



iSeries

Service and support

Version 5 Release 3





iSeries

Service and support

Version 5 Release 3

Note

Before using this information and the product it supports, be sure to read the information in the "Notices," on page 39.

Sixth Edition (August 2005)

This edition applies to version 5, release 3, modification 0 of IBM Operating System/400® (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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Part 1. Service and support

The purpose of this topic is to help you understand the service options that are available on your iSeries™ server, and to help you set up a server with the options you want to use.

If you are using a Hardware Management Console for **eServer**, there are steps you need to do on your Hardware Management Console (HMC) to set up a connection to IBM®. See Setting up your service environment in the eServer™ Hardware Information Center for more information.

What's new for V5R3

Learn about new information and functions that are available regarding service and support.

Print these topics

Print PDF versions of these topics and learn how to save them to your workstation.

Service and support overview

Use this information to see how all of the service and support pieces work together including connectivity, inventory, problem reporting, fixes, and remote support.

Electronic customer support

Use this information to learn how electronic customer support can provide you a connection to the IBM service system after you have completed problem analysis and have performed isolation procedures.

Electronic Service Agent™

Electronic Service Agent provides an automatic hardware problem reporting function that predicts and prevents hardware errors by early detection of potential problems, downloads fixes, and automatically submits problems to IBM when appropriate. During automatic hardware problem reporting, supplemental system service information is sent and made available to IBM support centers to aid in problem resolution.

Extreme Support

Use this information to learn how Extreme Support can help you manage inventory, and hardware problem reporting.

Set up a connection to IBM

Use this information to learn how to configure Universal Connection, Electronic Service Agent, Extreme Support, and an SNA connection.

Contact IBM support

Use this information to find out how to contact IBM support.

Send service requests

Use this information to learn about electronic customer support which provides a fast, electronic method for requesting the service of a hardware service provider with replacement parts.

Related information

Use this resource to access information that supports service and support and Universal Connection.

Note: Read the Chapter 10, "Code disclaimer information," on page 35 for important legal information.

Chapter 1. What's new for V5R3

What's new for service and support:

- There is a new overview topic that shows how the service and support pieces work together.
- There is more information about setting up your connection to IBM, including Universal Connection and Electronic Service Agent.
- Electronic Service Agent is now part of OS/400® V5R3, and the documentation is included within the iSeries Information Center.

What's new for Universal Connection:

- The remote iSeries servers or logical partitions can now access eSupport services through another server's modem or Internet connectivity.
- All electronic customer support connectivity options are now protected by a Virtual Private Network (VPN) so that your data is kept private.
- The Cryptographic Access Provider 128-bit (5722-AC3) and Digital Certificate Manager (OS/400 Option 34) are now required.
- There are new scenarios to help you understand how to configure Universal Connection in a corporate environment.
- The Create Service Configuration (CRTSRVCFG) command provides all connectivity options available through the Universal Connection wizard, except for configuring the Information Center Update application connectivity.

To find other information about what's new or changed this release, see the Memo to Users.

Chapter 2. Print these topics

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


- Service and support (about 350 KB)
- Universal Connection (about 900 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 where you want to save the PDF.
4. Click **Save**.

Downloading Adobe Reader

You need Adobe Reader to view or print these PDFs. You can download a free copy from the Adobe Web site (<http://www.adobe.com/products/acrobat/readstep.html>)  .

Chapter 3. Service and support overview

Traditionally, service and support has been thought of as resources you call on when you have a problem or failure. However, in today's fast paced environment, any server downtime can turn your customer into your competitor's customer. You must be more proactive and prevent failures before they happen or ensure that, if they do happen, you can recover as quickly as possible. The purpose of this topic is to describe the different aspects of service and support that you can use to ensure that your server and applications are ready when you need them.

There are several different pieces of service and support, as depicted in the following diagram.



Figure 1. Service and support overview

See the following pages for details on service and support:

Connectivity

Learn more about which connection method to use.

Inventory

Learn about using iSeries Navigator on your server to collect and manage various inventories on a regular basis, and store the data on a designated central system.

Problem reporting

Learn about how your server can help you isolate the cause of system-detected hardware problems and some software problems.

Fixes

Learn how fixes can correct problems that are discovered in your software or firmware.

Remote support

Learn about how, in some cases, IBM support personnel can connect directly to your server to try to determine the sources of a problem.

Connectivity

The fundamental element of your service environment is your connection to IBM. What connection method you choose depends on several factors:

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

You can use the Universal Connection Wizard to set up a connection to IBM. You also can configure a connection to IBM using SNA or by using the Create Service Configuration (CRTSRVCFG) command. For more details on how to configure these connections, see Chapter 7, “Set up a connection to IBM,” on page 27.

Inventory

You can use iSeries Navigator on your server to collect and manage various inventories on a regular basis, and store the data on a designated central system. For example, you can collect the inventory for users and groups, fixes, system values, hardware resources, software resources, service attributes, contact information, or network attributes. You may have other applications installed that allow you to collect lists of other types of resources.

You can share this information with IBM through Electronic Service Agent. This enables IBM to help you identify problems and troubleshoot them more quickly. In some cases, sharing your inventory can help you avoid a problem altogether.

For example, you share your software inventory with IBM and a fix becomes available for a software product that you have installed. Depending on the connectivity options you’ve selected, you can receive the fix automatically, which can help you to avoid a problem before you even experience it.

For information about gathering inventory using iSeries Navigator, see the Working with inventory topic. For more information about sharing inventory with IBM, see the Chapter 5, “Electronic Service Agent,” on page 15. For more information on using the GO SERVICE menu, see “Use the CL commands” on page 29.

Problem reporting

Your server can help you isolate the cause of system-detected hardware problems and some software problems. In these cases, your server communicates with the IBM support database to help narrow down the cause of your problem based on the symptoms you are experiencing. Depending on the problem, any one of the following actions can result:

- A fix can be sent to you, if one has already been identified
- A hardware part can be sent to you for you to install, if appropriate
- IBM support can call you to gather more information and help you perform further problem analysis
- IBM can send a service professional

Fixes

Periodically, problems are discovered in your software or firmware. IBM issues a fix (also known as a PTF, or program temporary fix) to correct the problem. Fixes play an important part in your system's maintenance strategy. They 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 help you keep track of fixes that are available for the software you have, and to 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™ (OS/400) and related software*.

Remote support

In some cases, IBM support personnel can connect directly to your server to try to determine the sources of a problem. IBM can use any of the following methods to connect to your server once they have you enable the connection:

Virtual private networking (VPN)

Virtual private networking uses several important TCP/IP protocols to protect data traffic. See the Virtual private networking topic for details on the protocols used. See the Start Remote Support (STRRMTSPT) command with the *VPN option in the CL command finder for additional details. This option is available if electronic customer support has been configured to use one of the Universal Connection VPN connectivity options.

Point-to-Point Protocol (PPP)

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 provide access to the Internet. The iSeries server includes TCP/IP PPP support as part of its wide-area network (WAN) connectivity. For details, see Remote Access Services: PPP connections in the Networking > TCP/IP applications, protocols, and services topic. See the Start Remote Support (STRRMTSPT) command with the *PPP option in the CL command finder for additional details.

Systems Network Architecture (SNA)

In IBM networks, SNA is the layered logical structure, formats, protocols, and operational sequences that are used for transmitting information units through networks. SNA also controls the configuration and operation of networks. APPC, APPN, and HPR are some examples of the protocols included within SNA. They can be used to connect the iSeries server with other IBM systems, or non-IBM systems, to connect remote controllers, and to maintain a high-level of security on your system. See APPC, APPN, and HPR for more information about the protocol. See the Start Remote Support (STRRMTSPT) command with the *VRT option in the CL command finder for more details.

RSSF

RSSF allows IBM support diagnostic access to the licensed internal code of the server.

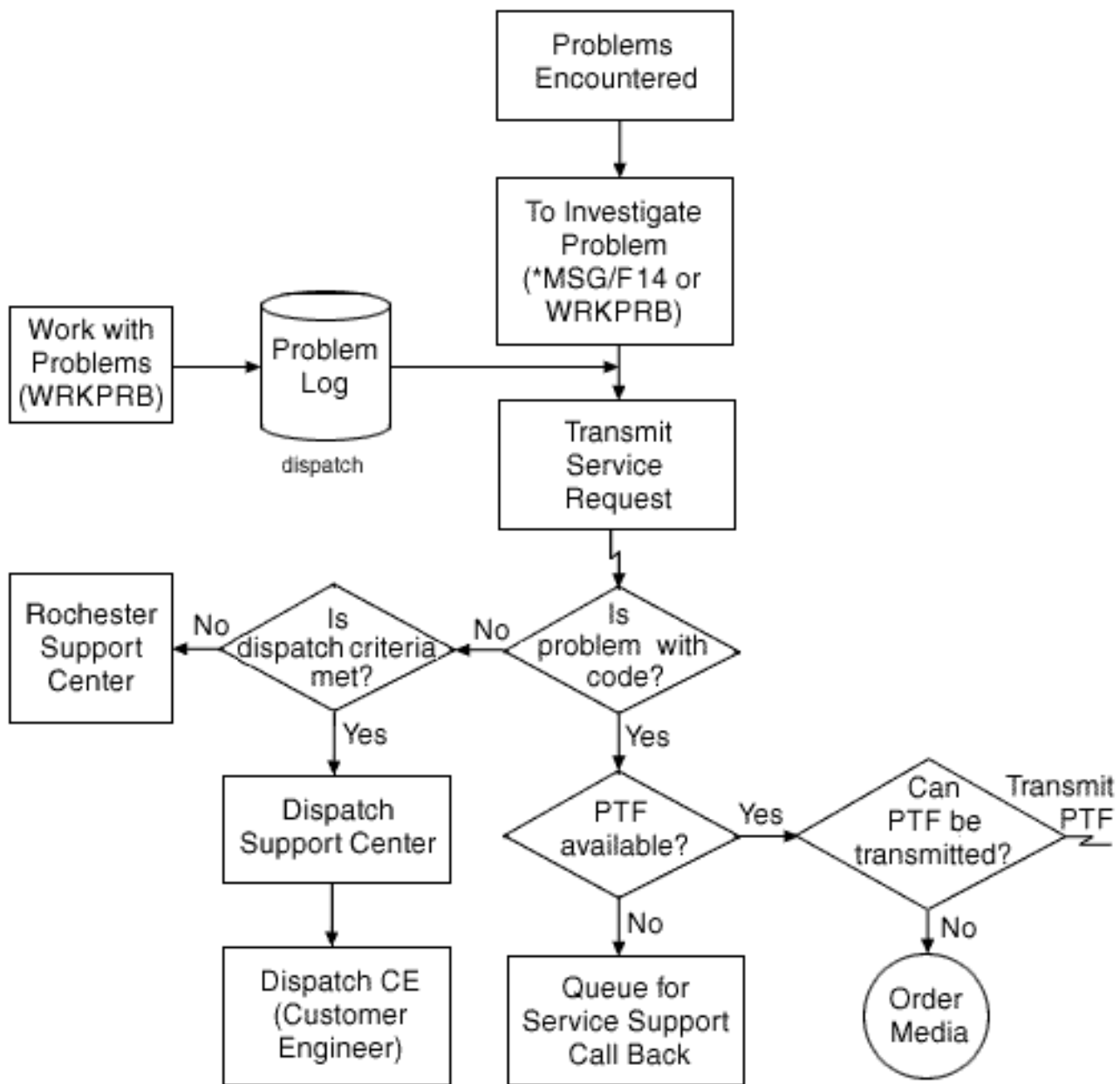
If a support person determines that this method is the best way to diagnose and fix your problem, you will be given detailed information about how to enable the connection.

Chapter 4. Electronic customer support

Your server can help you isolate the cause of system-detected hardware problems and some software problems. Your server also has an integrated set of functions that are designed to help service and support your system. These are the functions of electronic customer support.

The OS/400 licensed program includes electronic customer support. Electronic customer support provides a connection to the IBM service system after you have done problem analysis and have run isolation procedures. The communications hardware and software that are needed to access remote IBM service and support functions are part of the V5R3 base OS/400 licensed program.

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



RV3P051-1

Figure 2. Reporting problems and receiving responses

For more information about electronic customer support, see these topics:

“Electronic customer support: Command authority” on page 13

Use this information to find out what authorities are required to use electronic customer support.

“Add electronic customer support to your server” on page 13

Find out how to access electronic customer support. Details are provided on configuring the Universal Connection support or the traditional connection with SNA.

Electronic customer support: Command authority

To use Electronic customer support, your security officer must give you authority to the following commands:

- Send program temporary fix (PTF) Order (SNDPTFORD)
- Send Service Request (SNDSRVRQS)
- Work with Contact Information (WRKCNTINF)
- Work with Order Requests (WRKORDRQS)
- Request Order Assistance (RQSORDAST)

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

Add electronic customer support to your server

From time to time, your server may experience problems that need attention from IBM support services. Electronic customer support is available to help you keep your server operating efficiently. If there is a server hardware or software problem, IBM Customer Engineers can access your server directly to rapidly diagnose and solve the problem. Electronic customer support lets you:

- Order and install fixes
- Access the question-and-answer (Q & A) database
- Access local service and IBM product information
- Access technology forums
- Access problem analysis reporting and management

You can access electronic customer support using:

Universal Connection. A TCP/IP-based program that is configured using a graphical interface that allows you to choose how you connect to IBM.

Traditional connection. Available if you use Systems Network Architecture (SNA) and have a modem capable of Synchronous Data Link Control (SDLC).

For additional information, see the Online Publications


(<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>)  Web site, or Use software fixes in the OS/400 and related software topic.

Chapter 5. Electronic Service Agent


Electronic Service Agent provides an automatic hardware problem reporting function that predicts and prevents hardware errors by early detection of potential problems, downloading fixes, and automatically submitting problems to IBM when appropriate. During automatic hardware problem reporting, supplemental system service information is sent and made available to IBM support centers to aid in problem resolution. The same service information is available to you, and can be viewed with prior registration of an IBM ID, and is integrated into support tools for IBM Support Personnel.

Electronic Service Agent for IBM OS/400 V5R3 is integrated into the base operating system.

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

1. Go to the IBM Electronic Services news (<http://www.ibm.com/support/electronic>)  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 iSeries system and OS/400 logical partition. If you have other iSeries systems and OS/400 logical partitions in your network running other releases of OS/400, Electronic Service Agent is available for install on all releases of OS/400. For information about Electronic Service Agent for all OS/400 releases, see the Online Publications

(<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>)  Web site

The following topics give additional information to assist with activating and using Electronic Service Agent:

Pre-activation checklist

Use this checklist to help plan for Electronic Service Agent activation and to verify that you have completed all the preparation tasks.

Activate Electronic Service Agent

Learn how to activate Electronic Service Agent.

Use Electronic Service Agent

Learn about Electronic Service Agent operations and expected Electronic Service Agent activity on your system.

Troubleshoot Electronic Service Agent


Learn about general problem determination information for Electronic Service Agent including how to generate the documentation or traces.

Note: Read the Chapter 10, “Code disclaimer information,” on page 35 for important legal information.


Pre-activation checklist

Activation will be easier knowing the following information before starting activation:

- Ensure you have the following required products installed (confirm by using the DSPSFWRSC command):
 - 5722SS1 - Option 34 (OS/400 - Digital Certificate Manager)
 - 5722AC3 (Cryptographic Access Provider 128-bit)
 - 5722JC1 (IBM Toolbox Kit for Java™)
- Ensure the latest recommended PTFs for Electronic Service Agent are installed on OS/400.
 1. Go to the Recommended fixes

(http://www.ibm.com/eserver/series/support/s_dir/slkbases/recommendedfixes)  Web site.
 2. Under Recommended for specific products or functions, select **V5R3, Electronic Service Agent** as the topic, and click **Go**.
- Decide on the best method of connectivity

Service and support recommends the following methods for your OS/400 systems or logical partitions (listed in order).

 1. *Direct Internet from each logical partition or server:* This method allows larger fix files to pass through the connection to the server. Each logical partition can receive the fixes it needs. It is also faster than modem dial-up.
 2. *Shared direct Internet:* This method allows larger fix files to pass through the connection to the server. It allows connectivity to be concentrated through one server or logical partition simplifying firewall rules. It is also faster than modem dial-up connection.
 3. *Dial-up from the server, 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.
- Ensure you have the required setup for the type of connection you are using:
 - *If you are using a dial connection:*
 - Refer to “Modem and resource requirements” on page 19 to find out the requirements needed for Electronic Service Agent connections to IBM.
 - Verify the connection number for AT&T Global Network Services (AGNS) is current. For the most up-to-date connection numbers, see the AT&T business (www.attbusiness.net)  Web site, and select **Help Center > Access Numbers**.
 - Modem resource for dial connections
 - Dialing prefix for dial connections.
 - *If you are using a VPN connection:*
 - VPN capability
 - The prerequisites for enabling service configurations over a direct Internet connection include:
 - The iSeries server must have a globally routable IP address, or the server must be behind a NAT firewall with a globally routable address.
 - Ensure that TCP/IP is active. You can start TCP/IP through the Start TCP/IP (STRTCP) command.
 - Ensure your default TCP/IP route, or a host route, directs traffic out the appropriate TCP/IP interface to the Internet to allow the VPN to be established to IBM.

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

Activate Electronic Service Agent

Electronic Service Agent must be activated on each iSeries system and OS/400 logical partition. Activation should be performed by a system administrator.

If you are upgrading from prior OS/400 releases, the OS/400 V5R3 Electronic Service Agent will migrate Electronic Service Agent settings from the previous release.

As part of Electronic Service Agent activation, if needed, a point-to-point connection configurations for electronic customer support and Electronic Service Agent will be created.

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

- The character-based activation is designed for:
 - A single OS/400 system or logical partition
 - Customers who do not have an attached PC running iSeries Navigator
 - Customers who prefer a shorter and less complex activation.
- iSeries Navigator activation is designed for:
 - Customers who want to collect and transmit service information for groups of systems and or logical partitions
 - Clients who want to use Management Central via iSeries Navigator.

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

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

Note: Ensure you have met all the requirements in the “Pre-activation checklist” on page 15.

1. Using a 5250 emulator, sign on to the iSeries system or logical partition with a user profile (other than QSECOFR) that has a *SECOFR user class and its system defined special authorities.
2. Enter this command: DSPSYSVAL QRETSVRSEC. Confirm this system value is set to 1. Change the system value to 1, if needed, using the CHGSYSVAL QRETSVRSEC command.
3. From a command line enter GO SERVICE.
4. Note the following:

If the Change Contact Information (CHGCNTINF) command prompts, add or update the contact information for this system and press Enter.

If the Create Service Configuration (CRTSRVCFG) command prompts, notice that *SELECT is the value for several parameters. Press Enter. An additional panel will be displayed for each parameter for which *SELECT was specified. On each of these additional panels make a selection and press Enter.

Note: For details on the CL Commands, see the Control language (CL) topic.

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

To verify activation, perform these steps:

1. Type 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. Type GO SERVICE.
2. Choose the Service Configuration menu.

Use Electronic Service Agent

To change Electronic Service Agent settings

To change the service configurations, and to access Electronic Service Agent functions, on a command line, enter GO SERVICE. This will display the Electronic Service Agent main menu:

```
QS9MAIN                Electronic Service Agent        System: S10XXXXX
```

Select one of the following:

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

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 configuration
18. Service Configuration menu

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 on Electronic Service Agent and System Manager for iSeries, refer to the Online Publications (<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>)  Web site.

Troubleshoot Electronic Service Agent

If an error occurs when the system attempts to electronically report a problem or to send service information to IBM, there are many possible problem sources. Electronic Service Agent is dependent on many functions of OS/400 to be working properly, including Management Central, Connection Manger, which manages the TCP/IP connection profiles, Electronic Customer Support, and the Problem Log. Normal system problem determination is recommended for any error 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 may not show this activity. These activities will be shown when the tasks complete.

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 below.

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

Refer to the following information:

Modem and resource requirements

Learn about the modem and resource requirements needed for Point-to-Point TCP/IP Universal Connections.

Batch activation

Learn about how Electronic Service Agent can be activated in a batch environment.

Modem and resource requirements

The Electronic Service Agent and ECS service configurations created during activation are *PTP (Point-to-Point) TCP/IP Universal Connection based. If you do not have the modem and, or resources to support these types of connections, the service configurations will not be usable or activation will fail due to lack of internal resources.

Modem requirements

Use Table 1 on page 20 to determine the Point-to-Point functions that can be set up depending on your modem and resource. If this modem is to be used for hardware problem reporting and service information transmission functions, ECS must also be configured to use TCP/IP, not SDLC or SNA communications.

Asynchronous

If the modem is configured to operate in asynchronous mode, both hardware problem reporting and service information collection and transmission can be configured (examples: 2771 and 9771 internal modems, IBM 7855, IBM 7857, or IBM 7858 and dual model IBM 7852–400).

Note: If a non-IBM modem will be used, any asynchronous modem that supports the RS232 serial interface and the V.34/V.42 protocol (V.90 is optional) can be used for this function.

Typically, the default modem setting DSR (Data Set Ready) must be overridden. For an iSeries server to detect a hang-up, DSR must be set to follow CD (Carrier Detect). Refer to the modem manual for more information.

Communications I/O Adapter requirements

Note: At V5R3 there are two types of connections: AT&T dial and VPN.

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
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 would like to send programs from a central site for remote activation. In order to use this 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 install.

A sample CL program is provided.

For releases prior to V5R3:

- Before using a program, the International License Agreement for Services Programs must be accepted. To accept the license agreement, do one of the following:
 - On a command line, enter G0 SERVICE. Choose 'Display Service Agent license agreement'. Read the agreement and press **F6** 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 V5R3. See the Electronic Service Agent User Guide for V5R2 for information on batch activation.

Table 2. Commands and descriptions

Command	Command description
CHGCNTINF	Change service contact information. This information is used by command WRKCNTINF 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.

Table 2. Commands and descriptions (continued)

Command	Command description
CHGSRVAGT_*	Change Service Agent. Note: You must use with one of the required type commands: *COVERAGE, *JOBLOG, *MASTERPWD, *PRBLOG, *PRBRPT, *PRDACTLOG, *SENDDATA, *THRESHOLD).
CHGSRVAGTA	Changes the settings for Electronic Service Agent.
DSPSRVAGT_*	Display Service Agent. Note: You must use with one of the required type commands: *DEVICE, *INV, *MAINT, *PRDACTLOG, *SRVREGINF.
ENDSRVAGT	Ends the Electronic Service Agent subsystem jobs.
RTVSRVAGT	Retrieves the valid days of the week used by command CHGSRVAGTA parameters AUTOPTF and AUTOTEST.
STRSRVAGT	Start Electronic Service Agent. If command CHGSRVAGTA is used before this command is used, Electronic Service Agent will activate using those settings. If the command was not used, Electronic Service Agent will activate using the defaults.

Note: Refer to the Control language (CL) topic for more information.

Sample CL Program for batch activation

```

/* ELECTRONIC SERVICE AGENT */
/* */
/*****/
/* */
/* 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 User Guide for other */
/* 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/CHGCNTINF CMPNY(IBM) CONTACT('J Smith') +
TELNR('000-555-1234') MAILADDR('3605 +

```

```
Highway 52 N' 'ROCHESTER MN' USA 55901) +
LNGVER(2924) MEDPTF(*AUTOMATIC)
```

```
/*
/*
/* Configure the ECS and Service Agent connections.
/*
/*
/*
/******
/*QSYS/CRTSRVCFG CNNTYPE(*PTP) SERVICE(*SRVAGT) +*/
/*REFSRVCFG(*ANY) CNTRYID(US) STATE(MN) + */
/*TELNBR1('9,397-0005') + */
/*TELNBR2('9,397-0005') RSRNAME(CMN03) +*/
/*MODEM('IBM 7852-400')*/
```

```
/*
/*
/* 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 ENDDAYLOOP
ENDDO
```

```
IF (&DAY2 *EQ (%SUBSTRING(&DAYS &DAYPTR 4))) THEN(DO)
  CHGVAR VAR(&DAY) VALUE(&DAY2)
GOTO ENDDAYLOOP
ENDDO
```

```
IF (&DAY3 *EQ (%SUBSTRING(&DAYS &DAYPTR 4))) THEN(DO)
  CHGVAR VAR(&DAY) VALUE(&DAY)
GOTO ENDDAYLOOP
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) +
SRVINP((*ALL) 052000 052000 07) AUTOTEST(&DAY '15:00')
```

```
/*
/*
/* 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
```

Note: Read the Chapter 10, “Code disclaimer information,” on page 35 for important legal information.

Chapter 6. Extreme Support

iSeries Extreme Support is part of the IBM eServer Technical Support Advantage, which is IBM's comprehensive technical service and support initiative exclusively for IBM eServer.

iSeries Extreme Support includes support built right into the product and iSeries Navigator as well as support tools available over the Web. Some Extreme Support tools are PM iSeries over TCP/IP, Electronic Service Agent, and inventory consolidation with Management Central.

Electronic Service Agent monitors events and transmits system inventory information to IBM on a periodic, customer-definable timetable. The two key functions of Electronic Service Agent are:

System inventory collection and transmission

This function collects and electronically sends service information to IBM as input to problem analysis and problem prevention functions, and to assist IBM in providing improved service. The system information is gathered and stored by Management Central and is then sent to IBM with the Universal Connection. This function of Electronic Service Agent also has the ability to collect and transmit information from multiple systems. This is done by consolidating inventory from multiple systems onto one Management Central system before transmission over the connection.

The system inventory collection and transmission function of Electronic Service Agent is available with iSeries Navigator. You can find this support in the Management Central hierarchy under **Extreme Support**.

Inventory examples: You can collect any of the following: Hardware, software, fixes, system values, users and groups, service attributes, contact information, network attributes, PM iSeries performance data, and system registration.


Note: You can collect inventory for users and groups; however, Electronic Service Agent does not send this inventory to IBM.

Hardware problem reporting

This function predicts and prevents hardware errors by early detection of potential problems; downloads fixes, and automatically calls IBM Service when necessary. With early knowledge about potential problems, IBM can provide proactive service, assisting in maintaining higher availability and performance.

Note: The hardware problem reporting function can only report problems to IBM successfully if your system is under warranty, or if you have purchased an IBM Maintenance Services Agreement.

For more information on Electronic Service Agent, see "Configure Electronic Service Agent" on page 27.

For links to the User Guides for specific releases of Electronic Service Agent, go to the Online Publications (<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>)  Web site.

To set up a connection to IBM, see "Configure Extreme Support" on page 27. For information about collecting and sending service request information to IBM, see Chapter 8, "Send service requests," on page 31.

Chapter 7. Set up a connection to IBM

If you are using a Hardware Management Console for eServer, there are steps you need to do on your Hardware Management Console (HMC) to set up a connection to IBM. See the Setting up your service environment topic in the eServer Hardware Information Center for more information.

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

Universal Connection

Learn how this software can control how your business connects to IBM support services.

“Configure Electronic Service Agent”

Learn how to monitor events and to transmit service inventory information to IBM on a periodic, customer-definable timetable.

“Configure Extreme Support”

Use this procedure to configure Extreme Support if you want to use Electronic Service Agent for iSeries function in iSeries Navigator.

Chapter 4, “Electronic customer support,” on page 11

Learn how electronic customer support can provide you a connection to the IBM service system after you have completed problem analysis and have performed isolation procedures.

“Configure an SNA connection” on page 28

Use this procedure if you intend to access electronic customer support using SNA and a synchronous (SDLC) capable modem.

“Use the CL commands” on page 29

Learn about how you can use the CL Commands to create your connection to IBM.

Configure Electronic Service Agent

Electronic Service Agent provides an automatic hardware problem reporting function that predicts and prevents hardware errors by early detection of potential problems, downloads fixes, and automatically submits problems to IBM when appropriate. During automatic hardware problem reporting, supplemental system service information is sent and made available to IBM support centers to aid in problem resolution.

See Chapter 5, “Electronic Service Agent,” on page 15 for more details.

Configure Extreme Support

To use the Electronic Service Agent for iSeries function in iSeries Navigator, you must configure Extreme Support by doing the following steps:

1. Verify that you have security officer (*SECOFR) authority with *ALLOBJ, *IOSYSCFG, and *SECADM special authorities in your OS/400 user profile (other than QSECOFR).
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. See Configure Universal Connection for more information.


Configure an SNA connection

If you intend to access electronic customer support using SNA and a synchronous (SDLC) capable modem, then 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 only works for PPP and VPN connection types.

Gather 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 IBM eServer iSeries Support Web site (<http://www.ibm.com/eserver/series/support/supporthome.nsf/document/22721158>)  for more information.
2. Turn on the modem that is connected to the electronic customer support cable.
3. Optional: You may choose to configure your service provider information now. See Configure service provider information in the Universal Connection topic.

Get ready to begin configuration

1. On your PC desktop, open **Client Access**.
2. Expand **Operations Console**.

Note: If you have not worked with Operations Console, you need to configure a new connection to your server. 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 server.
4. From the File menu, select **Connection**.
5. If prompted for the device tools user ID and password, type QSECOFR for both values.
6. Select **Console**. The Server signon dialog box appears.
7. Enter your QSECOFR user ID and password.
8. Continue with Configure telephone information.

Configure telephone information

If you are installing this server in the United States, the Change Data Area (CHGDTAARA) display may have one of these IBM service support numbers in the New Value field. If you are not in the United States, call your IBM service support telephone number.

- 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.

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

1. On the command line of the main menu, type Call QTIINSTL and press Enter.
2. On the command line of the main menu, press F9 to recall Call QTIINSTL and press Enter.

3. On the command line of the main menu, type Call QESPHONE and press Enter.
4. Enter the **primary** telephone number in the **New Value** field.
5. Fill in the telephone/connection information outlined below and press Enter.
 - 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 (CHGDTAARA) display appears again to allow 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.

Configure contact information

1. On the command line of the main menu, type WRKCNTINF and press Enter.
2. Type 2 (Work with local service information) and press Enter. The Work with Local Service Information dialog box appears.
3. Type 2 (Change service contact information), and press Enter. The Change Service Contact Information dialog box 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 fields. 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 Test your connection to electronic customer support in the Universal Connection topic.

Use the CL commands

You also can establish your connection to IBM's support services using CL Commands, including the GO SERVICE and CRTSRVCFG commands. See the Control language (CL) topic for details.

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

Chapter 8. Send service requests

For hardware failures that do not disable system operation, electronic customer support provides a fast, electronic method for requesting the service of a hardware service provider with replacement parts. Using this method, you may report failures that occur on your iSeries server and selected input or output devices.

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

Refer to the following topics for more information:

“Send a service request immediately”

Learn how to send a service request immediately.

“Send a service request later” on page 32

Learn how to send a service request later.

Send a service request immediately

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

Note: Service requests can also be sent to other servers that have the System Manager for iSeries licensed program installed.

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

Hardware service:

If the service provider is IBM, and if no PTFs are found that match your problem symptoms, one of the following happens:

- Your request is sent to an IBM service representative.
- An IBM Customer Assistance Group representative calls you to assist in 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 to ANSWERED in the problem log.

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

Send 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 Report problems detected by the system. When the system reports the problem, the problem log entry is packaged as a service request. Then your server 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, do one of the following:

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

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 to ANSWERED in the problem log.


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

Chapter 9. Related information for Service and support

Listed below are the iSeries manuals and IBM Redbooks™ (in PDF format), 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

Web sites:

- For information on the AS/400e™ Diagnostic Tools for System Administrators book, see the Redbook Abstract (<http://www.redbooks.ibm.com/abstracts/sg248253.html>)  Web site.
- IBM Electronic Service Agent for iSeries (<http://publib.boulder.ibm.com/isrvagt/sdsadoc.html>)

 Web site.

iSeries Information Center:

- APPC, APPN, and HPR are some examples of the protocols included within SNA.
- IBM Performance Management for eServer iSeries
- Maintain and manage OS/400 and related software
- Remote Access Services: PPP connections
- Troubleshooting
- Use software fixes
- Virtual private networking
- Working with inventory

Related information for Universal Connection

Web sites:

- AT&T business (www.attbusiness.net)  Web site
- iSeries Access for Windows® (<http://www-1.ibm.com/servers/eserver/series/access/>)  Web site

iSeries Information Center

- Client SOCKS support
- Configure 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
- Packet rules concepts
- Troubleshoot PPP
- Troubleshoot VPN
- Virtual private networking


eServer Hardware Information Center: Setting up your service environment topic

Saving PDF files

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Part 2. Appendixes

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