



System i
Service and support
Customer service and support

Version 5 Release 4





System i

Service and support

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Note

Before using this information and the product it supports, read the information in "Notices," on page 25.

Sixth Edition (February 2006)

This edition applies to version 5, release 4, modification 0 of IBM i5/OS (product number 5722-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CISC models.

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Customer service and support

Various service options are available on your System i™ platform, such as problem reporting and remote support.

If you are using a Hardware Management Console (HMC), you need to follow certain steps on your HMC to set up a connection to IBM. See [Setting up your service environment](#)  in the IBM® Systems Hardware Information Center for more information.

Note: By using the code examples, you agree to the terms of the “Code license and disclaimer information” on page 23.

What’s new for V5R4

This topic highlights changes to the Customer service and support topic collection for IBM i5/OS® V5R4.



- | The following functions were added to the Electronic Service Agent™ function in IBM i5/OS V5R4:
 - | • Problem reporting retry.
 - | • Display problem reporting information and status.
 - | • Software problem reporting.

To find other information about what’s new or changed this release, see [Memo to users](#).

Printable PDFs

Use this to view and print a PDF of this information.

To view or download the PDF version of these topics, select the following topics:


- [Customer service and support](#) (about 460 KB). 
- [Universal Connection](#) (about 930 KB). 

Saving PDF files

To save a PDF on your workstation for viewing or printing:

1. Right-click the PDF in your browser (right-click the link above).
- | 2. Click the option that saves the PDF locally.
3. Navigate to the directory in which you want to save the PDF.
4. Click **Save**.

Downloading Adobe Reader

- | You need Adobe Reader installed on your system to view or print these PDFs. You can download a free
- | copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html) .

Service and support overview

Service and support options can be used to ensure that your system and applications are ready when you need them.

The following figure illustrates the service and support that you can use when a problem or failure occurs.



Figure 1. Service and support overview

Connectivity

To make the service environment available, you must have your system connected to IBM first.

What connection method you choose depends on several factors:

- Your hardware, software, and network configuration. This includes things like whether you have a direct connection to the Internet, whether you use a modem, and whether you connect through a console, such as a Hardware Management Console.
- The level of security your company wants to maintain.

You can use the Universal Connection wizard to set up a connection to IBM. You can also configure a connection to IBM by using the Systems Network Architecture (SNA) or by using the Create Service Configuration (CRTSRVCFG) command.

Related concepts

“Setting up a connection to IBM” on page 16

If you are using a Hardware Management Console (HMC), there are steps you need to do on your HMC to set up a connection to IBM.

Inventory

You can use iSeries™ Navigator on your system to collect and manage various inventories on a regular basis. You can also store the data on a designated central system.

You can collect an inventory for the following information:

- Users and groups

- Fixes
- System values
- Hardware resources or software resources
- Service attributes
- Contact information
- Network attributes

You can install other applications that allow you to collect lists of other types of resources.

You can share this information with IBM through the Electronic Service Agent function. This enables IBM to help you identify and troubleshoot problems more quickly. In some cases, you can avoid a problem by sharing your inventory. For example, if you share your software inventory with IBM, also you have selected the correct connectivity option. When a fix becomes available for a software product that you have installed, you can receive the fix automatically to avoid the problem before you experience it.

Refer to the Electronic Service Agent information for instructions about sharing inventory with IBM. For assistance about using the GO SERVICE menu, refer to the information about connecting to IBM using CL commands.

Related concepts

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

“Connecting to IBM using CL commands” on page 19

You can use the CL commands to create your connection to IBM.

Related information

Working with inventory

Problem reporting

Your system can help isolate the cause of system-detected hardware problems and some software problems.

Any one of the following actions might be taken when a problem occurs:

- A fix can be sent to you, if the fix has already been identified.
- A hardware part can be sent to you, if appropriate.
- IBM support can call you to gather more information and help you perform further problem analysis.
- IBM can send the service representative to you.

Fixes

Fixes can help you correct problems and maintain the system.

Periodically, problems might be discovered on your software or firmware. IBM issues a fix, which is also known as a program temporary fix (PTF), to correct the problem. Fixes play an important part in your system maintenance strategy. Fixes give you a chance to reduce system downtime, add functionality, or provide optimal availability. It is important that you develop a fix management strategy to keep track of fixes that are available for the software you have. Ensure that you can keep these programs running smoothly.

For detailed information about fixes and how to develop a fix management strategy, see *Maintain and manage i5/OS and related software*.

Remote support

In some cases, an IBM service representative can connect directly to your system to determine the sources of a problem.

Virtual private network

Virtual private network (VPN) uses several important TCP/IP protocols to protect data traffic. If electronic customer support has been configured to use one of the Universal Connection VPN connectivity options, you can use the Start Remote Support (STRRMTSPT) command with the *VPN option.

Point-to-Point Protocol

Point-to-Point Protocol (PPP) is an Internet standard for transmitting data over serial lines. It is the most widely used connection protocol among Internet service providers (ISPs). PPP allows individual computers to access networks, which in turn provides access to the Internet. The System i platform includes TCP/IP PPP support as part of its wide area network (WAN) connectivity. The *PPP option of the Start Remote Support (STRRMTSPT) command has additional details.

Systems Network Architecture

In IBM networks, Systems Network Architecture (SNA) is the description of the layered logical structure, formats, protocols, and operational sequences for transmitting information units through networks. SNA also controls the configuration and operation of networks. Advanced Program-to-Program Communication (APPC), Advanced Peer-to-Peer Networking[®] (APPN), and High-Performance Routing (HPR) are some examples of the protocols that are included within SNA. They can be used to connect the System i platform with other IBM Systems, or non-IBM systems, to connect remote controllers, and to maintain a high level of security on your system. The *VRT option of the Start Remote Support (STRRMTSPT) command has more details.

Remote service support facility

The remote service support facility enables IBM support to have diagnostic access to your system.

If a support person determines that this method is the best way to diagnose and fix your problem, you will be given detailed information about how to enable the connection.

Related information

Virtual Private Networking (VPN)

Start Remote Support (STRRMTSPT)

Universal Connection

Remote Access Services: PPP connections

APPC, APPN, and HPR

Electronic customer support

The integrated Electronic Customer Support functions assist in the service and support of your system by helping you isolate the cause of system-detected hardware problems and some software problems.

The communications hardware and software that are needed to access remote IBM service and support functions are part of the operating system.

The following figure shows how electronic customer support is organized to report problems and to receive responses.

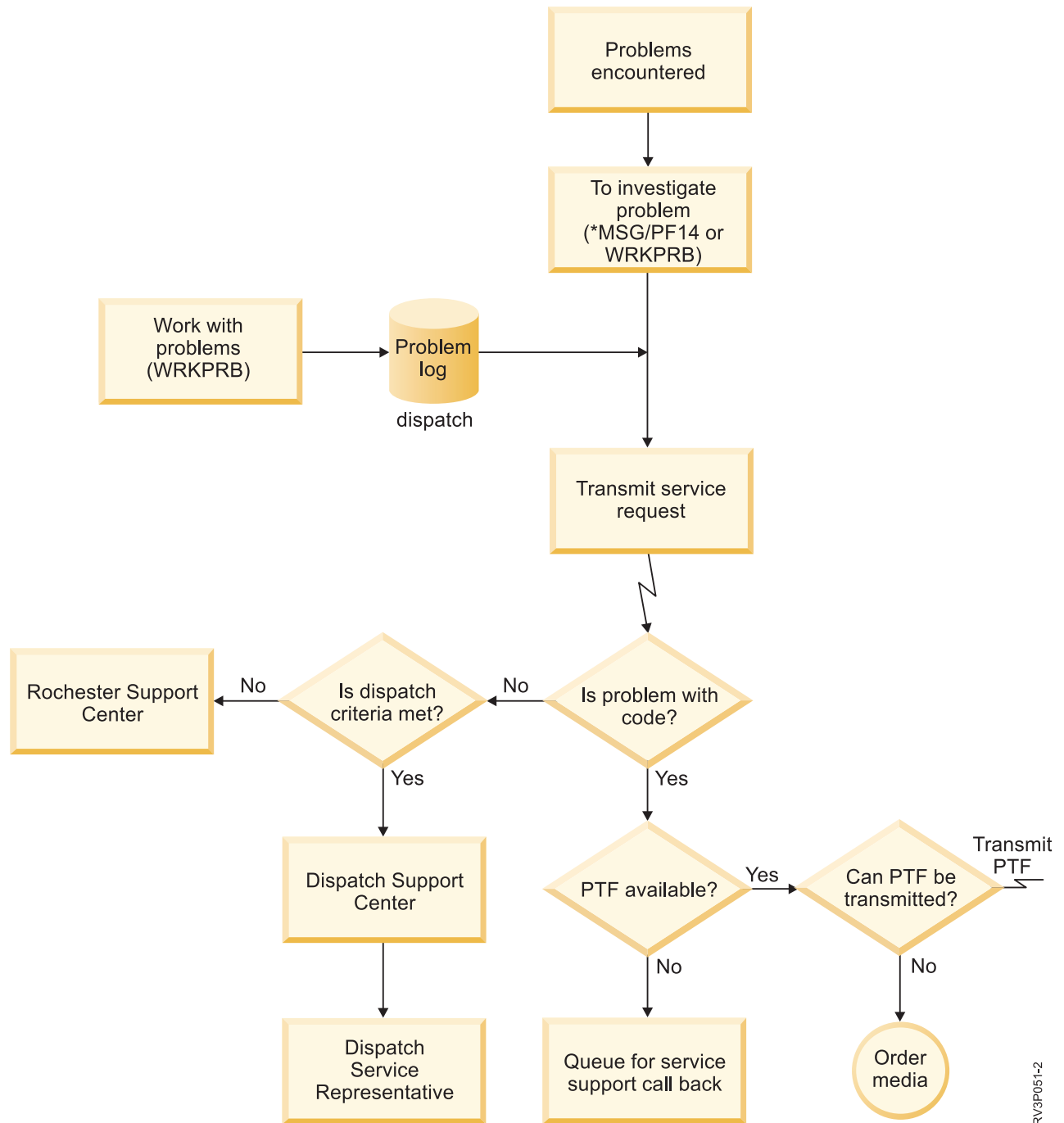


Figure 2. Reporting problems and receiving responses

Electronic customer support: Command authority

To use electronic customer support, you must have certain command authorities.

Your security officer must give you authority to the following commands:

- Send PTF Order (SNDPTFORD).
- Send Service Request (SND SRV RQS).
- Work with Contact Information (WRK CNT INF).

- Work with Order Requests (WRKORDRQS).
- Request Order Assistance (RQSORDAST).

Note: Refer to the Control language topic for details on these CL commands.

Adding electronic customer support to your system

To access electronic customer support from your system, you can set up a connection to IBM by using the Universal Connection or the traditional connection through Systems Network Architecture (SNA).

Electronic customer support is available to help keep your system operating efficiently. Sometimes, your system might experience problems that need attention from IBM service representatives. If there is a hardware or software problem, IBM service representatives can access your system directly to rapidly diagnose and solve the problem. Electronic customer support allows you to perform the following tasks:

- Order and install fixes.
- Access local service and IBM product information.
- Access technology forums.
- Access problem analysis reporting and management.

You can set up the connection to IBM using the following methods:

Universal Connection

A TCP/IP-based program that allows you to choose how you connect to IBM. For assistance on how to do this, refer to the information about configuring a Universal Connection.

Traditional connection

A connection that is available if you use SNA and have a modem capable of Synchronous Data Link Control (SDLC). For assistance on how to do this, refer to the information about configuring an SNA connection.

Related concepts

“Configuring an SNA connection” on page 17

If you intend to access electronic customer support using Systems Network Architecture (SNA) and a modem that is capable of Synchronous Data Link Control (SDLC), complete these tasks to establish your connection to IBM’s support services.

Related information

Use software fixes



IBM Electronic Service Agent for iSeries

Configure Universal Connection


Electronic Service Agent

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.


Electronic Service Agent also provides an automatic software problem-reporting function. Supplemental system service information is sent to IBM and made available to IBM support centers to figure out problem resolution. The same service information is available to be viewed with prior registration of an IBM ID.

Electronic Service Agent is integrated into the operating system.

For more information about creating an IBM ID, registering your system, and viewing the service information you share with IBM, follow these steps:

1. Go to the IBM Electronic Services Web site .
2. Choose from the following options:
 - a. To request an IBM ID, select **Register**.
 - b. To register your system, or to view the service information you share with IBM, select **My Systems**.

Electronic Service Agent must be activated on each system and logical partition (LPAR).

If you have other System i platforms and i5/OS LPARs that run other releases of the operating system in your network, Electronic Service Agent is available for installation on all releases of the operating system. For information about Electronic Service Agent for previous releases, see the IBM Electronic Service Agent for iSeries Web site .

| Electronic Service Agent has the following newly added functions in IBM i5/OS V5R4:

| **Problem reporting retry**

Retry capability for problem reporting is now controlled using the Electronic Service Agent attributes. The retry attributes are used for service requests that are placed automatically by Service Agent. The retry attributes are as follows:

Retry This attribute determines whether and how service requests are to be retried if an attempt fails. The service requests are placed automatically by Service Agent.

Frequency

This attribute specifies the frequency at which service requests are retried.

Number of times to retry

This attribute designates the number of times to try the service requests again.

Notifying users

This attribute determines whether Service Agent users are to receive a message when a retry occurs.

You can set the retry attributes using **GO SERVICE, Option 1, Change Service Agent attributes**.

| **Displaying problem reporting information and status**

To view the status of Service Agent's problem-reporting activity, use **GO SERVICE, Option 4, Display problem reporting information**.

| **Software problem reporting**

The Service Agent reports software problems that are detected by the i5/OS Service Monitor. This function is used to monitor the system for specific conditions. In addition to reporting the problems, the Electronic Service Agent automatically sends the primary problem documentation to IBM. Secondary documentation can be manually sent to IBM using the SERVICE menu command.

Related concepts

"Inventory" on page 2

You can use iSeries Navigator on your system to collect and manage various inventories on a regular basis. You can also store the data on a designated central system.

"Connecting to IBM using CL commands" on page 19

You can use the CL commands to create your connection to IBM.

Related tasks

"Configuring Extreme Support" on page 17

To use Electronic Service Agent for functions in iSeries Navigator, you must configure Extreme Support by completing these steps.

Related reference

“Extreme Support” on page 15

System i Extreme Support is part of the IBM Technical Support Advantage, which is IBM’s comprehensive technical service and support for IBM Systems.

“Sending service requests” on page 20

For hardware failures that do not disable system operation, electronic customer support provides a fast, electronic method for requesting the service from a hardware service provider with replacement parts. Using this method, you can report failures that occur on your System i platform or on specified input/output devices.

“Configuring Electronic Service Agent” on page 16

Electronic Service Agent is integrated into the operating system. However, you need to complete some configurations before you use Electronic Service Agent.

Related information


Working with inventory

Configure Universal Connection

Pre-activation checklist

Before you activate the Electronic Service Agent, go through this checklist and verify that you have completed all the preparation tasks.


Activation will be easier if you know the following information before starting activation:

1. Ensure that you have the following required products installed. Use the Display Software Resources (DSPSFWRSC) command to confirm this.
 - 5722-SS1 - Option 34 (i5/OS - Digital Certificate Manager)
 - 5722-JC1 (IBM Toolbox Kit for Java™)
2. Ensure that the latest recommended program temporary fixes (PTFs) for Electronic Service Agent are installed.
 - a. Go to the Recommended fixes Web site  .
 - b. Under the Recommended for specific products or functions heading, select **V5R4** as the release, select **Electronic Service Agent** as the topic, and click **Go**.
3. Decide on the best method of connectivity. Service and support recommends the following methods for your systems or logical partitions (listed in order):
 - a. Direct Internet from each logical partition or system: This method allows larger fix files to pass through the connection to the system. Each logical partition can receive the fixes it needs. It is also faster than modem dial-up connection.
 - b. Shared direct Internet: This method allows larger fix files to pass through the connection to the system. It allows connectivity to be concentrated through one system or logical partition simplifying firewall rules. It is also faster than modem dial-up connection.
 - c. Dial-up from the system, or shared dial-up (if you have logical partitions): If you do not have direct or shared direct Internet, you might choose to use shared dial-up connection. It is slower and restricts the file size that can pass through the connection.
4. Ensure that you have the required setup for the type of connection you are using:
 - **If you are using a VPN connection:**
 - Make sure of VPN capability.
 - Ensure that you have met the following prerequisites for enabling service configurations over a direct Internet connection:
 - Ensure that the System i model has a globally routable IP address, or the system must be behind a network address translation (NAT) firewall with a globally routable address.
 - Ensure that TCP/IP is active. You can use the Start TCP/IP (STRTCP) command to start TCP/IP.

- Ensure that your default TCP/IP route or a host route directs traffic out the appropriate TCP/IP interface to the Internet. So that the virtual private connection can be established to IBM.

Note: For more information about different types of VPN connections, see Scenarios: Universal Connection.

- **If you are using a dial-up connection:**

- Refer to “Modem and resource requirements” on page 12 to find out the requirements for Electronic Service Agent connections to IBM.
- Verify that the connection number for AT&T Global Network Services is current. For the most up-to-date connection numbers, see the AT&T Business Internet Services Web site , and select **Help Center > Access Numbers**.
- Select modem resource for dial-up connections.
- Select dialing prefix for dial-up connections.

Activating Electronic Service Agent

Electronic Service Agent must be activated on each system and logical partition. Only a system administrator should perform the activation.

If you are upgrading from previous releases of the operating system, the Electronic Service Agent migrates Electronic Service Agent settings from the previous release.

| As part of Electronic Service Agent activation, if needed, a service configuration for electronic customer support, Electronic Service Agent, and Information Center update is created by the system automatically.

Activation can be accomplished by using either the character-based interface, or by using the iSeries Navigator.


- The character-based interface activation is designed for:
 - A single system or logical partition.
 - Customers who do not have an attached PC that is running iSeries Navigator.
- iSeries Navigator activation is designed for:
 - Customers who want to collect and transmit service information for groups of systems or logical partitions.
 - Customers who want to use Management Central through iSeries Navigator.

Note: Activation in a batch environment is also available using the CL commands.

To activate Electronic Service Agent using the CL commands, follow these steps:

Prerequisite: Ensure that you have met all the requirements in the “Pre-activation checklist” on page 8.

1. Use a 5250 emulator, sign on to the system or logical partition with a user profile (other than QSECOFR) that has an *SECOFR user class and its system-defined special authorities.
2. Enter the DSPSYSVAL QRETSVRSEC command.
 - a. Confirm that this system value is set to 1.
 - b. Change the system value to 1, if needed, using the CHGSYSVAL QRETSVRSEC command.
3. Confirm that the following products are installed on the system by using the DSPSPFWRSC command:
 - 5722-SS1 Option 34 (i5/OS - Digital Certificate Manager)
 - 5722-JC1 (IBM Toolbox Kit for Java)
4. Ensure that the latest recommended PTFs are installed on the i5/OS operating system.

The latest PTFs for Electronic Service Agent can be found on the Recommended fixes  Web site. Select **V5R4** for the release of the operating system, select **Electronic Service Agent** as the topic, and click **Go**.

5. From a command line, enter `GO SERVICE`.
6. If the Change Contact Information (`CHGCNTINF`) command is prompted, add or update the contact information for this system. Press Enter.
7. If the Create Service Configuration (`CRTSRVCFG`) command is prompted, notice that `*SELECT` is the value for several parameters. Press Enter. An additional panel is displayed for each parameter, for which `*SELECT` was specified. On each of these additional panels, make a selection and press Enter. For details about the CL commands, see the Control language topic.

The Service Agent Main Menu is displayed. Activation is complete.

To verify the activation, perform these steps:

1. Enter `GO SERVICE`.
2. Choose **Work with jobs** to show the active status of the Service Agent jobs.
3. Type `WRKJOBSCDE QS9SACOL` to show the job schedule entry that initiates the collection and transmission of Electronic Service Agent service information.

To manage the connection profiles created during activation, perform these steps:

1. Enter `GO SERVICE`.
2. Select the **Service Configuration** menu.

Using Electronic Service Agent

You can perform various Electronic Service Agent operations and expected Electronic Service Agent activities on your system.

To change the service configurations and to access Electronic Service Agent functions, on a command line, enter `GO SERVICE`. The Electronic Service Agent main menu is displayed.

QS9MAIN

Electronic Service Agent

System: S10XXXXX

Select one of the following:

1. Change Service Agent attributes
2. Run service information collection
3. Authorize users to access service information

Information

4. Display problem reporting information
5. Display service information collection
6. Display service registration information
7. Reports

Jobs

8. End jobs
9. Start jobs
10. Work with jobs


Problem determination

11. Change Service Agent job logging
12. Change product activity log analysis
13. Work with Service Agent spooled files
14. Display audit log
15. Send test problem
16. Work with threshold table
17. Verify Service Agent connection
18. Service Configuration menu
19. Change send option

Related

70. Related Service Agent commands

Electronic Service Agent attributes control many aspects of how Electronic Service Agent operates, including the list of users to receive Electronic Service Agent messages and the time of day that Electronic Service Agent collects and transmits information to IBM.

- To change attributes, select 1. Change Service Agent attributes.
- To manage the connection profiles created during activation, select 18. Service Configuration menu. For example, changes might be needed for the connection number.
- For more information about the Electronic Service Agent function and the IBM System Manager for i5/OS operating system licensed program, refer to the IBM Electronic Service Agent for iSeries  Web site.

Troubleshooting Electronic Service Agent

When an error occurs, the system attempts to electronically report a problem or send service information to IBM.


Electronic Service Agent is dependent on many functions of the i5/OS operating system to be working properly, including Management Central; Connection Manager, which manages the TCP/IP connection profiles; Electronic Customer Support; and the problem log. Normal system problem determination is recommended for any error that is received.

To verify that service information was sent to IBM, use the Electronic Service Agent menu option to display service information collection. If service information is currently (at this moment) being collected or transmitted, the Last Run and Last Send information might not show this activity. These activities are shown when the tasks have been completed.

The task of collecting service information uses Management Central, and the task of sending service information uses Universal Connection. These tasks take time to run. A summary of the collection and transmission steps is outlined here.

- A collection task in Management Central determines if service information needs to be collected and collects new service information as needed.
- After the collection is complete, a job is submitted to use Universal Connection to perform the following tasks:
 - Start the connection profile.
 - Vary on its associated line, controller, and device descriptions, if applicable.
 - Connect to IBM.
 - Send the service information.
- Factors that affect the length of the time needed to collect and send information are the size of the system, processing load, and the speed of the connection.

Related information

 [Setting up IBM i5/OS to connect to service and support without an HMC](#)

Modem and resource requirements

The Electronic Service Agent (ESC) and electronic customer support service configurations created during activation are *PTP (Point-to-Point) TCP/IP Universal Connection based. The modem and resource requirements must be met to connect to IBM.

Modem requirements

The point-to-point functions that can be set up depend on your modem and resource. Refer to Table 1 to determine the functions. If you want to use this modem for problem-reporting and service-information transmission functions, electronic customer support must also be configured to use TCP/IP, not Synchronous Data Link Control (SDLC) or Systems Network Architecture (SNA) communications.

Modem in asynchronous mode

- | If the modem is configured to operate in asynchronous mode, both problem-reporting and service-information collection and transmission can be configured (Example modems are 2771 and 9771 internal modems, IBM 7855, IBM 7857, or IBM 7858 and dual model IBM 7852–400).
- | **Note:** If you use a non-IBM modem, any asynchronous modem that supports the RS-232 (EIA 232) serial interface and the V.34/V.42 protocol (V.90 is optional) can be used for this function.

Typically, the default modem setting Data Set Ready (DSR) must be overridden. For a System i platform to detect a hang-up disconnection (modem has hung up), DSR must be set to follow Carrier Detect (CD). Refer to the modem manual for more information.

Communications I/O adapter requirements

AT&T dial-up and virtual private network (VPN) connections are supported.

Determine if you have one of the following compatible I/O adapters.

Table 1. Adapters and descriptions

Adapter	Description
2699	Two-line WAN IOA. This IOA requires either a 2629 LAN/WAN/Workstation IOP or MFIOP.
2720	PCI WAN/Twinaxial IOA.
2721	PCI Two-line WAN IOA.
2742	Two-line communications IOA.

Table 1. Adapters and descriptions (continued)

Adapter	Description
2745	PCI Two-line WAN IOA (replaces IOA 2721).
2771	Two-port WAN IOA, with a V.90 integrated modem on port 1 and a standard communications interface on port 2. To use port 2 of the 2771 adapter, an external modem with the appropriate cable is required.
2772	Two port V.90 integrated modem WAN IOA.
2793	Two-port WAN IOA, with a V.90 integrated modem on port 1 and a standard communications interface on port 2. To use port 2 of the 2771 adapter, an external modem with the appropriate cable is required.
2805	Four port V.92 integrated modem WAN IOA.

Batch activation

Electronic Service Agent can be activated in a batch environment. This approach is helpful for customers with many remote systems who want to send programs from a central site for remote activation.

To use the batch environment method, the Electronic Service Agent product must be installed and the Electronic Service Agent Simplified Activation PTFs need to be available on each system and be installed or be available for installation.

For releases before V5R4:


- | • Before using a program, the International License Agreement for Services Programs must be accepted.
- | To accept the license agreement, perform one of the following tasks:
- | – On a command line, enter G0 SERVICE. Select **Display Service Agent license agreement**. Read the agreement and press F6 (Accept the terms of this agreement) to accept.
- | – On a command line, enter QSVCDRCR/ACPTSALIC. Read the agreement and press F6 to accept.
- | • Electronic Service Agent commands are not the same as those for V5R4. See the IBM Electronic Service Agent for iSeries  Web site for information about batch activation.

Table 2. Commands and descriptions

Command	Command description
CHGCNTINF	Changes the service contact information. This information is used by the Work with Contact Information (WRKCNTINF) command as the local service information.
CRTSRVCFG	Creates the service configurations used to electronically report problems and service information to IBM.
CHGSRVCFG	Changes the service configurations used to electronically report problems and service information to IBM.
DLTSRVCFG	Deletes the service configurations used to electronically report problems and service information to IBM.
VFYSRVCFG	Verifies the service configurations used to electronically report problems and service information to IBM.
CHGSRVAGT	Changes the operation of Electronic Service Agent.
CHGSRVAGT	Changes the settings for Electronic Service Agent.
DSPSRVAGT	Displays several aspects of Electronic Service Agent.
ENDSRVAGT	Ends the Electronic Service Agent subsystem jobs.
RTVSRVAGT	Retrieves the valid days of the week used by the Retrieve Service Agent (RTVSRVAGT) command, the AUTOPTF and AUTOTEST parameters.

Table 2. Commands and descriptions (continued)

Command	Command description
STRSRVAGT	Starts Electronic Service Agent. If the CHGSRVAGT command is used before this command is used, Electronic Service Agent is activated using those settings. If the command was not used, Electronic Service Agent is activated using the defaults.

A sample CL program is provided.

Sample CL Program for batch activation

This sample program refers to the fictitious ABC Company. Any associated references to this fictitious company are for illustration purposes only.

Note: By using the code examples, you agree to the terms of the “Code license and disclaimer information” on page 23.

```

| /*****
| /* ELECTRONIC SERVICE AGENT SAMPLE BATCH ACTIVATION PROGRAM */
| /*****
| /*
| /* THIS CODE IS PROVIDED AS A SAMPLE AND IS NOT INTENDED */
| /* TO BE SUPPORTED BY IBM. THIS IS SUPPLIED ON AN AS-IS */
| /* BASIS AND IT IS THE RESPONSIBILITY OF THE END USER TO ENSURE */
| /* THE ACCURACY OF THE PROGRAM IN THEIR ENVIRONMENT. */
| /* */
| /*****
| /*
| /* See the Electronic Service Agent Information Center topics */
| /* for additional requirements, such as authorities and system */
| /* values. */
| /* */
| /*****
| PGM
| /*****
| /*
| /* The following variables are used to retrieve the possible */
| /* days to be used as input to the CHGSRVAGTA AUTOPTF and AUTOTEST */
| /* parameters. */
| /* */
| /*****
| DCL VAR(&DAY1) TYPE(*CHAR) LEN(4)
| DCL VAR(&DAY2) TYPE(*CHAR) LEN(4)
| DCL VAR(&DAY3) TYPE(*CHAR) LEN(4)
| DCL VAR(&DAY) TYPE(*CHAR) LEN(4)
| DCL VAR(&DAYS) TYPE(*CHAR) LEN(28) +
| VALUE('WED*THU*FRI*SAT*SUN*MON*TUE')
| DCL VAR(&DAYPTR) TYPE(*DEC) LEN(1 0) VALUE(1)
| /*****
| /*
| /* Change the contact information. */
| /* */
| /*****
| QSYS/CHGNTINF CMPNY('ABC Company') CONTACT('System +
| Administrator') TELNBR('123-456-7890') +
| MAILADDR('123 ABC Street' *SAME *SAME +
| ANYTOWN MN US 12345) LNGVER(2924) +
| EMAILADDR(SYSADMIN@ABCCOMPANY.COM) +
| MEDPTF(*AUTOMATIC)
| /*****
| /*
| /* Configure the electronic customer support and Service Agent connections. */
| /* NOTE: THIS SAMPLE ASSUMES A DIRECT CONNECTION FOR THE PRIMARY */

```

```

| /*          AND A MULTIHOP CONNECTION FOR THE BACKUP.          */
| /*                                                         */
| /*****
| QSYS/CRTSRVCFG ROLE(*PRIMARY) CNNTYPE(*DIRECT) +
|           CNTRYID(US) STATE(MN)
| /*                                                         */
| QSYS/CRTSRVCFG ROLE(*BACKUP) CNNTYPE(*MULTIHOP) +
|           RMTSYS('10.11.12.13')
| /*****
| /*
| /* Retrieve the days of the week that can be used for CHGSRVAGTA. */
| /*
| /* Choose the day that best fits the activity for this system.    */
| /* Use the &DAYS variable. The first one is the first choice,    */
| /* second one is the second choice, and so on.                    */
| /*****
| QSYS/RTVSRVAGT DAY1(&DAY1) DAY2(&DAY2) DAY3(&DAY3)
|
| DAYLOOP:
| IF (&DAY1 *EQ (%SUBSTRING(&DAYS &DAYPTR 4))) THEN(DO)
|   CHGVAR VAR(&DAY) VALUE(&DAY1)
| GOTO DAYLOOP
| ENDDO
|
| IF (&DAY2 *EQ (%SUBSTRING(&DAYS &DAYPTR 4))) THEN(DO)
|   CHGVAR VAR(&DAY) VALUE(&DAY2)
| GOTO DAYLOOP
| ENDDO
|
| IF (&DAY3 *EQ (%SUBSTRING(&DAYS &DAYPTR 4))) THEN(DO)
|   CHGVAR VAR(&DAY) VALUE(&DAY)
| GOTO DAYLOOP
| ENDDO
|
| CHGVAR VAR(&DAYPTR) VALUE(&DAYPTR +4)
| GOTO DAYLOOP
|
| ENDDAYLOOP:
| /*****
| /*
| /* Configure Service Agent hardware problem reporting using the
| /* day of the week that was determined above and the desired time.
| /*
| /* -- NOTE: Use this command only if you want to override the
| /* CHGSRVAGTA defaults.
| /*
| /*****
| QSYS/CHGSRVAGTA ENABLE(*YES) AUTORPT(*YES) AUTOPTF(*YES +
|           &DAY *YES) AUTOTEST(&DAY) SRVINP((*ALL))
|
| /*****
| /*
| /* Activate Service Agent. If commands CHGSRVAGTA was used ahead of
| /* this, Service Agent will activate using those settings.
| /* If the command was not used, Service Agent will be activated
| /* using the defaults.
| /*
| /*****
| SKIPIT: QSYS/STRSRVAGT TYPE(*ACTIVATE)
|
| ENDPGM


```

Extreme Support

System i Extreme Support is part of the IBM Technical Support Advantage, which is IBM's comprehensive technical service and support for IBM Systems.

System i Extreme Support includes support built right into the product, iSeries Navigator, and support tools available over the Web. Some Extreme Support tools are Performance Management for System i5™ over TCP/IP, Electronic Service Agent, and inventory consolidation with Management Central.

- | **Note:** Electronic Service Agent can only report problems to IBM successfully if your system is under warranty, or if you have purchased an IBM Maintenance Services Agreement.

For links to the User Guides for specific releases of Electronic Service Agent, go to the IBM Electronic Service Agent for iSeries  Web site.

Related concepts

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

Related tasks

“Configuring Extreme Support” on page 17

To use Electronic Service Agent for functions in iSeries Navigator, you must configure Extreme Support by completing these steps.

Related reference

“Sending service requests” on page 20

For hardware failures that do not disable system operation, electronic customer support provides a fast, electronic method for requesting the service from a hardware service provider with replacement parts. Using this method, you can report failures that occur on your System i platform or on specified input/output devices.

Related information

Configure Universal Connection

Setting up a connection to IBM

If you are using a Hardware Management Console (HMC), there are steps you need to do on your HMC to set up a connection to IBM.

See Setting up your service environment  in the IBM Systems Hardware Information Center for more information.

There are several choices that you can use to set up a connection to IBM.

Related concepts

“Connectivity” on page 2

To make the service environment available, you must have your system connected to IBM first.

Configuring Electronic Service Agent

Electronic Service Agent is integrated into the operating system. However, you need to complete some configurations before you use Electronic Service Agent.

- | During automatic problem reporting, supplemental system service information is sent and made available
- | to IBM support centers to aid in problem resolution.

Related concepts

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

Configuring Extreme Support

To use Electronic Service Agent for functions in iSeries Navigator, you must configure Extreme Support by completing these steps.

1. Verify that you have security officer (*SECOFR) authority with *ALLOBJ, *IOSYSCFG, and *SECADM special authorities in your user profile.
2. In iSeries Navigator, expand **Management Central**.
3. Right-click **Extreme Support** and select **Configuration**. You are shown the Extreme Support wizard.
4. Follow the wizard instructions to set up and configure Extreme Support functions.

Notes:

- a. It is recommended that you manage your scheduled inventory tasks to avoid duplication.
- b. If you did not previously configure Universal Connection, you are given the opportunity to configure that connection now with the Extreme Support wizard.

Related concepts

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

Related reference

“Extreme Support” on page 15

System i Extreme Support is part of the IBM Technical Support Advantage, which is IBM’s comprehensive technical service and support for IBM Systems.

“Sending service requests” on page 20

For hardware failures that do not disable system operation, electronic customer support provides a fast, electronic method for requesting the service from a hardware service provider with replacement parts. Using this method, you can report failures that occur on your System i platform or on specified input/output devices.

Related information

Configure Universal Connection

Configuring an SNA connection

If you intend to access electronic customer support using Systems Network Architecture (SNA) and a modem that is capable of Synchronous Data Link Control (SDLC), complete these tasks to establish your connection to IBM’s support services.

Notes:

1. This type of configuration does not work with Electronic Service Agent.
2. You can configure this type of access as a backup in case the Universal Connection is unable to be established. The Universal Connection will automatically fall back to this configuration if it exists. However, this connection type works only for Point-to-Point Protocol (PPP) and virtual private network (VPN) connection types.

Related reference

“Adding electronic customer support to your system” on page 6

To access electronic customer support from your system, you can set up a connection to IBM by using the Universal Connection or the traditional connection through Systems Network Architecture (SNA).

Related information


Use software fixes

 IBM Electronic Service Agent for iSeries

Configure Universal Connection

Gathering configuration information

Before you start the configuration, complete these steps to gather needed configuration information.

1. Obtain primary and alternative numbers and connection information. If you do not know your service numbers and are not in the United States, refer to the Guide to fixes  Web site for more information.
2. Turn on the modem that is connected to the electronic customer support cable.
3. You might choose to configure your service provider information now. See the information about configuring service provider in the Universal Connection topic.

Related information

Configuring service provider information

Preparing for configuration

Before you start the configuration, complete these steps to prepare for it.

1. On your PC desktop, double-click **Client Access** to open it.
2. Expand **Operations Console**.

Note: If you have not worked with Operations Console, you need to configure a new connection to your system. A wizard takes you through the configuration process. If no wizard appears, select **Connection** on the toolbar and select **New Connection**. If you do not have Client Access Express installed, you can use Telnet or a 5250 emulation session.

3. In the Operations Console window, select *your system*.
4. From the File menu, select **Connection**.
5. If prompted for the device tools user ID and password, enter QSECOFR for both values.
6. Select **Console**. The system sign-on window appears.
7. Enter your QSECOFR user ID and password.
8. Continue with "Configuring telephone information."

Configuring telephone information

Your telephone information depends on whether you are installing the system in the United States or outside of the United States.

If you are installing this system in the United States, the Change Data Area (CHGDTAARA) display might have one of these IBM service support numbers in the **New Value** field.

- East of the Mississippi River: **SST:18002378804**
- West of the Mississippi River: **SST:18005252834**

The SST value is a modem command. If you receive an error after entering these values, delete SST, or add the required prefix (for example, SST9), and try again.

If you are not in the United States, call your IBM service support telephone number.

To configure the primary and alternative telephone information, follow these steps:

1. On the command line of the main menu, enter Call QTIINSTL and press Enter.
2. Press F9 to recall Call QTIINSTL and press Enter.
3. Enter Call QESPHONE and press Enter.
4. Enter the **primary** telephone number in the **New Value** field.
5. Fill in the telephone and connection information and press Enter.

Note:

- Ensure that the telephone number you enter follows this format: '1234567890 '

- Do not add or delete any spaces after the last digit of the telephone number. Adding or deleting characters or spaces causes an error.

The Change Data Area display appears again for you to enter the alternative support number (if it is available in your area). To determine whether you are on the display for the primary support number or the alternative support number (if it is available in your area), check the value of the substring starting position. For the primary support number, the value is 001. For the alternative support number, the value is 051.

6. Type the alternative support telephone number (the support number you did not use as primary) in the **New Value** field and press Enter.
7. Press F3 (Exit) to return to the main menu.

Configuring contact information

To configure the contact information, complete these steps.

1. On the command line of the main menu, enter WRKCNTINF and press Enter.
2. Type 2 (Work with local service information) and press Enter. The Work with Local Service Information window appears.
3. Type 2 (Change service contact information), and press Enter. The Change Service Contact Information window appears.
4. Perform the following steps:
 - a. Type the customer information and page down to the next dialog box.
 - b. Enter the correct information in the **National language version** field. Press F4 for a list of national language versions.
 - c. Enter the correct information in the **Media for mailing fixes** field. Press the Help key for more information about the Media for mailing fixes field.
 - d. Press Enter. The Work with Local Service Information display appears with the following message: Data area QSSF created in library QUSRSYS. If the contact information has been created and you change it, the following message appears: Support contact information updated.
5. To test your connection, see Testing your connection to electronic customer support in the Universal Connection topic.

Connecting to IBM using CL commands

You can use the CL commands to create your connection to IBM.

You can connect to the IBM Service Center by using the GO SERVICE or the Create Service Configuration (CRTSRVCFG) commands. See Control language for details.

Note: You will not be able to configure the Information Center Update application connectivity using these commands.

Related concepts

“Inventory” on page 2

You can use iSeries Navigator on your system to collect and manage various inventories on a regular basis. You can also store the data on a designated central system.

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

Related information

Working with inventory

Sending service requests

For hardware failures that do not disable system operation, electronic customer support provides a fast, electronic method for requesting the service from a hardware service provider with replacement parts. Using this method, you can report failures that occur on your System i platform or on specified input/output devices.

The Send Service Request (SNDSRVRQS) command establishes a communications session and sends problem information to the support center or tests the communications link to your service representative.

Related concepts

“Electronic Service Agent” on page 6

The Electronic Service Agent function provides an automatic hardware problem-reporting function that helps predict and prevent hardware errors by early detection of potential problems. With the function, you can also download fixes and automatically submit problems to IBM when appropriate.

Related tasks

“Configuring Extreme Support” on page 17

To use Electronic Service Agent for functions in iSeries Navigator, you must configure Extreme Support by completing these steps.

Related reference

“Extreme Support” on page 15

System i Extreme Support is part of the IBM Technical Support Advantage, which is IBM’s comprehensive technical service and support for IBM Systems.

Related information

Configure Universal Connection

Sending a service request immediately

If you select **option 1** (Send service request now) on the Select Reporting Option display to send a service request right after detecting a problem, your system packages the problem log entry as a service request, automatically dials the IBM service provider system, and transmits the problem.

Note: Service requests can also be sent to other systems that have the System Manager for i5/OS licensed program installed.

The service provider determines whether the request is for hardware or software service, and takes the following appropriate action.

Hardware service:

If the service provider is IBM and no PTFs match your problem’s symptoms, one of the following activities happens:

- Your request is sent to an IBM service representative.
- An IBM Customer Assistance Group representative calls you to help further problem definition. The connection to the service provider system ends, and the status of the problem in the problem log is changed to SENT.

Software service:

- A search is performed against the database of program temporary fixes (PTFs) by using the symptom string you created during problem analysis.
- If the service provider is IBM, a match is found, and a PTF is available, then IBM will either transmit the PTF to you electronically, or send a PTF CD to you through normal mail channels. The size of the

PTF and its requisites determine whether IBM sends the PTF electronically or through the mail. The PTFs that you receive electronically are placed in the QGPL library with a file name of the PTF number that is preceded by a Q and a file type of SAVE.

- If a match is not found or the PTF is not available, you will see the Save APAR Data display. This display saves the following information about your problem:
 - History log
 - Job information
 - Hardware and software resources
 - Error log entries
 - Vertical Licensed Internal Code log entries
 - Problem log entries
 - Pictures of displays

You can then forward this information to the IBM Software Support Center to help you solve your problem.

The connection to the service provider ends when you receive a PTF or when your problem is opened for further investigation. The system changes the status of the problem to SENT or ANSWERED in the problem log.

Note: Whenever you use electronic customer support, your system needs to dial out to the IBM Support Center. Remember to have the electronic customer support modem available and turned on.

Sending a service request later

If you decide to send a service request later, select **option 2** (Do not send service request) on the Select Reporting Option display. The status of the problem in the problem log changes to PREPARED.

To submit a problem with PREPARED status, follow the directions in Reporting problems detected by the system. When the system reports the problem, the problem log entry is packaged as a service request. Then your system automatically dials the service provider system, and the system transmits the problem to the service provider.

To report all problems in the problem log that have a status of PREPARED, perform one of the following actions:

1. On the Work with Problems display, press F16 (Report prepared problems).
2. On any command line, enter SNDSRVRQS *PREPARED and press the Enter key.

The connection to the service provider system ends when you receive a program temporary fix (PTF) or when your problem is opened for further investigation. The system changes the status of the problem to SENT or ANSWERED in the problem log.


Note: Whenever you use electronic customer support, your system needs to dial out to the IBM Support Center. Remember to have the electronic customer support modem available and turned on.

Related information for service and support


Listed here are the Web sites and information center topics that relate to service and support and Universal Connection. You can view or print any of the PDFs.

Related information for service and support

- **IBM Redbooks™** :

- AS/400e™ Diagnostic Tools for System Administrators: An A to Z Reference for Problem Determination (<http://www.redbooks.ibm.com/abstracts/sg248253.html>) 

- **Web sites:**


- IBM Electronic Service Agent for iSeries (<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>) 

- **i5/OS Information Center:**

- APPC, APPN, and HPR are some examples of the protocols included within SNA.
- IBM Performance Management for eServer™ iSeries
- Maintain and manage i5/OS and related software
- Remote Access Services: PPP connections
- Troubleshooting
- Using software fixes
- Virtual Private Networking (VPN)
- Working with inventory

Related information for Universal Connection

- **Web sites:**

- AT&T Business Internet Services (www.attbusiness.net) 
- iSeries Access (<http://www-1.ibm.com/servers/eserver/series/access/>) 

- **i5/OS Information Center:**

- Client SOCKS support
- Configuring your modem for PPP
- Implicit IKE
- IP Security (IPSec) protocols
- iSeries Access for Windows®: Installation and setup
- Layer 2 Tunnel Protocol (L2TP)
- NAT compatible IPSec with UDP
- Packet rules concepts
- Troubleshooting PPP
- Troubleshooting VPN


- **IBM Systems Hardware Information Center:** Setting up your service environment 

Saving PDF files

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2. Click the option that saves the PDF locally.
3. Navigate to the directory in where you want to save the PDF.
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