heart beat.
Test Emails Enabled	This contact should receive any test e-mail's sent.
EED Enabled	Notification issued if failed to send with PMR information.

Available buttons for the E-mail template:

Button	Description
OK	The OK button located at the bottom of the detail pane is active once data has been typed or changed in a field. Click **OK** to save all data typed.
Cancel	Click **Cancel** to cancel the current operation.

Administration folder

Register template

The Register template provides the capability of registering one or more defined machines. Holding the shift key while selecting the second machine will mark multiple machines for registration.

Within this template a simple machine list is displayed, in the detail pane to the right, for selection and registration.

When the Register selection in the Navigation pane is highlighted the Add and Delete buttons at the bottom are disabled.

Available buttons for the Register template:

Button	Description
Open	Click Open to display node information of the selected machine. See section on Node Info for details.
Register	Click **Register** to register the selected machine(s) with IBM.

Manage Cluster Ids template

This template allows the assignment or removal of Cluster Type, Serial, and Model information to selected machines.
Select machine or machines to append the Cluster information to, and then push append pushbutton. A cluster detail window will allow for the entry of cluster information, and whether you should override any detected cluster information.

Enter the Cluster Details

Cluster Type	Enter 4 digit type assigned to cluster
Cluster Serial	Enter 7 digit serial number assigned to cluster
Cluster Model	Enter 3 digit model assigned (alpha in capitals)
Override detected Cluster Details	Check to override, only if SFP fails to detect the right cluster info.
OK	Saves entered cluster data
Cancel	Returns to previous menu, no action taken

Selecting Remove Cluster ID from Machines pushbutton will issue a Yes / No validation prompt and if Yes is pressed the cluster information will be removed from the selected machines.

Data Compression Cycles

The Data Compression Cycles template allows for the automatic saving and restoration of the SA Gateway database. The ESS database is maintained within the Java ESS daemon memory space and is saved and restored daily. Old or unused data will be purged automatically from memory during this cycle if compression is enabled. The compression should always be enabled to keep the daemon running as smoothly as possible. If daily compression does not occur, then the **sares** process will force a ESS daemon restart.

The detail pane shows the next scheduled compression date and time, enabled status of compression, and allows one to set the daily timer for scheduled compression or immediate execution. Using the Compress Data Now will immediately invoke a compression cycle, where the ESS process will shutdown, restart, and initialize the database. The Next Compression Date will be updated to reflect the new daily cycle time in 24 hours from the current time. A new cycle time may be set by entering the desired time either in a 12 or 24 hour format and then selecting the Set The Timer For Data Compression push button. If entry is valid then the Next Compression Date will reflect the new time. If improper data entry is made a RED Time error will be posted and date will not be adjusted. Use the format display at the bottom of the window to assist you in the correct format for entering the time setting.

Import / Export template
The Import / Export template allows for the automatic addition of machines from an ASCII input file, the capability of saving existing machine entries to an ASCII output file, and exporting the defined database to a binary file and importing a previously exported database

Import ASCII Input File Format:
Each monitored machine to be added must be on a single line. Each line must contain the required machine data in the following order with comma separators and no spaces.

Note: Processor ID is obtained by executing uname -m command on the physical host**.**

"Hostname","**Type", "Serial", "ProcessorID", "Model","HMC"**

For example, the input file would contain:
ABC,7040,43515,003555434C00,681**,HMC**
sas6k7.austin.ibm.com,7040,8386522,i686,681**,HMC**
....
XYZ,7040,34789,4438902**,,HMC**

"HMC" is a hardcoded String, to identify this is an HMC system. (not standalone SA which runs on the aix partition)

Available Buttons:

Button	Description
ASCII Input Machine List	Click **ASCII Input Machines List** to input an ASCII machine list. Type the location and name of the file at the selection window.
ASCII Output Machine List	Click **ASCII Output Machines List** to output an ASCII machine list of all defined Service Agent machines. Type the destination and name of the file at the selection window.
Export Service Agent Database	Click **Export Service Agent Database** to output the SA Gateway database to a file.
Import Service Agent Database	Click **Import Service Agent Database** to input a previously exported machine database file.

Lockout Machines template

The Lockout Machines template allows turning off or locking out Service Agent on selected machines. This is useful when there is to be some type of system maintenance that could possibly cause Service Agent to report false errors. To avoid confusion lockout the system that you wish to ignore prior to performing any activities that could cause false errors.
CAUTION: The locked out system will not report any errors until the lock is removed. Be sure to unlock the system after all maintenance work is performed.

Available Buttons:

Button	Description
Open	Click **Open** to see Node information details on the selected machine.
lock	Click **lock** to lock the machine and disable Service Agent reporting.
unlock	Click **unlock** to unlock the machine and enable Service Agent reporting.

Purge data template

The Purge data template allows you to purge all the data collected and placed in the CallLog folder, information associated with PMR and Error data contained in database, and queued data. The CallLog folder is located beneath the Network folder in the Navigation Pane. PMR and Error information are shown under machine detail. The outgoing queue cannot be viewed but contains any pending actions that are to go to the IBM SAS on next established good connection. Be aware if you purge the outgoing queue that pending information may be lost or not transmitted to IBM.

Available Buttons:

Button	Description
Purge	Click **Purge** to optionally purge all the following data: ✎ CallLog Data - Clears the CallLog ✎ Error Warnings - Clears accumulated Error Warnings ✎ Internal Errors - Clears accumulated Internal Errors ✎ Closed PMR - Clears PMRs with a Closed status ✎ All PMR - Clears all PMRs from the database ✎ Outgoing Queue - Removes pending entries in the outgoing queue and sets the status to Fail ✎ Email Locks for Revision Updates - Removes any locks set

SA Access template

This template allows the assignment of a new password for Service Agent User Interface access. Pressing the Change the Password pushbutton will bring up a window prompt where old and new password information may be entered. The keystrokes will be shown with * filled for key stroke verification.

Enter the Password Details

Old Password	Enter the current SA access password
New Password	Enter the new password data
Verify New Password	Enter the new password again for verification
OK	Verifies and saves entered data
Cancel	Returns to previous menu, no password action taken

Data files template

This template allows for the removal of old or unnecessary vital product data, extended error data files or PM data files that are maintained by SA for selected HMC machines. Select the HMC host that you wish to manage the files for, then activate the Manage The External Files push button. This should post a new window for the selected machine, allowing for the selection of file type by drop down arrow. If no files for the selected type are available the window will post nothing for the selected file type. All files for the selected type should be displayed for the selected machines. The machines and type of file should be shown a part of the path, while the date and timestamp are part of the file name conventions. Being able to verify the date and timestamp may be a necessity to selecting the correct file for removal. So within the file name you should see yyyy_mm_dd+HH.MM.SSS just prior to the file type. Select the file or range of files, by holding the shift key and making second selection, then press the Remove push

button to delete the files. Pressing the Cancel will return to the previous menu without taking any actions.

SA Update template

This template is available for possible future activation, current implementation of HMC code does not allow SA rpm to be installed separately. Access request will be sent to IBM SAS but no information will be returned at the current time.

Alerts folder template

The Alerts template allows for screen display.

Alerts are generated by Service Agent when important events occur, such as status changes to PMRs or Service Agent internal errors. In addition to the E-mail and pager alert notification other alert methods can be displayed on the screen. As long as the selection is open, configured alerts are displayed and maintained in the detail pane window. When the selection is closed and reopened the screen is cleared for new alerts. By default all alerts are enabled for display in the Alert selection. Specific alerts can be ignored by setting the associated toggle buttons to true.

Available entries for Alert template:

Alert	Description
Limit	Number of Alerts that are kept at one time. When the limit is reached, no more entries are displayed until the window is cleared or the limit is increased.
Alerts	This is the display capture window for Alerts
Open	To view details of an alert entry, select it from the Alert window and click **Open**.
Reset	To clear the list entries from the alert window press this button.
Flag	The following alerts can be prevented from displaying by setting ignored flag.
Cautions	To ignore "Cautions" alerts, set this toggle button to true.
Closed	To ignore "Closed" alerts, set this toggle button to true.
Failed	To ignore "Failed" alerts, set this toggle button to true.
Held	To ignore "Held" alert, set this toggle button to true.
Internal Errors	To ignore "Internal Error" alerts, set this toggle button to true.
Opened	To ignore "Opened" alerts, set this toggle button to true.
Pending	To ignore "Pending" alerts, set this toggle button to true.

Filter lists folder

Resource Filters template

The Resource Filters template works in conjunction with the Add / Forms / Resource Filter template. When this template is selected all resources that have been configured to be ignored are displayed.

If this template is blank, then no resource filters have been added to the Service Agent Network tree.

For details on adding Resource Filters, see *How to define Resource Filters* in Chapter 5.

Once resource filters have been defined, clicking on this template changes the detail pane into two sections. The upper section has a list of all of the resource filters indicating the Source or machine the resource filter has been added to and the name of the resource that is being ignored.

The lower section displays the Node Information associated with the source or machine that the filter was added to. This display changes depending upon which source or machine is selected.

Thresholds template

The Thresholds template works in conjunction with the Add Form Threshold template.

When this template is selected, all thresholds that have been configured are displayed. If this selection is made and the display is blank, no additional thresholds have been added to the Service Agent Network tree.

For details on adding Thresholds , see *How to specify Thresholds* in Chapter 5.

Once a threshold has been defined, clicking the Thresholds template makes the detail pane appear in two sections.

The upper section has a list of all of the thresholds with the specific configuration information set for each threshold. The bottom section displays the information details of the machine the threshold was added to or the information details of the Network if the threshold was added to the network. In addition there is an Overrides entry in this section which displays the name of the source or machine this threshold overrides.

 For example, if threshold error 124-708 is added to the Network and the same threshold error number 124-708 is added to a specific machine with different configuration data, then the threshold added to the machine would take precedence or an override threshold configured for the Network when it occurs on that machine. If the error occurs on any other machine, then the threshold for the Network applies.

Manual Tools folder

Connect template

The Connect template provides the capability to connect to the IBM Service Agent Server (SAS) immediately or force a current connection to be canceled. It can be used in situations where there are pending requests that should go out immediately or where there is a need to verify the external connection process is working properly.

When connection is made to the SAS, any pending requests destined to be sent to IBM are handled. If there are no pending requests, then a simple handshake between Service Agent and the SAS is performed and the connection is ended.

Available Buttons for Connect template:

Buttons	Description
Connect	Click **Connect** to initiate an immediate connection to SAS.
Disconnect	Click **Disconnect** to disconnect the current connection to SAS.

Microcode template

The ManualMicrocode template provides options that allows you to work with information pertaining to microcode. The microcode information can pertain to your gateway server, your monitored machines, or to microcode levels last received from IBM. The ManualMicrocode template provides the following functions:

- ? Open
- ? Get current installed inventory
- ? Retrieve MicroCode list from IBM (based upon monitored machine(s) selected)
- ? Retrieve master MicroCode list from IBM
- ? Display last MicroCode list retrieved
- ? Distribute MicroCode

You must have Inventory Scout (invscout) installed. For invscout installation and running, refer to the invscout documentation available on the AIX installation packages.

Available Buttons for ManualMicroCode template:

Buttons	Description
Open	Click **Open** to display information about the monitored machine. The information provided shows Name, IP address, processor id and so on.
Get current installed inventory	The Get current installed inventory button gets the resulting list of microcode levels of the selected monitored machine(s). Service Agent can utilize this information when retrieving a MicroCode list from IBM.
Retrieve MicroCode list from IBM	This function requires a machine or monitored node(s) be selected prior to selection and a current Microcode list for the selected machine(s) be available. When the current MicroCode list is available (by executing "Get Current Installed Inventory") this function will connect into IBM and send in the inventory list. It will then retrieve the list of the latest available MicroCode for the systems selected. A selection Window will be display where the user can select the Microcode Packages he wishes to download from IBM. The downloaded Microcode will then optionally be pushed out to the selected machine. User should follow the installation procedures specified in the individual Microcode readme files. When the retrieved Microcode List is displayed the screen consists of a series of columns depicting: 　　**Select** - Toggle this field to select the Microcode for download. 　　**Node** - Indicates which selected machine the Microcode applies to. 　　**Device/System** - Displays the System the code is form 　　**Package** - Indicates the package name 　　**Readme** - Indicates the name of the Readme file. 　　**Latest Avail** - Indicates the name of the Microcode File 　　**Release Date** - Date the Microcode was released 　　**Need UpDate** - Indicates, based upon the current revision level file received, the selected machine should update 　　**Impact** - Indicates impact of Microcode 　　**Severity** - Indicates severity of Micorcode At the bottom of the screen there are selection buttons that act on your choices: **MicroCode and Readme button:** This button is a drop down button that defaults to MicroCode and Readme. This option downloads both the MicroCode and associated Readme files of the selected packages when the Download button is pressed. Other options are download Readme or MicroCode only. ***Currently, only readme files are enabled to download to an hmc.**

	Destination-Gateway button: This button is a drop down button that defaults to the Destination-Gateway which specifies the MicroCode to be downloaded to the Gateway System. The files will be put to the /var/svcagent/ibmucode directory on the Gateway. Other options are "Destination-Client" which attempts to put the microcode files on the client machine in the /var/svcagent/ibmucode directory as well. **Download button:** Starts the downloading process for the monitored machines selected. **Cancel button:** Exits the Window and takes the user back to the previous screen.
Retrieve master MicroCode list from IBM	This function connects to IBM and retrieves a master list of available MicroCode for all AIX machine product types. A selection Window is displayed where the user can select which Microcode Packages to download from IBM. The downloaded Microcode is then, optionally, distributed to the selected monitored machine. Follow the installation procedures specified in the individual Microcode readme files When the retrieved Master Microcode List is displayed, the screen displays a series of expandable folders grouped according to the Microcode type available. Expanding these folder shows the package names available for download. Expanding the package names shows the list of files available for download. At the top of the Window is a License Button. Clicking on this displays the License Agreement for downloading the Code. You should Read and Understand the License Agreement before downloading MicroCode. By highlighting a package name and pressing the Download button at the bottom of the window, all files associated with the package are downloaded to the Gateway system and put into the /var/svcagent/ibmucode directory. Highlighting an individual file or files and pressing the Download button at the bottom of the window, downloads the selected file to the /var/svcagent/ibmucode directory on the Gateway.
Display last MicroCode list retrieved	This function displays the last MicroCode list retrieved from IBM. This way the user will not have to dial out overtime he wishes to view the list. In order get an updated

	list one of the retrieve functions must be utilized. MicroCode download capabilities are also available with this option.
Distribute MicroCode	This function allows you to optionally distribute previously downloaded microcode to the selected monitored machine(s). Follow the installation procedures specified in the individual Microcode readme files.

PMR template

The Manual PMR allows the creation of a PMR for the selected machine and sends it to the IBM SAS. Initial selection of controlling HMC machine where PMR will be posted must be made and the Generate button will then be activated. This will bring up a selection window listing all of the machines supported on the selected HMC for final selection of PMR information. Selecting the machine and pushing OK will post the final creation window with pre-filled information from selected host. Although any of the fields may be changed it is suggested that only Error Number, Description, and Error Details be updated.

Only Hardware PMRs may be created currently. The Software selection is for future requirements.

Pressing the Generate push button once fields are filled in will give you a choice to dial immediately or a delayed request to IBM SAS. While the Cancel push button will return to main Manual PMR window with no action taken.

VPD template

The VPD template gathers the latest Vital Product Data (VPD) from the selected machine and sends it to the IBM SAS.

In those instances where the most current copy of VPD is needed by IBM support for problem analysis, this selection bypasses the VPD timer configuration. You have the option to wait for the next time Service Agent calls SAS, or you can make a connection and immediately send the VPD.

For information on configuring the VPD template, see *How to send VPD* data in Chapter 5.

Save VPD data to file

Saving VPD data to a local file is possible using the *Save VPD* option under the Manual Tools folder.

Select the machine for which the VPD data needs to be saved and click **Save VPD Data to File**. A file save dialog box pops up. The VPD data can be saved in two formats.

1. Text Format - Choose the *Files of Type* as text files (*.txt) and

choose the file name and click on **Save**.

2. ZIP Format - Choose the *Files of Type* as zip files (*.zip) and choose the file name and click on **Save**. The file will be in zip format with a .zip extension. Use *unzip -j* to unzip the file.

If the destination for the file is a diskette, the program may fail if the diskette is full and does not prompt for the next diskette to be inserted. Hence the save process stops in the middle.

Collect VPD

This option can be used to manually collect VPD from each of the client HMCs. SA on each of the HMC client will try to pull VPD from the monitored systems and send it to the gateway. If it fails during this process, an internal error will be created and email notifications may be send if an email alert is set to notify the users.
After collecting the VPD, check the CEC folder under each of the HMC to verify what has been collected.

Performance Data

Performance Data template gathers the latest PM data using the selected HMC system from its monitored systems and sends it to the IBM SAS.

Collect PM

This option will collect the PM Data from the monitored systems, using the selected hmc system. There might be multiple LPARs being monitored by a single hmc.It is done in two phases. First, the data will be collected from the aix partitions and then it will be moved to the gateway system, if the hmc is a client to another gateway hmc.

Send PM

This option will send the collected PM data to IBM manually.
Use both the Collect and Send options to manually resend the PM data to IBM.

Test Tools folder

TestEmail

The Test E-mail template allows you to verify the proper operation of the E-mail Alert templates that have been added. This selection sends a test E-mail notification to all E-mail Alert templates that have

the Test E-mail option turned on or set to TRUE. If a E-mail address should not get *Test Notifications* this option should be switched to FALSE.

See section on "Adding E-mail Alert" templates for details. If an E-mail address fails to receive a test notification, check to make sure the E-mail alert and the test E-mail check box are set to TRUE. If they are, then examine your local E-mail system configuration and set up to ensure it is working property. Service Agent sends E-mail notifications using the simple AIX *sendmail* command as a typical client. All other aspects of the local mail system are under control and responsibility of the user or local administrator

TestPMR

The TestPMR template sends a test problem management report to the IBM SAS. Upon receiving this report contact is made back to the customer indicating proper reception of the test PMR. This is used to verify the machine can properly open a PMR into the IBM system. If contact with IBM support is not made within a reasonable time after the PMR has been successfully opened, contact IBM support or your normal channel of access to verify it's arrival. Be ready to supply the PMR#, machine type, and serial number of the machine it was opened against.

Appendix B. Accessing the SA interface using a PC

You can access the Service Agent interface using a PC with Microsoft Windows and Java environment.

Create the PC interface by completing the following steps:

__ 1. On the HMC Gateway server, run the file /usr/svcagent/bin/installnt. Running *installnt* creates a tar file called *instui.tar* located in the /tmp directory.

__ 2. Transfer the *instui.tar* file to the PC from which you want to run the Service Agent interface.

__ 3. Unzip instui.tar.
The unziped file contains a working directory called *svcagentui*. Additionally, /var/svcagent and /usr/svcagent are built

__ 4. Locate the following files contained in svcagentui.

   ? hmcstartadvanced_java.bat - starts the Service Agent Advanced Configuration interface
   ? hmcstartadvanaced_jre.bat - starts the Service Agent Advanced Configuration interface

__ 5. Depending on your PC environment you will have to run one of the above files.

Troubleshooting

UI does not appear
If the UI does not connect to the Gateway, check the properties.hsc file to see the gateway name is fully qualified and can be reached from the PC. You can edit the properties.hsc file located in the *svcagentui* directory to put the fully qualified hostname of the gateway.

Appendix C. Service Agent Modem Setup

A TTY device must be available and configured on the gateway system. A modem is required. The modem is used to call the IBM Service Agent Server (SAS). For security, only outbound calls are required by Service Agent so the auto answer capability of the modem should be disabled. An asynchronous modem with a minimum communications speed of 9600 baud and error correction (in the United States) is required. Please refer to local procedures in your country to see what the modem requirements are for Service Agent.

If you use any of these modems, complete the instructions below prior to using Service Agent.

Configuring the 7852-400 Modem

The 7852 Model 400 is one of the modems of choice for Service Agent. From the factory, there are DIP switches on the side of the modem that need to be set to make asynchronous mode the default mode. Switch 12 needs to be set to the off (down) position for asynchronous mode. Switch 5 needs to be set to the off (down) position to disable auto-answer to meet the security requirement that modem will not answer. See the diagram below for proper settings of switches if necessary.

To setup and initialize the 7852-400 for operation:

__ 1. Set switches 5 and 12 to the down (off) position.

__ 2. Connect the RS232 cable to the modem and to a serial port.

__ 3. Connect the telephone cable (sent with the modem) to the modem connector labeled LINE (middle connector), and to the telephone wall jack.

__ 4. Connect the modem power cable to the modem and the transformer to the building power.

__ 5. Power-on the modem (switch in rear).

```
Up      + +        + +      +          +  +  +  +
Down        - - -        - -       - -
Switch  1 2  3 4 5   6 7  8 9 10  11 12  13 14 15 16
```

7852-400 Service Agent DIP Switch Settings

Configuring the 7857-017 or 7858-336 Modem

The 7857 is another one of the modems of choice for Service Agent. The 7858-336 is the replacement modem for the 7857. These procedures are here to aid in the proper configuration of the 7857-017 or 7858-336, or to set a known configuration state.

To setup and initialize the 7857-017 or 7858-336 for operation:

__ 1. Connect the RS232 cable to the modem and to a serial port.

__ 2. Connect the telephone cable (sent with the modem) to the modem connector labeled
     PSTN, and to the telephone wall jack.

__ 3. Connect the modem power cable to building power.

__ 4. Power-on the modem.

__ 5. Wait for the main display panel.

Use the following procedure to place the modem in a known configuration.

After the modem is powered on and local tests have completed, there should be two lines of configuration information displayed on the modem LCD screen.

__ 1. Press the down arrow key 12 times until the CONFIGURATIONS message is displayed.
    ✍   CONFIGURATIONS D12
              Press ✍
__ 2. Press the right arrow key until the Select Factory message is displayed.
    ✍   CONFIGURATIONS D12
              Select Factory_
__ 3. Press the Enter key to select the Factory configuration option.
     Press the up arrow key until 0 is displayed.
    ✍   CONFIGURATIONS D12
              Select Factory 0
__ 4. Press the Enter key to load the predefined factory configuration 0.
              IBM 7857 AT CMD aa ✍
              td_ rd_ dsr_ ec ✍ ll_
__ 5. Press the down arrow key 7 times until the S-REGISTER message is displayed.
    ✍   S-REGISTER   D7
              Press ✍
__ 6. Press the right arrow key until the message Ring to answ. on is displayed.
    ✍✍   S-REGISTER   D7

                 Ring to answ. On=2_

__ 7. Press the Enter key to select Ring to answ. on.

   ✍   S-REGISTER   D7

        Ring to answ. On=_

__ 8. Press the up arrow key until 0 is displayed.

     ✍✍   S-REGISTER   D7

           Ring to answ. On=0

__ 9. Press the Enter key to set Auto Answer to 0.

   ✍   S-REGISTER   D7

        Press ✍

__ 10. Press the down arrow key 5 times until the CONFIGURATIONS message is displayed.

     ✍   CONFIGURATIONS D12

          Press ✍

__ 11. Press the right arrow key 3 times until the Store User Conf. message is displayed.

     ✍   CONFIGURATIONS D12

         Store User Conf._

__ 12. Press the Enter key to select the Store User Configuration option.
   Press the up arrow key until 0 is displayed

   ✍   CONFIGURATIONS D12

      Store User Conf. 0

__ 13. Press the Enter key to select location 0.

__ 14. Press the Enter key to save current configuration into User 0 .

      CONFIGURATIONS D12

       Press ✍

__ 15. Press the Enter key to return to main display panel.

      IBM 7857 AT CMD aa_

      td_ rd_ dsr_ ec ✍ ll_   ✍ = Shows LCD as on.

The above setup places the 7857 or 7858 modem into the proper configuration for use with the Dialer that is used for Service Agent pSeries or RS/6000.

Notes:
The modem initialization strings provided are on an AS IS basis. Although they
have been tested in a typical AIX environment they may have to be modified depending on
the actual setup and configuration of your environment.

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