iWay Software
Software
An Information Builders Company

iWay

iWay Server Installation
Version 5 Release 2.3

Preface

This documentation describes how to install the iWay Server Version 5 Release 2.3 software. It is intended for system administrators and others who are responsible for installing the software and general machine administration for user ID setup and run time security.

How This Manual Is Organized

This manual includes the following chapters:

Chapter		Contents
1	Introduction to Server Installation	Lists the necessary terminology and prerequisites for general sever installation.
2	Server Installation for Windows NT/2000	Describes the installation requirements and the step-by-step instructions for a Windows NT/2000 installation.
3	Server Installation for UNIX	Describes the installation requirements and the step-by-step instructions for a UNIX installation. This includes all UNIX platforms such as HP-UX, AIX®, Solaris™, and Linux®.
4	Server Installation for OS/390 and z/OS	Describes the installation requirements and the step-by-step instructions for an OS/390 and z/OS installation.
5	Server Installation for MVS	Describes the installation requirements and the step-by-step instructions for an MVS installation.
6	Server Installation for OS/400	Describes the installation requirements and the step-by-step instructions for an OS/400 installation.
7	Server Installation for OpenVMS	Describes the installation requirements and the step-by-step instructions for an OpenVMS installation.
8	Server Installation for VM	Describes the installation requirements and the step-by-step instructions for a VM installation.

Documentation Conventions

The following conventions apply throughout this manual:

Convention	Description
THIS TYPEFACE or this typeface	Denotes syntax that you must enter exactly as shown.
this typeface	Represents a placeholder (or variable) in syntax for a value that you or the system must supply.
underscore	Indicates a default setting.
this typeface	Represents a placeholder (or variable), a cross-reference, or an important term. It may also indicate a button, menu item, or dialog box option you can click or select.
this typeface	Highlights a file name or command.
Key + Key	Indicates keys that you must press simultaneously.
{ }	Indicates two or three choices; type one of them, not the braces.
[ ]	Indicates a group of optional parameters. None are required, but you may select one of them. Type only the parameter in the brackets, not the brackets.
|	Separates mutually exclusive choices in syntax. Type one of them, not the symbol.
...	Indicates that you can enter a parameter multiple times. Type only the parameter, not the ellipsis points (…).
. . .	Indicates that there are (or could be) intervening or additional commands.

Related Publications

To view a current listing of our publications and to place an order, visit our World Wide Web site, http://www.iwaysoftware.com. You can also contact the Publications Order Department at (800) 969-4636.

Customer Support

Do you have questions about the iWay Server Installation?

Call Information Builders Customer Support Service (CSS) at (800) 736-6130 or (212) 736-6130. Customer Support Consultants are available Monday through Friday between 8:00 a.m. and 8:00 p.m. EST to address all your iWay Server Installation questions. Information Builders consultants can also give you general guidance regarding product capabilities and documentation. Please be ready to provide your six-digit site code (*xxxx.xx*) when you call.

You can also access support services electronically, 24 hours a day, with InfoResponse Online. InfoResponse Online is accessible through our World Wide Web site, http://www.informationbuilders.com. It connects you to the tracking system and known-problem database at the Information Builders support center. Registered users can open, update, and view the status of cases in the tracking system and read descriptions of reported software issues. New users can register immediately for this service. The technical support section of www.informationbuilders.com also provides usage techniques, diagnostic tips, and answers to frequently asked questions.

To learn about the full range of available support services, ask your Information Builders representative about InfoResponse Online, or call (800) 969-INFO.

Information You Should Have

To help our consultants answer your questions most effectively, be ready to provide the following information when you call:

- Your six-digit site code (*xxxx.xx*).

- Your iWay Software configuration:

  - The iWay Software version and release.

  - The communications protocol (for example, TCP/IP or LU6.2), including vendor and release.

- The stored procedure (preferably with line numbers) or SQL statements being used in server access.

- The database server release level.

- The database name and release level.

- The Master File and Access File.

- The exact nature of the problem:

    - Are the results or the format incorrect? Are the text or calculations missing or misplaced?

    - The error message and return code, if applicable.

    - Is this related to any other problem?

- Has the procedure or query ever worked in its present form? Has it been changed recently? How often does the problem occur?

- What release of the operating system are you using? Has it, your security system, communications protocol, or front-end software changed?

- Is this problem reproducible? If so, how?

- Have you tried to reproduce your problem in the simplest form possible? For example, if you are having problems joining two data sources, have you tried executing a query containing just the code to access the data source?

- Do you have a trace file?

- How is the problem affecting your business? Is it halting development or production? Do you just have questions about functionality or documentation?

User Feedback

In an effort to produce effective documentation, the Documentation Services staff welcomes your opinions regarding this manual. Please use the Reader Comments form at the end of this manual to relay suggestions for improving the publication or to alert us to corrections. You can also use the Documentation Feedback form on our Web site, http://www.iwaysoftware.com.

Thank you, in advance, for your comments.

iWay Software Training and Professional Services

Interested in training? Our Education Department offers a wide variety of training courses for iWay Software and other Information Builders products.

For information on course descriptions, locations, and dates, or to register for classes, visit our World Wide Web site (http://www.iwaysoftware.com) or call (800) 969-INFO to speak to an Education Representative.

Interested in technical assistance for your implementation? Our Professional Services department provides expert design, systems architecture, implementation, and project management services for all your business integration projects. For information, visit our World Wide Web site (http://www.iwaysoftware.com).

Contents

Contents

Introduction to Server Installation

Topics:

- Terminology
- Installation Requirements

This documentation covers the requirements necessary for installation, configuration and general use of the server software on a given platform. The installation process, while not exactly the same on all platforms, has many steps and concepts in common. Each platform-related section is organized by issues and steps in the order in which they would occur during the installation process.

The steps in the following chapters for the Windows NT®/2000, UNIX®, OS/390 and z/OS™, OpenVMS™, or OS/400® platforms will result in the installation of the software plus a basic configuration with no configured data adapters.

Installation on MVS® and VM does not produce a basic configuration. Specific configuration of the data adapters, including basic configuration, is covered in the Server Administration manuals for each platform.

Terminology

To eliminate the repetitive listing of individual platform names and terms that may be particularly long and sometimes confusing, the following terms and generalities will be used.

- UNIX refers to any UNIX or Linux implementation (for example, Solaris, Tru64™, AIX, Red Hat™, and others). Linux is a generic open source implementation of UNIX, but a particular Linux release has specific implementations by specific vendors (or groups) for specific hardware platforms. Therefore, compiled software for a given Linux operating system level may be interchangeable between Intel releases; it does not mean that compiled software may be directly used on any hardware implementation with a different chipset.

- Windows NT/2000 refers to any supported MS/Windows NT 4.0 with Service Pack 5 or higher or 2000 Server environment. Servers are not supported on Windows NT 3.x and Windows workstation releases (for example, 95, 98, ME, 2000 Professional and XP Professional). However, connectors are supported in these environments.

- MVS or Traditional MVS refers to the implementation model for MVS that uses JCL, PDSs, and Load Libraries that run as started tasks.

- OS/390 and z/OS refers to an OS/390 and z/OS implementation model using UNIX System Services (USS) as a run time shell and file system to store and run applications. The actual implementation of the product can access traditional MVS application PDS files and data sets. There is also JCL in this implementation, but it is used for installation purposes and as a shell to start, control, and stop the USS implementation. The USS implementation is more like a UNIX release in terms of the way processes run and the features.

- OS/400 refers to an AS/400 machine running OS/400. The AS/400 is also known as IBM's iSeries of machines. Generally, the terms AS/400 and OS/400 can be used interchangeably, but AS/400 is the hardware and OS/400 is the operating system. The distinction only recently became important because other operating systems are now available on AS/400 hardware. The OS/400 implementation is a mix of traditional OS/400 program libraries. Use of the QSH (UNIX) shell and file system (IFS) plus traditional OS/400 application libraries are also accessible. Only RISC processor hardware is supported. The older CISC machines are not supported.

- OpenVMS refers to Compaq's OpenVMS operating system. Some people also refer to OpenVMS as VMS™; the terms are interchangeable. OpenVMS was originally from Digital Equipment Company (DEC), which later merged with Compaq. It is not uncommon to hear the original company name in reference to this platform. Only Alpha processor hardware is supported, the older VAX machines are not supported.

- VM refers to IBM's VM/CMS. While UNIX Systems Services do exist under VM, only the traditional VM model is supported.

- A connector refers to client side products and/or actual applications that talk to a server for some purpose.

- A server refers to the server environment that connects requests with application agents to service the requests. The server environment is a number of processes that provide management, logging, and application processing. The environment is generally configured with data adapters that allow the application agents to access data sources such as Oracle®, DB2®, SQL Server, and other remote servers acting as subservers.

- A server or data adapter refers to the ability of an application agent to access an external data source such as Oracle, DB2, Essbase, SQL Server, and other remote servers acting as subservers. Adapter configuration is part of the general configuration of the server environment and is not specific to individual application agents. The actual data adapters available will vary by platform. Specifics are detailed in the *Server Administration* manual.

Installation Requirements

Review the documented installation process before starting. Checking the steps beforehand will allow the installation to go smoothly. In some cases, the information provided in this manual might need to be disseminated among several administrators if job functions, such as software loading and ID creation, are performed by several people.

HAPTER 2

Server Installation for Windows NT/2000

Topics:

- Installation Requirements
- Installing the Server
- Verifying the Server Installation
- Uninstalling the Server
- Troubleshooting

This document describes the requirements and procedures for proper installation of the Server for Windows NT/2000.

Installation Requirements

Before beginning server installation, review the following requirements:

- Supported Hardware and Software
- Disk Space Requirements
- Memory Usage
- Communications Requirements
- Installation User ID Requirements

Supported Hardware and Software

The following hardware and software have been tested with the server.

Hardware	Software Operating System Release
Intel (Pentium class or higher) PC	Microsoft Windows NT Version 4.0, with Service Pack 6a applied.
	Microsoft Windows 2000 Server.
	Microsoft Internet Explorer 5.5 or higher is required for the Web Console

Note:

- The server will be supported on Windows 2003 Server with full certification of Windows 2003 later in the year.
- The server is supported on Windows XP as a developer's environment only.
- Installing an iWay Server on a Primary Domain Controller is not recommended.
- Particular database vendors may have specific minimum service pack requirements.

Disk Space Requirements

The following are disk space requirements for all servers.

Server Type	During Install	After Install
All Server Types	2 megabytes	90 megabytes

Memory Usage

Memory usage depends on the following elements:

- Number of data access agents.

- Type of access that is performed: joins, large retrieval, etc.

- Connection queue.

The following table shows the memory requirements for installation and operation of the server. These numbers apply when the server is in an idle state, so they can fluctuate slightly.

Server Type	Workspace Memory	Memory per Active Agent
Full Function Server	12 megabytes	10 megabytes

Communications Requirements

The following communications protocols are compatible with the server.

Communications Protocol	Requirements
SNA (LU6.2)	Inbound or outbound: Microsoft SNA Server Version 4.0 with Service Pack 3 (for Microsoft Windows NT, Version 4.0 only), Microsoft Integration Server 2000 (Windows 2000 only), IBM's eNetwork Communications Server Version 6.0 or higher (6.1 or higher on Windows 2000) must be installed and configured.
TCP/IP	Microsoft TCP/IP for Windows NT must be installed and configured. **Note:** Up to 4 consecutive open ports for each server you want to run will be used. The starting port number (of the consecutive ports) is chosen during the installation process.

Installation User ID Requirements

The Windows ID that is used to install the server is the default server administrator, and it is referred to as the "iadmin" ID. After the server is installed, you can change this ID and add additional server administrators. Server administrators are users that have permission to start and configure the server.

During normal operation, it is not necessary for server administrators to also have administrator rights to the local Windows machine. However during installation, you must be logged on as a Windows administrator, because the installation program adds a service to the operating system. After installation, Windows administrator rights can be revoked.

A server administrator's ID and password are encrypted and stored by the server's configuration. These IDs and passwords must be kept in sync with Windows IDs and passwords to the start server with security on. When starting with security on, if the server administrator does not have a password, or the password is not in sync with Windows, the server starts in Safe Mode, and not all functionality is available. See the *Troubleshooting* on page 2-14 for details on how to fix this problem.

Installing the Server

Installation is performed by the setup program, which yields a basic configuration. After installation, the administrator can start both the server and a browser against the server's HTTP listener. This allows the administrator to complete the configuration (typically for DBMS and outbound communications nodes) using the Web Console.

Procedure **How to Install and Configure the Server**

Note: You should exit all programs before continuing.

1. Insert the server installation CD into your CD-ROM drive.

2. If the Windows Autorun feature is active, the installation setup program will start automatically. If not, at the command prompt or using the Start Menu Run feature, type the following:

   drive:\setup

   where:

   drive

   Is the letter of the drive where you placed the installation CD.

   The Choose Setup Language window opens.

3. From the drop-down menu, select the language to be used during installation.

   Click *OK* to continue or *Cancel* to stop the installation procedure.

   If a prior installation exists, a question will appear asking if you would like to refresh the installation.

4. Click *Yes* to replace the current installation. When the replace is finished you can start the server. See *Verifying the Server Installation* on page 2-13.

   Click *No* to continue with installation.

   The Software License Agreement window opens.

5. Click *Yes* to accept the terms of the agreement and continue installing the server.

Click *No* to reject the software license agreement and exit the Setup program.

The Software Registration window opens:
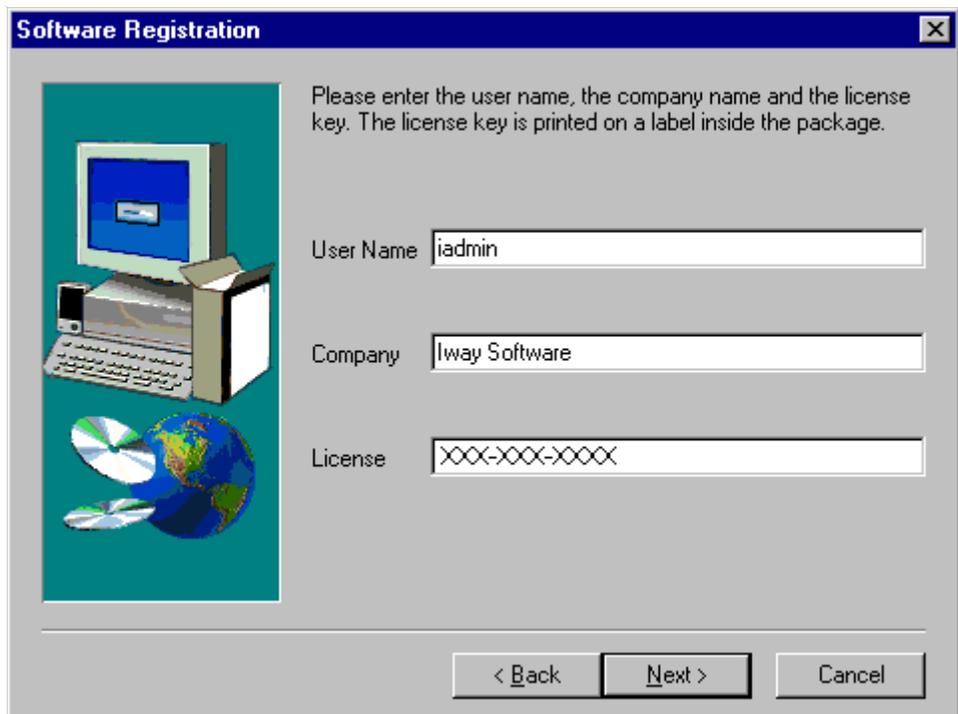
6. In the Software Registration window, enter the user name, company name, and the three part License Key.

Important: The License Key is printed on a form included with the software and should be saved for future reference. You must include the hyphens.

The License Key determines which product you are installing, such as a Full-Function Server or a WebFOCUS Reporting Server. Default settings, such as folder names, vary depending on the license key you enter. The screens that follow are for an iWay Full Function Server.

7. Click Next.

- If you enter an invalid License Key, the Setup program displays a warning:

Click *OK* to correct the key.

- If the License Key is correct, the Registration Confirmation window opens:

8. Click *OK* to continue.

The next window will vary, depending on whether there is an existing 52 Server installed on the machine.

- On a machine that has never had a server installed, the installation script will directly jump to the Select Program Folder window. Proceed to the screen before step 11.

- On a machine where a version 52 server has been installed, the Prior Installations Found: Select Option window displays:
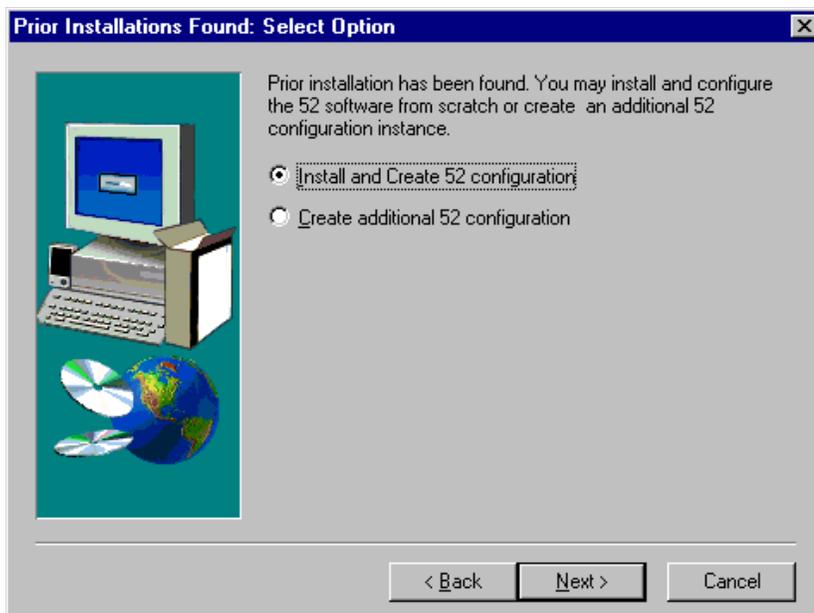
9. In the Prior Installations Found: Select Option window, choose one option:

- **Install and Create 52 configuration.** This option creates the software installation directory (EDAHOME) and an original configuration directory (EDACONF) to go with the installation directory. A new folder/directory may be picked or an existing one over-written.

- **Create additional 52 configuration.** This option allows you to create a new configuration.

  Important: The original configuration can only be reconfigured manually or through the Web Console. If you replace a prior configuration, the Server Setup program creates a backup of your original configuration in the BACKUP directory.

10. Click *Next*.

The Select Program Folder window opens:
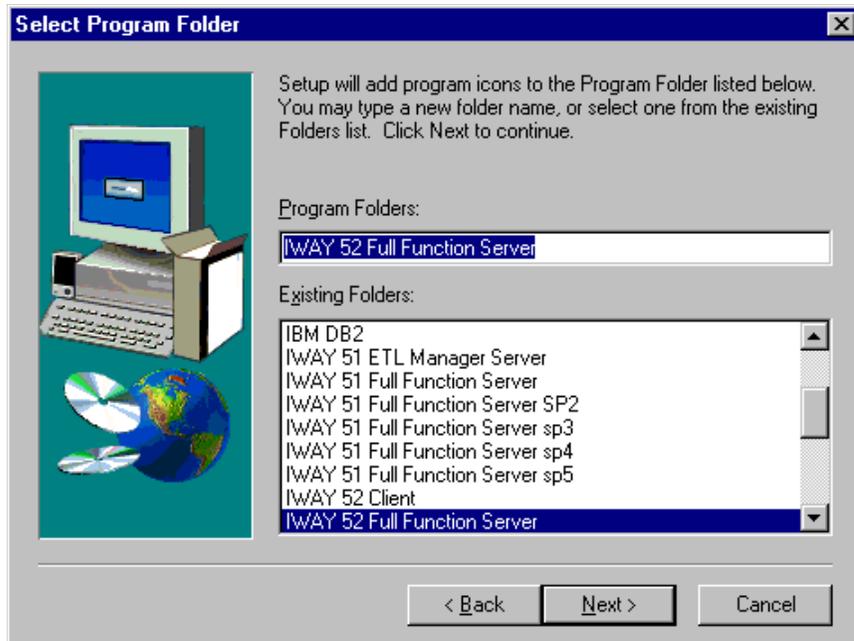
11. Accept the default or specify a new program folder.

The name defaults based upon the server type being installed, but it can have a suffix (for example, 001) to configure additional servers. In all cases, the name must be unique. The setup program adds this new folder to the Startup menu.

12. Click *Next*.

13. Complete the Select Directories window. This Window varies depending on whether pre-existing servers were found and which server was selected.

- If no pre-existing servers were found, or Install and Create 52 Configuration was selected, then the Select Directories window opens:
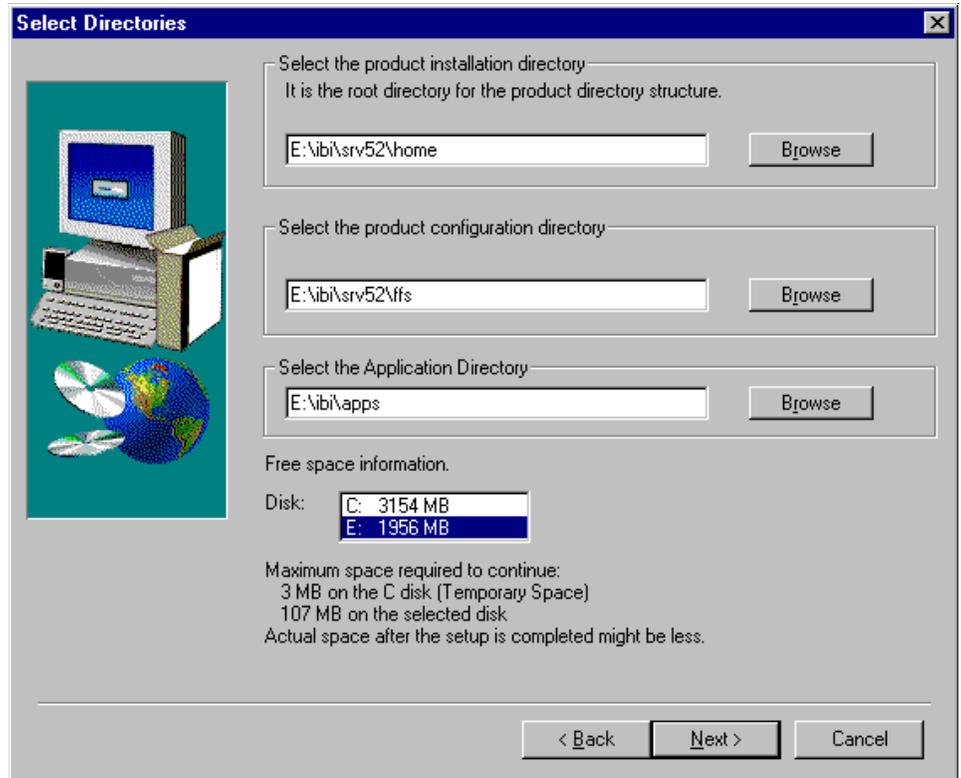
Enter the names of the directories where you want to install and configure the server, and from where you want to find and read applications. Click Next to proceed to step 15, the Configure Server Administrator ID/Password and Inbound Communications window.

Note: You can include spaces in the directory name; however, the Setup program does not include them when it creates the directory.

- If a pre-existing server was found and you chose to create an additional configuration, a different Select Directories window opens:
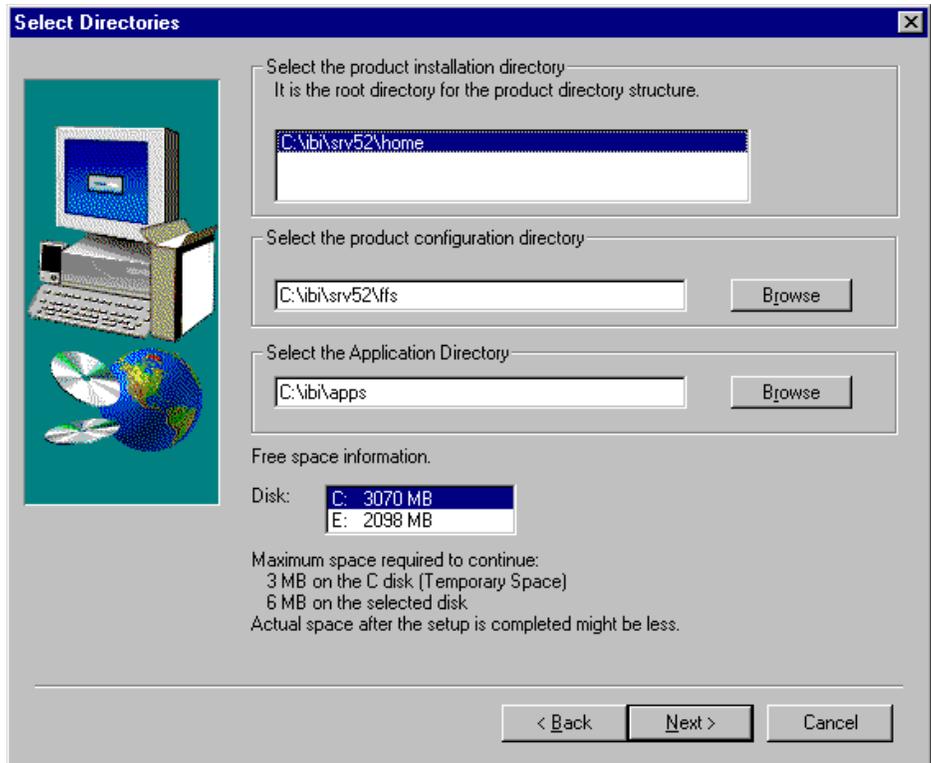
You must choose an existing EDAHOME directory, and enter the directory where you want to store the new EDACONF. If you have more than one version installed, the Select Directories window shows a list of existing EDAHOME directories. Select the EDAHOME directory you want to use for configuration, and enter the directory where you want to store the configuration.

14. Click *Next*.

15. In the Configure Server Administrator ID/Password and Inbound Communications window, supply the information requested:

- • **Server Password.** Enter the password of the person logged on to the computer. Both the ID and password can be changed after the installation using the Web Console. If the password is incorrect, the server will start in safe mode. See *Safe Mode* on page 2-14 for more information.

- • **TCP/IP Services.** Type the Base TCP/IP Port Number or the service name representing the port number that the server is using for TCP/IP. The server needs four consecutive ports for internal and external communications. The default varies by product to support multiple servers on a particular machine.

    For a Full Function Server, the default is 8100, which reserves ports 8100-8103.

    For a WebFOCUS Reporting Server, the default is 8120, which reserves ports 8120-8123.

    For ETL, the default is 8116, which reserves ports 8116-8119.

    Note: The HTTP port number is always one greater than the base TCP/IP port number. For example; if the TCP/IP port number is 8100, the HTTP port number will be 8101.

16. Click *Next* to proceed to the Demo files installation.

17. In the Demo files installation screen, select the language in which the Demo files should be installed. If no language is selected, the installation continues but the Demo files are not installed. These files are not required for the operation of the server.

18. Click *Next*. The Setup program installs software and configures the server using the information you specified. A resource meter and copy messages will appear during this step. The Setup program creates a server program group to receive the program icons for the product. The actual name will be based upon the server product that was installed.

19. Click *Finish* to exit the Server Setup Program.

Note: After running the Setup program, if you need to modify the configuration or configure DBMS support, you may do this using the Web Console. For more information, see the *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

You are now ready to verify your installation.

Verifying the Server Installation

After you have completed your configuration, your server should be started, and the Console displayed.

If not, to manually start the server, select the Start Security On option in the folder group for the server (for example, iWay 52 Server). Then open the Web Console, by selecting Web Console in the same group.

Note: If you prefer to start the server without security, open the Start With Alternative Security Modes subdirectory and select Start Security OFF.

Procedure **How to Use the Web Console to Test the Server**

After installation, the server will start and the Web Console is displayed. The Web Console home page contains links for the various features it supports. Click Test Basic Server Functionality to test the installation. A sample report is executed and a new window will display the results.

Detailed use of the Web Console for configuration or general operation of the server is available by clicking Help on the left navigation pane and in the *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

Procedure **How to Install the Debuggable Version**

As with any complex software product, there is sometimes a need to produce traces and other information in order to identify problems. To address this issue, the product is shipped with a debuggable version. To install the debuggable version, the CD must be in its original install location.

Note: The Debuggable Version should not be installed and activated unless explicitly requested by customer support for problem resolution.

1. From the Start menu, select *Programs*.

2. Select *iWay Servertype*.

3. Select *Diagnostic Functions*.

4. Select *Install Debuggable Version*.

Uninstalling the Server

Ensure that the server is stopped and execute the uninstall program in the server's program group (for example, iWay 52 Server). This program removes the EDAHOME and EDACONF directories of this server instance.

If you have more than one configuration using the same EDAHOME directory, the additional configurations contain unconfigure icons instead of uninstall icons. If you want to uninstall your initial configuration, you must unconfigure the additional configurations first. If you do not unconfigure these instances before uninstalling the EDAHOME directory, you disable the additional configurations, including their unconfigure utilities. A manual cleanup is then required.

Troubleshooting

Safe Mode

If the server starts in safe mode normal, normal use of the server is disabled. However, the administrator can connect to the Web Console to fix the problem. When the Web Console is started the reason the server is in safe mode is listed on its Home page. Click the fix hyperlink listed under the problem and make the correction. Save and restart the server. A common reason for the server to start in safe mode is that the server_admin_password is not correct.

CHAPTER 3

Server Installation for UNIX

Topics:

- Installation Requirements
- Installing the Server
- Verifying the Server Installation
- Configuring the Server With Different Security Modes
- General Server Startup and Use
- Troubleshooting

This document describes the requirements and procedures for proper installation of the Server for UNIX.

Installation Requirements

Before beginning server installation, review the following requirements:

- Supported Platforms and Operating Systems

- Disk Space Requirements

- Memory Usage

- Communications Requirements

- Installation User ID Requirements

Supported Platforms and Operating Systems

The following table lists supported platforms and operating system releases. Confirm that your platform and operating system release are supported and that the label on the CD identifies the correct software.

Important: The CD label displays the platform and operating system release on which the software was built. The software will run on the designated or higher release. However, DBMS support must be taken into consideration when selecting software. Please consult your local branch if you have any questions.

Operating System Release and CD Label
Compaq Tru64 V4.0D
Compaq Tru64 V5.0A
HP-UX 11 (32 Bit)
HP-UX 11 (64 Bit)
IBM AIX 4.2.1
IBM AIX 4.3.3
IBM AIX 4.3.3 (64 Bit)
IBM/z Series OS/390 Linux (2.49 Kernel)
NCR MP-RAS 3.02
RedHat Linux 6.2 (2.2.14 Kernel) for Intel
RedHat Linux 7.2 (2.4.7 Kernel) for Intel
Sequent Dynix/ptx 4.5.1

Operating System Release and CD Label
Siemens Reliant 5.45
SUN Solaris 2.6
SUN Solaris 7 (64 bit)
SUN Solaris 8 (64 bit)

Note:

- To use the server, Korn Shell (ksh) must be installed on your system. Since Korn Shell is not installed with Linux, Linux sites must install the Public Domain Korn Shell (pdksh) package from their respective Linux vendor.

- Bull Escala - Use software for IBM AIX.

- Siemens-Fujitsu PRIMEPOWER - Use software for SUN Solaris.

The server also supports a range of data adapters for Adabas/C, DB2 UDB, C-ISAM (Informix), Essbase, Informix (SDK), Ingres II, Oracle, Progress, Red Brick, Sybase (ASE and IQ), Teradata, Nucleus and UniVerse; see the DBMS support chart for specific combinations on any given platform. Specific DBMS information (such as release levels, user IDs, and passwords) is not used during basic installation, but will be used later during configuration.

Disk Space Requirements

The following are approximate disk space requirements. Specific sizes may vary slightly with options selected during configuration. The usage numbers do not include space for actual applications, databases, sort space, output preparation, or logs.

Platform	Version	After Install
HP HP-UX	11 (32Bit)	122 megabytes
IBM AIX	4.2.1	37 megabytes
Sun Solaris	2.6 (32-bit)	120 megabytes

Memory Usage

Memory and shared memory usage depend on the following elements:

- Number of data access agents.

- Type of access performed: joins, large retrieval, etc.

- Connection queue.

Actual memory usage differs between the various UNIX implementations and the server load. The following table shows the shared memory usage for installation and operation of the server.

Platform	Workspace Memory	Memory Per Agent	Listener Memory
HP HP-UX 11 (32bit)	.7 Megabytes	1.7 Megabytes	Any .7 Megabytes
IBM AIX 4.2.1	1 Megabyte	2.2 Megabytes	Any .6 Megabytes
Sun Solaris 2.6 (32bit)	2 Megabytes	18 Megabytes	Any 5 Megabytes

Communications Requirements

The TCP/IP Transport protocol is supported on all platforms and is the primary method of communications between iWay-enabled connector applications and iWay Servers. The SNA (LU6.2) protocol is also supported on a limited set of platforms. The following topics describe specific protocol requirements.

Communications Protocol	Requirements
TCP/IP	Up to 4 consecutive open ports for each server you want to run will be used. Since an initial installation also yields an initial configuration, a set of port numbers must be available at install time.
SNA (LU6.2)	The System Administrator should confirm that: • The System Network Architecture (SNA) software is configured on both target nodes in the network. • An SNA configuration for intra-node communications exists. This is required in order to directly test the configuration locally. For information on supported versions of SNA software, see *Software Release Requirements for SNA (LU6.2)* on page 3-5.

Reference   **Software Release Requirements for SNA (LU6.2)**

The following software releases are supported for SNA (LU6.2):

Platform	Software	Version
HP	SNAplus	Version 4.0
IBM	Communications Server	Version 5
NCR	SNA Services	Version 3.01
Sun	SunLink SNA/PTP	Version 9.1

Installation User ID Requirements

The operating system ID you use when installing the server will own the files and is the default server administrator. Server administrators are users that have permission to start and configure the server. You can create a new operating system ID to run and own the server files or use any ordinary (non super user) ID. However, you should not install the server as root.

Through out this documentation, the name "iadmin" is used to refer to the server administrator ID and group, but you may use any name for this ID. The "iadmin" ID should have a Korn or Bourne shell as the default logon shell.

When running the server in secured mode, end users and applications are authenticated against the operating system when they need access to the server. Therefore, in additional to the "iadmin" ID, operating system IDs must be available for end users and applications to access the server. Server data access agents will impersonate these IDs before performing any file access on their behalf. For security purposes, you should not allow end users and applications to use the "iadmin" ID. The "iadmin" ID should be available only to users who require administrative privileges to the server.

Installing the Server

Installation takes place in three steps:

- Mounting the software CD.

- Performing the installation.

- Dismounting the software CD.

Mounting the Software CD

Before beginning installation, you must make the software on the CD accessible to the user performing the actual installation. To do this, the media may be mounted and the setup program directly accessed; or the media may be mounted and the contents copied to disk for later access.

Procedure **How to Mount the Software CD**

If the machine on which the software is being installed does not have a CD device, see *How to Mount the CD on Machines Without a CD-ROM Device* on page 3-8.

1. Log on as root. (This is usually required by the mount command.)

2. If you do not have a standard location for mounting CD media, create a directory to which you will mount the CD; for example, /cdrom.

3. After inserting the software CD into the CD drive, mount the CD by issuing the following command:

For Operating System	Enter
Compaq Tru64	`mount -t cdfs -o noversion device_name /cdrom_directory`
HP HP-UX	`mount -F cdfs device_name /cdrom_directory`
IBM AIX and Bull Escala	`mount -r -v cdrfs device_name /cdrom_directory`
Linux (Any vendor)	`mount device_name /cdrom_directory` **Note:** Linux will usually auto mount your CD as /cdrom or /mnt/cdrom; no further actions need to be taken.
IBM Dynix/ptx, NCR MP-RAS and UnixWare	`mount -F cdfs -r device_name /cdrom_directory`
Siemens Reliant	`mount -F hs device_name /cdrom_directory`
Solaris (without volume management)	`mount -F hsfs -r device_name /cdrom_directory`
Solaris (with volume management)	A CD is auto mounted as: `/cdrom_directory/iWay` **Note:** iWay is the standard volume label for iWay CDs.

where:

`device_name`

Is the system name for your CD device. Consult your UNIX System Administrator for the name of the device for your platform.

`cdrom_directory`

Is the directory to which you will be mounting the CD drive. This is a static directory for Solaris Volume Management.

The CD will now be accessible to the ID doing the actual install.

The install process does not require that any files be copied to disk before running the setup program. The setup program can be accessed directly from the CD.

Procedure **How to Mount the CD on Machines Without a CD-ROM Device**

If your machine does not have a CD device, the following steps must be followed prior to installation:

1. Unload the CD to a disk drive on a machine on your network that has the appropriate device. Usually, any UNIX or PC machine may be used.

2. Transfer the CD files (in binary mode) to a temporary directory on the machine on which you wish to install the software.

3. Continue as though the machine you are using has a CD device, but specify actual disk drive locations.

Note: Files transferred from a PC might be capitalized on the CD. After the ftp, these files must be renamed in lowercase, and the permissions on the files must be checked. Permissions should be as follows:

-rwxr-xr-x	inu.out
-rw-r--r--	iserver.tar
-rwxr-xr-x	isetup

Use the chmod command to change permissions if necessary.

Procedure **How to Install the Server**

Note: For performance reasons, the software should not be installed or accessed using NFS-mounted disks; a directly connected disk is always preferable.

1. Log on as the iadmin user ID.

   Note: Logging on with the iadmin ID is recommended (rather than with "su"; from root).

2. Set the default protection mask to minimally read/execute (if it has not already been set to that option). For example:

   ```
   $ umask 022
   ```

   The install procedure may be run from any directory; you do not need to "cd" to that directory (provided the full path name is used). Also ensure that you have write privileges to the directory from which you are running the command. To test this, enter:

   ```
   $ touch xxxx
   ```

3. The installation procedure name is isetup. Call it using the appropriate full path name to the CD location (or where ever the procedure is located).

   ```
   $ /cdrom/isetup
   ```

   The isetup program requires a license key plus five basic parameters. The default values are presented at the beginning of the program. You may skip to final confirmation; otherwise, you are prompted for individual changes.

   The five required parameters are:

Parameter	Description
EDAHOME	Location for actual software.
EDACONF	Location for default configuration.
APPROOT	Location for default applications and sample applications.
Server Admin Password	Password to access Web Console when running the server in WCPROTECT mode. Supplying a password is recommended.
TCP Base Port	The port number the server's TCP Listener listens on. Also the start of the set of four port numbers used by the server for other TCP-based services.

   Note: If you select N at the default settings prompt, you also have the option to install demo files. If you wish to install the demo files, select N at the default settings prompt and choose a language for the demo when prompted.

Generating a UNIX Installation

The following is an example of a Full-Function Server installation that shows the defaults being taken. If you are satisfied with the selections, answer yes to the final prompt and wait for the return of the command prompt before proceeding to the next step.

If you decide to change a default, you will be prompted for the individual values. However, there are some rules about directory locations. The default location is the iadmin user ID home directory. The EDAHOME directory path name is locked into the pattern *ibi/srv52*/home*. If you change EDAHOME, the default EDACONF follows the change in the pattern. EDACONF can also be changed, but is locked into a similar pattern.

```
$ /cdrom/isetup

-----------------------------------------------------------------------

              Welcome to the Product Set Up Facility
    Please respond to the prompts or enter Q to quit at any prompt.

-----------------------------------------------------------------------

Select an options:

   1. Install and Configure
   2. Add Additional Configuration Instance
   3. Refresh Installation (Reinstall, Keep Configurations)
   4. Install Debuggables to the Installation Directory

Enter a selection (Default=1) : 1

-----------------------------------------------------------------------

Enter your License Key (Format 999-999-9999) :   xxx-xxx-xxxx

   License Key has been checked

   Product: Full Function Server
   Maximum Number of Users: 2
   Maximum Number of CPUs: 2

ISETUP: License xxx-xxx-xxxx has been accepted

-----------------------------------------------------------------------

Please enter the full path name of the media for the product

(Default=/cdrom/iserver.tar)
```

```
Please supply media or <Enter> :

------------------------------------------------------------------------

Enter the Server Administrator (iadmin) Password:

------------------------------------------------------------------------

Please review the default settings.

EDAHOME =/home/iadmin/ibi/srv52/home
EDACONF =/home/iadmin/ibi/srv52/ffs
APPROOT =/home/iadmin/ibi/apps
TCP_BASE_PORT = 8100

If you are satisfied with the default settings you may proceed to
final confirmation else you will be prompted for individual values.
Proceed with defaults? (Y/N Default=Y)           :   y

The following selections have been made for ...

Install Options ...
   INSTALLATION_DEVICE = /cdrom/iserver.tar
   PRODUCT = server
   EDAHOME = /home/iadmin/ibi/srv52/home

Configure Options ...
   EDACONF = /home/iadmin/ibi/srv52/ffs
   EDAHOME = /home/iadmin/ibi/srv52/home
   LICENSE = xxx-xxx-xxxx
   APPROOT = /home/iadmin/ibi/apps
   SERVER_TYPE = ffs
   SERVER_NAME = "IWay 52 Full Function Server"
   SERVER_ADMIN_ID = iadmin
   SERVER_ADMIN_PASSWORD = 2E17EEB1CF514BA4
   TCP_BASE_PORT = 8100

Please confirm these values with one of the following responses ...

   Y = Accept and Proceed
   N = Start Over
   Q = Quit

Please supply confirmation: Y

Please, wait while we are installing the server ...

ISETUP: Installation Step completed
```

```
Please, wait while we are configuring the server ...


ISETUP: Configuration Step completed

----------------------------------------------------------------------

Would you like to start the server (Y/N Default=Y)? : Y

ISETUP: The server has been started

----------------------------------------------------------------------

To administer the server go to a web browser
and open the URL http://hostname:8101
$
```

Additional Configurations

If you have additional licenses and need to configure an additional server, log on with the iadmin ID and run EDAHOME/bin/isetup, where EDAHOME is the directory in which the software was installed. At the main menu, select option 2, Add Additional Configuration Instance.

The prompts for adding a configuration are similar to those for an installation, but EDAHOME is the directory where the software was originally installed. Typically, you would not want to accept the defaults, as doing so will cause your current configuration to be overwritten. If the supplied EDACONF already exists, the installation will copy it to a directory called BACKUP.

Refreshing Installation Directories

Sometimes it is necessary to refresh the installation of the server. To do this run, the isetup program located in the EDAHOME/bin directory. At the main menu, select option 3, Refresh Installation (Reinstall, Keep Configuration). This refreshes programming files under the server installation directory and does not affect any configuration directories. However, it does remove any patches that may have been applied to the server.

How to Dismount the Software CD-ROM

When you have finished accessing the CD, dismount and store it. All UNIX vendors use the following command to dismount:

`$ umount /cdrom_directory`

where:

`cdrom_directory`

Is the mount point directory used in the original mount command.

Normally you will not need the CD again unless a support situation requires debuggable versions of the software to be installed. A set of debuggable versions matching the original software is provided on the CD for this situation if it should arise.

Verifying the Server Installation

After completing the installation, you should verify that the server is functioning properly.

Procedure **How to Test the Server Installation**

To test the installation, use the initial configuration that is created by the installation. The server may be brought up, checked, connected to, tested, disconnected, and shut down using the following basic steps.

1. Log on as the iadmin user ID.

2. Start the server with appropriate path to edastart and -start option:

    `/home/iadmin/ibi/srv52/ffs/edastart -start`

3. Check to ensure that the processes are up with -show:

    `/home/iadmin/ibi/srv52/ffs/edastart -show`

4. Start the Web Console by starting a browser pointed at the HTTP Listener Port of the server. The URL format is http://host:port. For example, if the default ports were used during installation, use http://host:8101 for an iWay Server and http://host:8121 for a WebFOCUS Server. The HTTP Listener port number is one higher than the TCP Listener Port specified during the installation.

5. If the server is running secured, you will receive a logon screen. Log on as the iadmin user ID.

    Note: For information on how to configure the server for Secured Mode, see *Configuring the Server With Different Security Modes* on page 3-14.

6. The Home Page of the Web Console will open. The Home Page is arranged in a menu-like context for the various features it supports. Detailed use of the Web Console for configuration or general operation of the server is available by clicking Help in the left navigation menu and in the *iWay Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

7. The Home Page has a link for testing the server. Click the Test Basic Server Functionality link to run a sample report.

8. If you are done using the server, you can stop it through the Web Console by clicking Workspace on the left and then Stop.

9. If there are startup problems, examine the /home/iadmin/ibi/srv52/ffs/edaprint.log file.

Installing the Debuggable Version

As with any complex software product, there is sometimes a need to produce traces and other information in order to identify problems. The product is shipped with a debuggable version. If necessary, it should be installed using the isetup tool. Select option 4, Install Debuggables to the Installation Directory, from the main menu. The original installation CD is required in order to complete this installation. The debuggable version should not be installed and activated unless explicitly requested by customer support for problem resolution.

Configuring the Server With Different Security Modes

There are three security modes for a server.

1. **Security OFF.** This is the default unless security was configured.

2. **Security ON.** With security ON, users must either send a password to connect to the server or use some other form of verification.

3. **Security WCPROTECT.** With security WCPROTECT, users are not verified against the operating system, but will be verified against the edaserve.cfg file when logging into the Web Console.

Each of these security options can be set with the EDAEXTSEC variable, as follows.

```
export EDAEXTSEC={ON|OFF|WCPROTECT}
```

The default is OFF unless the server has been configured for Secured Mode, as described below; then the default is ON.

Procedure **How to Configure the Server for Secured Mode**

Although the actual installation is done with an ordinary user id, this procedure requires root permission.

Note: The server should be down when carrying out this procedure.

1. Log on as root or su to root.

2. Change your current directory to the bin directory of the home directory created during the installation procedure.

    For example, enter the following command:

    ```
    cd /home/iadmin/ibi/srv52/home/bin
    ```

3. Change file ownership permissions by entering the following commands:

    ```
    chown root tscom300.out
    chmod 4555 tscom300.out
    ```

4. Verify your changes by issuing the following command:

    ```
    ls -l tscom300.out
    ```

    The output should be similar to the following:

    ```
    -r-sr-xr-x 1 root iadmin 123503 Aug 23 04:45 tscom300.out
    ```

    Note the permissions and ownerships.

When you start the server, it will run with security on.

Procedure **How to Configure the Server for WCPROTECT Mode**

1. Prior to starting the server, issue the variable EDAEXTSEC as follows:

    ```
    export EDAEXTSEC=WCPROTECT
    ```

2. Start the server.

A user will only be authenticated when connecting to the Web Console. Only IDs and passwords stored by the server in edaserve.cfg will have administrative access to the Web Console.

General Server Startup and Use

After configuring for secured mode (if desired), the server is started and managed with the same steps as those that start the Web Console and verify the server. For more information, see *How to Test the Server Installation* on page 3-13. If the server has not been configured for adapters yet, now is an appropriate time to do so using the Web Console and the *iWay Server Administration for UNIX, Windows NT, OpenVMS, OS/400, OS/390 and z/OS* manual.

Reference **Commonly Used Server Start Options and Functions**

Command and Option	Function
`edastart`	Starts server with the line mode console to actively view server log and dynamically issue edastart options such as show, traceon, and stop. Uses Control C to get console command prompt.
`edastart -start`	Starts the server without line mode console.
`edastart -sstart n`	Starts the server, but waits n seconds for actual start up.
`edastart -show`	Shows general status of server and agents.
`edastart -stop`	Stops the server.
`edastart -cleardir`	Removes all temporary directories and files created by the server.
`edastart -traceon`	Turns on tracing. May be used at initial start up or after start. Should not be turned on (due to overhead) unless there is a problem that needs to be traced. It is always preferable to run traces at initial start up time unless instructed otherwise.
`edastart -traceoff`	Turns off tracing.
`edastart -?`	Displays edastart options.
`edastart -?s`	Displays support information and support related options.

Troubleshooting

Safe Mode

If the server starts in safe mode normal use of the server is disabled. However the administrator can connect to the Web Console to fix the problem. When the Web Console is started the reason the server is in safe mode is listed on the HOME page. Click the fix hyperlink listed under the problem and make the correction. Save and restart the server.

Note: A common reason for the server to start in safe mode is that the server_admin_password is not correct.

Server Installation for OS/390 and z/OS

Topics:

- Installation Requirements
- Installing a New Server for OS/390 and z/OS
- General Server Startup and Use
- DB2 Security Exit Configuration
- Adding a Configuration Instance
- Upgrading Your Server Release
- Migrating From an MVS Server
- Frequently Asked Questions

This document describes the requirements and procedures for:

- Installing a new Server for OS/390 and z/OS (follow this document in sequential order).
- Adding a configuration instance (see *Adding a Configuration Instance* on page 4-31).
- Upgrading your Server for OS/390 and z/OS from an earlier Version 5, Release 2.x (see *Upgrading Your Server Release* on page 4-35).
- Migrating from the Server for MVS (see *Migrating From an MVS Server* on page 4-44).

The Server for OS/390 and z/OS supports data adapters for the following Database Management Systems (DBMSs):

```
Adabas       CA-IDMS/SQL   Teradata
BULL GCOS    CA-IDMS/DB,   SAP
Datacom,     IMS           Siebel
DB2 CLI,     Millennium    Supra
DB2 CAF,     MODEL 204     Total
EJB,         MQ Series     VSAM
Flat Files   Oracle        XML
FOCUS
```

You do not need specific DBMS information (such as release levels, user IDs, and passwords) for installation. This information will be needed later for configuration.

Installation Requirements

Before you begin server installation, review the operating system, disk space, memory, and communications requirements.

Operating System Requirements

The server requires the following operating system levels.

Operating System	Release
OS/390	2.10
z/OS	1.1 or higher

Disk Space Requirements

The following table lists approximate disk space requirements for each platform. Specific sizes may vary slightly with options selected during configuration. The usage numbers do not include space for actual applications, databases, sort space, output preparation, or logs.

Platform	Version	During Installation	After Installation
OS/390	2.10	1 Gigabyte	750 Megabytes
z/OS	1.1 through 1.4	1 Gigabyte	750 Megabytes

Memory Requirements

Memory usage of a configured environment consists of the following elements:

- Workspace Manager

- Listeners

- Concurrently running application agents

Actual memory usage depends on application features and differs between applications. The following table lists memory usage values:

Platform	Workspace Memory	Memory Per Agent
OS/390	9 Megabytes	1.2 Megabytes
z/OS	9 Megabytes	1.2 Megabytes

Communications Requirements

The TCP/IP Transport protocol is supported on all platforms and is the primary method of communication between connector applications and servers. Up to four consecutive open ports for each server you want to run will be used. The starting number of consecutive ports is required for installation.

Installing a New Server for OS/390 and z/OS

To install a new Server for OS/390 and z/OS, perform the following steps.

Step 1. Establish the HFS Directory for the Server

The server installation requires a set of HFS directories where the product executable files, configuration files and sample applications are loaded. The server also use HFS directories for temporary files during the server operation by default. Application files (MFD/FEX) can be kept in the HFS directories or in PDS.

To better control the space allocated to server software, we recommend defining a separate HFS data set, OMVS.IADMIN, and mounting it as /u/iadmin for the exclusive use of the server. Note that both names can be changed and existing HFS data sets used as an alternative.

Step 1a. Define the HFS Data Set

Create the JCL to define the HFS data set, add a job card, and submit. In the following sample JCL, the name assigned to the HFS data set is OMVS.IADMIN.

```
//********* JOB CARD GOES HERE ************//
//
//************DEFINE HFS *****************//
//DEFWEB EXEC PGM=IEFBR14
//DD1 DD DISP=(NEW,CATLG),DSN=OMVS.IADMIN,DSNTYPE=HFS,
// VOL=SER=VPWRKC,DCB=(DSORG=PO),
// SPACE=(CYL,(1200,5),,CONTIG,ROUND)
```

Step 1b. Mount the File System

At the command line in Option 6 of ISPF, issue the following commands

```
MOUNT FILESYSTEM('OMVS.IADMIN')
MOUNTPOINT ('/u/iadmin') TYPE (HFS) MODE (RDWR)
```

where:

OMVS.IADMIN

> Is the name associated with the file system defined in Step 1a.

/u/iadmin

> Is the mount entry point for the file system. Specify a directory appropriate for your site.
>
> The specified directory must exist before you issue the MOUNT command.

Update your BPXPRMXX member in SYS1.PARMLIB to permanently mount the file system.

Step 2. Set Up User IDs

To install and run the server, you will need to set up the following user IDs:

- **Server Administration User ID (Non-Super User).** The installation of the server requires at least one non-super user ID that has read access to the BPX.FILEATTR.APF Facility file. This ID must have a unique numeric UID (User ID Definition). This ID should be available only to users who require administrative privileges to the server.

  We recommend that you assign *iadmin* as the ID for installing and running the server; this is the name used throughout the installation procedure. However, you can choose any site-specific user ID with a unique numeric UID.

- **Server System User ID (Super User).** If you plan to run the server with security on, you must create a super-user Server System ID for the server. This ID must have UID(0) specified in its RACF definition. The server will use this ID when it needs super user privileges for commands such as changing ownership. This allows multiple users to access the server and execute requests based on the methods used by WebSphere and IBM's HTTP Server.

  We recommend that you assign *iserver* as the Server System ID. However, you can choose a site-specific user ID.

  Note: Should you wish to change this system ID after the server is installed, you can edit the edaserve.cfg file and restart the server.

- **General User IDs.** For server users, ensure that each user ID has an OMVS segment.

Step 2a. Define the Server Administration User ID

The following sample definition of a server administration user ID is created using RACF commands that only the Security Administrator can issue.

```
ADDUSER iadmin PASSW(xxxx)
DFLTGRP(OMVSGRP)
OMVS(UID(8) HOME('/u/iadmin') PROGRAM('/bin/sh)')
TSO(ACCTNUM(12345) PROC(PROC01))
```

Verify that the above ADDUSER command completed successfully. To do so, issue the following command:

```
[TSO] LISTUSER iadmin OMVS NORACF
```

You should receive the following response:

```
USER=iadmin
OMVS INFORMATION
------------------------------
UID=0000000008
HOME=/u/iadmin
PROGRAM=/bin/sh
```

A Security Administrator must update the Facility classes of RACF, as shown below. The following commands are issued with ISPF Option 6:

```
RDEFINE FACILITY BPX.FILEATTR.APF  UACC(NONE)
PERMIT BPX.FILEATTR.APF CL(FACILITY) ID(iadmin) ACCESS(READ)
```

For the above commands to take effect, the RACF Facility class will have to be refreshed.

```
SETROPTS RACLIST(FACILITY) REFRESH
```

Verify that the home directory of the server administration user ID is correct. To do so, issue the following command from omvs:

```
pwd
```

You should receive the following response:

```
/u/iadmin
```

This directory should be the home directory specified in the UID definition for iadmin.

For a second confirmation, issue the following command:

```
echo $HOME
```

You should receive the following response:

```
/u/iadmin
```

Verify that the server administration user ID has a unique UID and the correct GID defined. To do so, log on using the IADMIN user ID and, from omvs, issue the following command and press *Enter*:

```
id
```

You should receive the following response:

```
uid=0000000008(IADMIN) gid=50(group)
```

This UID and GID should match what is defined in the OMVS segment.

Step 2b. Define the Server System User ID

The following sample definition of a server system user ID is created using RACF commands that only the Security Administrator can issue.

```
ADDUSER iserver
DFLTGRP(OMVSGRP)
OMVS(UID(0) HOME('/u/iserver') PROGRAM('/bin/sh'))
```

Verify that the above ADDUSER command completed successfully by issuing the following command:

```
[TSO] LISTUSER iserver OMVS NORACF
```

You should receive the following output:

```
USER=iserver
OMVS INFORMATION
-----------------------------
UID=0000000000
HOME=/u/iserver
PROGRAM=/bin/sh
```

Step 2c. Add OMVS Segment to General User IDs

For users of the server, ensure that each user ID has an OMVS segment (or is setup to use a default user ID as documented in the IBM manual *UNIX System Services Planning*). To modify an existing TSO user ID profile, from ISPF Option6, issue the following command

```
ALTUSER user_ID OMVS(UID(nnn) HOME('/u/user_ID') PROGRAM('/bin/sh'))
```

where:

user_ID

    Is the user ID you are modifying.

Step 3. Collect Required Information for Data Adapters

For the data adapters listed in the following table, the installation procedure will prompt you for the specified information. For all other data adapters, no information is required during installation.

Data Adapter	Information Required	Format / Notes
Adabas	Load library	DSN
CA-Datacom	Load library	DSN
DB2 CAF	SDSNLOAD load library	DSN (if not already in linklist.) For security information, see *DB2 Security Exit Configuration* on page 4-26.
DB2 CLI	CLI DSNAOINI	Environment variable. Full path and file name of DB2 CLI ini file. For example: `/u/iadmin/db2cli.ini`
CA-IDMS/DB and CA-IDMS/SQL	IDMS.LOADLIB IDMS.DBA.LOAD.LIB SYSCTL SYSIDMS	DSN DSN DSN DSN
IMS	DFSPZP DFSRESLB load library	DSN DSN
MODEL 204	M204 load library	DSN
Oracle	ORACLE_SID ORACLE_HOME LIBPATH	Environment variable: Oracle SID Environment variable: Oracle home directory Environment variable: location of Oracle lib directory, usually $ORACLE_HOME/lib
Supra	LINKLIB INTERFLM ENVLIB CSIPARM	DSN DSN DSN DDNAME: points to the data set that contains the CSIPARM definition, which in turn points to the Central PDM you are accessing. For the name of this file, contact your Supra Database Administrator.

Note: If you are using non-APF authorized DBMS Libraries, you must allocate the libraries to the DDNAME TASKLIB in the ISTART JCL. The installation routine collects the information and allocates the required libraries in STEPLIB.

After the server is installed and configured, data adapters can be configured using a Web-based server configuration tool called the Web Console.

Step 4. Copy the Installation Software From Tape or FTP

There are two ways to unload the installation media:

- **From Tape.** The software is provided on a cartridge in 3480 or 3490 format with both MVS PDSs and HFS tar files. You must unload the installation data set from the tape before you can run the installation as explained below in *Unloading From Tape* on page 4-8. This is how most installations are performed.

- **From FTP/Disk.** The software can be downloaded from a special FTP site and includes both an MVS data set and HFS files. You must allocate space and ensure that the MVS data set and HFS files are in the appropriate locations as explained below in *Copying From FTP/Disk* on page 4-10. You must contact your Information Builders representative if you wish to use this option.

Unloading From Tape

The software is provided on a cartridge in 3480 or 3490 format with both MVS PDSs and HFS tar files. Perform the following to unload the installation data set from the tape:

1. Log on to TSO with the iadmin user ID. This user ID must have an OMVS segment defined and access to the HFS directory where the product will be installed.

2. Run an IEBCOPY job to allocate and unload the *qualif*.HOME.DATA data set. This PDS contains the members needed for the actual installation.

The following is sample JCL for the initial unload to a new data set:

```
//IEBCOPY  EXEC PGM=IEBCOPY,REGION=0M
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD UNIT=workunit,SPACE=(CYL,(5,1))
//OUT1     DD DISP=(NEW,CATLG,DELETE),
//          DSN=qualif.HOME.DATA,
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200),
//          SPACE=(CYL,(1,5,25)),
//          UNIT=SYSDA
//IN1      DD DISP=(OLD,PASS),
//           DSN=HOME.DATA,
//           UNIT=cart,
//           VOL=(,RETAIN,,SER=volser),
//           LABEL=(1,SL)
//SYSPRINT  DD  SYSOUT=*
//SYSIN     DD  *
  COPY INDD=IN1,OUTDD=OUT1
```

where:

workunit

> Is the unit for the work data set.

qualif

> Is the high-level qualifier for HOME.DATA and for all other MVS data sets that the installation procedure allocates. We recommend that the high-level qualifier reflect the release of the server (for example, IADMIN.SRV52). However, you can use any site specific value.

> **Note:** Using a low-level qualifier such as HOME.DATA is recommended, but any site specific value can be used.

cart

> Is the unit type of the tape drive. Common names include 3480, TAPE, or 3490. Change as needed.

volser

> Is the value shown on the media label.

After this job has run, *qualif*.HOME.DATA is allocated, cataloged, and populated with the members needed to continue the product installation.

Proceed to

Copying From FTP/Disk

This section only applies when installing from FTP/Disk. You must contact your Information Builders representative before attempting this.

1. Log on to TSO with the iadmin user ID. This user ID must have an OMVS segment defined and access to the HFS directory where the product will be installed.

2. Allocate a temporary sequential data set with a name such as the following:

   `qualif.ISERVER.DATA`

   and the following attributes:

   `LRECL(80),RECFM(F,B),BLKSIZE(3120),SPACE=(TRK,(2,2))`

   Note: Substitute the name you use for *qualif*.ISERVER.DATA in the steps below.

3. Create a temporary HFS directory to hold the installation files. For example:

   `/u/iadmin/download.`

4. Using TSO or ISPF option 6, connect to the FTP site using the information provided by your Information Builders representative.

5. Once connected, type the following to indicate a binary transfer:

   `binary`

6. Type the following to get the MVS installation software:

   `get iserver.data 'qualif.ISERVER.DATA' (replace`

7. Type the following to indicate the location for the HFS files:

   `lcd /u/iadmin/download`

8. Type the following to get the HFS files:

   `mget *`

   You will be prompted to accept the transfer of 7 files (6 HFS files and 1 MVS data set).

   `Mget inu.out (Yes|No|Quit|Stop prompting)?`

9. Enter:

   `Yes`

   to accept the transfer of all **except for** the iserver.data data set indicated by a prompt such as the following:

   `Mget iserver.data (Yes|No|Quit|Stop prompting)?`

10. When you receive the above prompt, enter:

    `No`

11. When all 6 HFS files have been transferred, type the following to exit FTP:

```
quit
```

12. Under TSO, explode the sequential file *qualif*.ISERVER.DATA created above into a PDS using the following command:

```
RECEIVE INDSN('qualif.ISERVER.DATA')
```

13. At the restore parameters prompt, type the following to create the *qualif*.HOME.DATA PDS:

```
DSNAME('qualif.HOME.DATA')
```

Note: Using a low-level qualifier such as HOME.DATA and a high-level qualifier that reflects the release of the server (for example, IADMIN.SRV52) is recommended. However, you can use any site specific value.

In the ISETUP procedure below, be sure to specify *(D)isk* for the Input Source and provide the HFS directory into which you transferred the installation files.

Step 5. Run ISETUP

Server installation consists of a series of ISPF panels, which gather the required information After the panel dialog is complete, JCL is created and submitted (if required) to install the server on OS/390 and z/OS. This JCL job retrieves the remainder of the MVS libraries and HFS files from the media and configures a basic working server.

To begin, using option 6 in ISPF, execute the ISETUP member in your *qualif*.HOME.DATA. The first Installation and Configuration panel opens:

```
IWay Software            Installation and Configuration          OS/390 and z/OS
Command ===>                                                              P1

Welcome to the Product Set Up Facility
Please respond to the following selection

Select an option:

        1. Install and Configure
        2. Add Additional Configuration Instance
        3. Refresh Installation (Reinstall, Keep Configurations)

Enter selection (Default=1) ===>
Enter License Key            ===>      -      -      Last License key processed
Input source                 ===> T                 (T)ape or (D)isk



Enter Job Card information                 Override JOB name checking ===> N
===> //IADMIN JOB (ACCT INFO),_____
===> //*_____
===> //*_____
Press Enter to continue, PF3 to END or PF1 for Help
```

1. Complete the panel as follows:

`Enter selection`	Accept the default value 1, *Install and Configure*, for a new installation. **Note:** • For option 2, *Add Additional Configuration Instance*, see *Adding a Configuration Instance* on page 4-31. • For option 3, *Refresh Installation*, see *Upgrading Your Server Release* on page 4-35.
`Enter License Key`	Enter the 10-digit License Key that was provided with the software. Be sure to store this key in a safe place for future reference.
`Input source`	Choose the input source, T for Tape or D for Disk. The default value is T. **Note:** If you downloaded the server software via FTP, choose D and, on the next panel, provide the directory name where the transferred files reside.
`Enter Job Card information`	To provide valid JCL for submitting jobs to the JES queue, provide a valid job name (a maximum of the first seven characters following the // on the first JCL line), which defaults to the user ID that you are currently using. This job name, plus a job name character (A,B,C and so on) is used in the JCL generated by the installation procedure.
`Override JOB name checking`	To provide your own JOB Card information, provide valid JCL and select 'Y' for the "Override JOB name checking" question. This will cause the same JCL to be used for all jobs created.

2. Press *Enter* to continue to the next panel.

```
IWay Software            Installation and Configuration         OS/390 and z/OS
Command ===>                                                                  P2
                               New Installation

Please enter the following information for Full Function Server

  Input Media (blank any field for default)
    Volume serial number      ===> T5203U
    Volume unit type          ===> 3480
    Work unit type            ===> SYSDA

  Installation parameters (blank any field for default)
    HFS Base Directory        ===> /u/iadmin/ibi/srv52/ffs
    HFS APPROOT Directory      ===> /u/iadmin/ibi/apps
    Server System Userid      ===> ISERVER
    TCP Base Port             ===> 8100

  MVS Installation Libraries
    EDACONF Library           ===> IADMIN.SRV52.FFS.DATA
    EDAHOME Library           ===> IADMIN.SRV52.HOME.LOAD
    EDAHOME Library Unit      ===> 3390      Volume ===> USERMA

Press Enter to continue, PF3 to return to previous menu or PF1 for Help
```

3. Complete the panel as follows:

Input Media	
Note: If installing from disk, provide the directory name where the installation files reside.	
`Volume serial number`	Provide the volume serial number for the server media. This volume serial number is located on the tape supplied in you server package. The value shown is an example of the required format.
`Volume unit type`	Review the default value and change if necessary.
`Work unit type`	Review the default value and change if necessary. **Note:** The *Work Unit Type* field can specify a UNIT= type value (for example, SYSDA) or to direct work files to a specific volume serial number you can specify, in single quotation marks ('), 'SYSDA,VOL=SER=volume'.

Installation parameters	
`HFS Base Directory`	This indicates where to install the server. The default value is the home directory of the user ID you are using to install the product. Change this value, if necessary, to a valid directory that has space for the installation. The installation procedure checks whether this directory exists and has enough space. If either test fails, you will receive a message indicating the failure and available options.
`HFS APPROOT Directory`	This indicates where application components will reside. The default value is based on the value specified for *HFS Base Directory*. To specify another location for application components, change the value for this field.
`Server System Userid`	This shows the default value, ISERVER. To change this value, see the requirements in *Step 2. Set Up User IDs* on page 4-4.
`TCP Base Port`	This indicates the first of four consecutive ports that must be available for the listeners and other internal needs. For example, if you choose port 8100, then ports 8100, 8101, 8102, and 8103 are used by the server. Ensure that you choose ports that are not currently being used.

MVS Installation Libraries	
`EDACONF Library`	This is the full data set name the installation procedure will use to allocate the EDACONF configuration library on MVS. If you are running from *qualif*.HOME.DATA, this field will have the default value *qualif.server_type*.DATA (where *server_type* is based on License key). If you used another name to unload the first data set, this field will be blank. On subsequent running of ISETUP, the previous value used will be displayed. Change the value as necessary.
`EDAHOME Library`	This is the full data set name the installation procedure will use to allocate the EDAHOME load library on MVS. If you are running from *qualif*.HOME.DATA, this field will have the default value *qualif*.HOME.LOAD. If you used another name to unload the first data set, this field will be blank. On subsequent running of ISETUP, the previous value used will be displayed. Change the value as necessary.
`EDAHOME Library Unit/Volume`	These show the values that the installation process will use to allocate the EDAHOME load library on MVS. If necessary, you can change these to site specific values.

4. Press *Enter* to proceed to the next panel. Depending on your license key, you may receive the Data Adapter panel before the Demonstration Files panel. The Data Adapter panel lists adapters that require the allocation of MVS libraries in the ISTART JCL.

5. If you receive the Data Adapter panel:

   a. Place a 'Y' next to the required adapters and press *Enter* to proceed to the next panel.

   b. Supply the information required and press *Enter* to proceed to the Demonstration Files panel.

   For more information, see *Step 3. Collect Required Information for Data Adapters* on page 4-7.

   Note: After the server is installed and configured, you can use the Web Console to complete configuration of these data adapters and to configure adapters that do not have MVS JCL requirements.

6. In the Demonstration Files panel, place a Y next to the desired language and press *Enter* to proceed to the Confirmation panel.

Note: If you do not select a language, demonstration files are not installed.

```
IWay Software          Installation and Configuration        OS/390 and z/OS
Command ===>                                        _                    P4
                             New Installation

Please confirm the following information for Full Function Server

  Input Media
     Volume serial number     ===> T5203U
     Work unit type           ===> SYSDA
     Unit type                ===> 3480
  Installation parameters
     HFS EDACONF Directory     ===> /u/iadmin/ibi/srv52/ffs/ibi/srv52/ffs
     HFS EDAHOME Directory     ===> /u/iadmin/ibi/srv52/ffs/ibi/srv52/home
     HFS APPROOT Directory     ===> /u/iadmin/ibi/apps
     Server System Userid      ===> ISERVER
     TCP Base Port             ===> 8100
     EDACONF Library           ===> IADMIN.SRV52.FFS.DATA
     EDAHOME Library           ===> IADMIN.SRV52.HOME.LOAD
     EDAHOME Library Unit      ===> 3390   Volume ===> USERMA

Continue ? (N)o, (C)reate JCL only, (S)ubmit JCL  ===> N   (Enter N, C or S)

Press Enter to process, PF3 to return to previous menu or PF1 for Help
```

7. Ensure that all values on the Confirmation panel are correct, then select one of the following options:

• *N.* Select this option to return to the initial screen and change installation values.

• *C.* Select this option to create JCL to be submitted at a later time. The JCL is placed in your configuration library

• *S.* Select this option to create JCL and submit the job immediately.

8. As the job is processed, in SDSF, check the JESLOG for errors and return codes.

Following is a list of the jobs created. All members are created in the configuration library.

`ISETUPJ1` `ISOPTS1`	Main JCL Job stream that is used to install the server.
`ISTART`	Starts the server.
`ISTOP`	Stops the server.
`ICLEAR`	Clears server resources after abnormal end.
`ICLRDIR`	Clears super-user-owned directories from a previously run secure server.
`ISHOW`	Shows current workspace status.
`ITRCON`	Turns on dynamic tracing (server will be started if not already running).
`ITRCOFF`	Turns off dynamic tracing (server will be started if not already running).
`ISAVEDIA`	Creates a directory called sd*nnnnnn* and populates it with full diagnostic information.

The following table shows the HFS directory structures created during the install process.

`/u/iadmin/ibi/srv52/tape`	Contains HFS files from the input media.
`/u/iadmin/ibi/srv52/install`	Working directory for the installation process. Log and error files reside here.
`/u/iadmin/ibi/apps`	The installation creates *baseapp* and one or more sample application directories under this directory.
`/u/iadmin/ibi/profiles`	This is where the server profiles are created.
`/u/iadmin/ibi/srv52/home`	Server system directories are created under this directory.

`/u/iadmin/ibi/srv52/`*`server_type`*
 	
where:
 	
`server_type`
 	
    Is one or more of the following:
 	
    `ffs` Full-Function server
    `wfs` WebFOCUS Reporting Server
    `etl` ETL Server
    `wfm` WebFOCUS Maintain Server
    `cgw` Communications Gateway
    `aas` Application Adapter Server
	Configuration directories are created under this directory. The license key specified in the ISETUP procedure determines the *server_type*.

Example   **Server ISTART JCL**

The ISETUP procedure generates the configuration library *qualif.server_type*.DATA. This library contains the member ISTART, which starts the server. An example of the ISTART member follows:

```
//IADMINA    JOB  (IADMIN),'IADMIN',MSGCLASS=X,MSGCLASS=(1,1),CLASS=Y,
//           NOTIFY=IADMIN
//*
//TSCOM300   EXEC PGM=TSCOM300
//STEPLIB    DD   DSN=IADMIN.SRV52.HOME.LOAD,DISP=SHR
//EDAPRINT   DD   SYSOUT=*
//SYSPRINT   DD   SYSOUT=*
//SYSOUT     DD   SYSOUT=*
//EDAPARM    DD   *
//*
//EDAENV     DD   *
TZ=EST5EDT
EDACONF=/u/iadmin/ibi/srv52/ffs
PATH=/bin
SHELL=/bin/sh
```

Note: The TZ=EST5EDT is the Time Zone setting, which ensures that the timestamps found in the product files are accurate. The default is Eastern Standard Time. You can edit this setting to reflect a different time zone.

The license key determines the name of the configuration directory, which is automatically created by the ISETUP procedure.

Step 6. Test the Server Installation

To test the server installation:

1. Log on to TSO as iadmin.

2. Submit the ISTART JCL to start the server.

3. Check the job output for errors. Look for the EDAPRINT message:

   `Workspace initialization completed`

4. Start the Web Console by opening a browser pointed at the listener port of the server. The URL format is

   `http://host:port`

   where:

   host

   Is the name of the machine on which the server is installed.

   port

   Is one port higher than the port specified when installing the server. For example, if you specified port 8100 during installation, then use port 8101 to access the Web Console.

   The Web Console opens.

5. Click *Test* to run a sample report.

When you are finished using the server, you can use the Web Console to stop the server by selecting the Workspace link on the left and then choosing Stop.

If you experience problems at start up, examine the job output for more information.

Step 7. Configure Server Security

The server runs in one of the following security modes:

- **Security OFF.** This is the default unless security is configured.

- **Security ON.** All connecting users are authenticated against the security package (RACF, ACF2, Top Secret), and the data agents are impersonated according to the deployment mode to control access right to data files and dbms objects.

To configure server security:

1. Log on to TSO using an ID with read access to BPX.FILEATTR.APF FACILITY.

2. Using the name of the actual EDAHOME directory, change file attributes by entering the following TSO commands in ISPF Command Shell (option 6):

   ```
   OSHELL extattr +a /u/iadmin/ibi/srv52/home/bin/tscom300.out
   OSHELL extattr +a /u/iadmin/ibi/srv52/home/bin/tsqprx.out
   ```

3. Verify your changes by issuing the following command:

   ```
   OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tscom300.out
   OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tsqprx.out
   ```

   The extended attributes portion of the output should be a-s-

4. The libraries allocated to STEPLIB in the ISTART JCL must be APF-authorized. Any non APF-authorized libraries must be allocated the TASKLIB DDNAME.

5. Test server security by repeating the process described in *Step 6. Test the Server Installation* on page 4-20.

Configuring Security With Top Secret

If you use Computer Associates CA-TOP SECRET, follow these guidelines or refer to the security vendor's manual for implementing its SAF Interface for user-level security.

CA-TOP SECRET maintains security characteristics for each user and program in a "facility entry." Through a facility entry, the server must be defined to CA-TOP SECRET as a multi-user program requiring task-level authority.

To use CA-TOP SECRET, perform the following steps:

1. Create a CA-TOP SECRET facility entry called IWAY for the server security module, *PATHNAM .

2. Within this entry, include CA-TOP SECRET parameters to establish the proper operating characteristics.

3. Each user of the server must be defined to CA-TOP SECRET and given access to the appropriate system resources.

The following is an example of a facility entry that defines the server to CA-TOP SECRET:

```
FACILITY DISPLAY
INITPGM=*PATHNAME ID=9 TYPE=26
ATTRIBUTES=IN-USE,ACTIVE,SHRPRF,ASUBM,TENV,NOABEND,MULTIUSER,NOXDEF
ATTRIBUTES=LUMSG,STMSG,SIGN(M),NOPSEUDO,INSTDATA,NORNDPW,AUTHINIT
ATTRIBUTES=NOPROMPT,MENU,NOAUDIT,RES,NOMRO,WARNPW,NOTSOC
ATTRIBUTES=NOTRACE,NOLAB,NODORMPW,NONPWR,NOIMSXTND
MODE=IMPL
LOGGING=ACCESS,INIT,SMF,MSG,SEC9
UIDACID=8 LOCKTIME=000 DEFACID=*NONE* KEY=8
```

General Server Startup and Use

This section provides information on operation and use of the server. Additional information on the server and how to configure adapters is available in the Web Console help. The Web Console help is also available as the *iWay Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

Server Startup and Stop

- Startup

  Submit the ISTART member of the MVS configuration library for your server.

- Stop

  Submit the ISTOP member of the configuration library or use the Web Console.

Server Startup and Operation Using MVS Operator MODIFY Commands

On MVS, you can start the server using MODIFY commands either from the MVS Console or SDSF. You can use MODIFY commands to pass options to an already running job:

Use MVS Operator MODIFY commands in the following format:

```
MODIFY jobname, parameters
```

For instance:

```
MODIFY IWAY520,-SHOW
```

Note: If the server job is cancelled or it abends, submit the ICLEAR job in the configuration data set before restarting the server.

Batch Execution

The following sample jcl allows you to access data via an individual access agent TSCOM3 as a batch job. This is the equivalent to edastart -t in a Unix environment.

Make the following modifications to the ISTART JCL:

```
//INPUT        DD *
EX FEX
/*
//OUTPUT       DD SYSOUT=*
//EDAPARM
-t
/*
//EDAENV       DD *
TRMIN=//DD:INPUT
TRMOUT=//DD:OUTPUT
EDACURDIR=u/iadmin/ibi/srv52/ffs/edatemp
```

Note:

- The INPUT and OUTPUT DDNAMEs are arbitrary and can be any valid DDNAME except for TRMIN and TRMOUT. You can also allocate the INPUT and/or OUTPUT DDNAMEs to a data set if so desired.

- If the keyword EDACURDIR is not specified, then the output will be placed in the home directory of the user ID that is executing the request.

- The name of the FEX must always be UPPERCASE.

- Any parameters used in EDAPARM must start in Column 1 or the parameter will be ignored. Also, only one parameter can be used per line as shown below:

```
//EDAPARM
-t
-traceon
/*
```

Getting Diagnostic Information

If you encounter problems, you will need to submit the following information to iWay Technical Support:

- Server trace.
- JCL for ISTART.
- Job output.
- System dump (if needed).
- Any additional information regarding how the problem occurred.

To generate a server trace:

1. Turn tracing on from the Web Console or by running the ITRCON JCL member.
2. Reproduce the problem.
3. Stop the server.
4. Submit the ISAVEDIA member to produce the diagnostic information.

   A directory called sd*nnnnnn* is created under your configuration directory (for example, /ibi/server52/ffs/sd123456). Diagnostic information is placed in this directory. Make sure you have access to this directory.

Important: In order for the correct information to be copied to your directory, do not change anything in the EDAENV DD statement.

To generate a system dump:

1. Allocate DDNAME SYSMDUMP pointing to the data set with the following DCB parameters:

   ```
   RECFM=FB,LRECL=4160,BLKSIZE=4160.
   ```

2. To get the first dump, add the parameter FREE=CLOSE to your DD statement. The DD statement should appear as follows:

   ```
   //SYSMDUMP DD DISP=SHR,DSN=MYID.EDAPTH.SYSMDUMP,FREE=CLOSE
   ```

3. To get the LAST dump, the statement should appear as follows:

   ```
   //SYSMDUMP DD DISP=SHR,DSN=MYID.EDAPTH.SYSMDUMP
   ```

   Only two IDs must have privileges to write into this data set: ISERVER and IADMIN. General server users DO NOT need read or write access to the SYSMDUMP data set.

4. To prevent abendaid from intercepting the dump, add:

   ```
   //ABNLIGNR DD DUMMY
   ```

5. Save the entire job output for the server (including JES logs).

Turning Security OFF

In the event that security needs to be removed from the server, perform the following steps:

1. In the *qualif*.HOME.DATA(ISTART) JCL, add the following setting under the EDAENV DDNAME:

    EDAEXTSEC=OFF

2. Submit the *qualif*.HOME.DATA(ICLRDIR) JCL. This will clean any remaining files from when the server was running with security on.

3. Submit *qualif*.HOME.DATA(ISTART). The server will now be running with security turned off.

DB2 Security Exit Configuration

Customize the DB2 security exit to allow the Data Adapter for DB2 to run with user-level security enabled. If you do so, users will connect to DB2 with the authorization of the user ID with which they logged on to the server. The server must also be running with security turned on.

If you do not customize the DB2 security exit, all users will be assigned the connect ID to DB2 that is associated with the region, job submitter, or started task.

The changes that must be made to the IBM DB2 signon exit, DSN3SATH, differ for RACF and CA-TOP SECRET sites and CA-ACF2 sites.

*   For an example of the changes that must be made in DSN3SATH for RACF and CA-TOP SECRET sites, see *Changing DSN3SATH for RACF (Version 6.1 example code) and CA-TOP SECRET Sites* on page 4-27.

*   For an example of the changes that must be made in DSN3SATH for CA-ACF2 sites, see *Changing DSN3SATH for CA-ACF2 Sites* on page 4-29.

The arrows shown in the examples indicate the lines containing the recommended modification of DSN3SATH, which calls the module FOCDSN3 the supplied exit.

Once you have finished the edits, assemble the exit into an object file. This object file is input to the link JCL found in *Modifying the Link JCL for DSN3SATH* on page 4-30.

Note:

*   The positioning of these lines is appropriate, assuming that no other changes or additions have already been made to DSN3SATH. If any changes have been made, you should decide on the most appropriate location for this call to FOCDSN3.

*   FOCDSN3 is used to set the proper primary (individual user ID) authorization.

- Another program, FOCDSN4, is used to set the proper secondary (group ID) authorization for RACF and CA-TOP SECRET. FOCDSN4 is not needed with CA-ACF2; the secondary authorization ID(s) will be set correctly without it.

Example **Changing DSN3SATH for RACF (Version 6.1 example code) and CA-TOP SECRET Sites**

```
SATH001  DS    0H
         USING WORKAREA,R11      ESTABLISH DATA AREA ADDRESS ABILITY
         ST    R2,FREMFLAG       SAVE FREEMAIN INDICATOR
         XC    SAVEAREA(72),SAVEAREA CLEAR REGISTER SAVE AREA
         LA    R15,SAVEAREA      GET ADDRESS OF CSECT'S SAVE AREA
         ST    R13,FOUR(,R15)    CHAIN THE SAVE AREA BACK POINTER
         ST    R15,EIGHT(,R13)   CHAIN SAVEAREA FORWARD
         LR    R13,R15           ADDRESS OF CSECT'S SAVE AREA SPACE
         XC    EXPLARC,EXPLARC   INIT RETURN CODE TO NORMAL RETURN
         XC    SECCOUNT,SECCOUNT CLEAR GROUP NAME COUNTER FIELD
         L     R8,PSAAOLD-PSA    GET CURRENT ASCB ADDRESS AND
                                 USING ASCB,R8 SET MAPPING
                                 ADDRESS ABILITY

         EJECT
**********SECTION 1:  DETERMINE THE PRIMARY AUTHORIZATION ID  ********
*                                                                    *
*   IF THE INPUT AUTHID IS NULL OR BLANKS, CHANGE IT TO THE AUTHID   *
*   IN EITHER THE JCT OR THE FIELD POINTED TO BY ASCBJBNS.           *
*                                                                    *
*   THE CODE IN THIS SECTION IS AN ASSEMBLER LANGUAGE VERSION OF     *
*   THE DEFAULT IDENTIFY AUTHORIZATION EXIT. IT IS EXECUTED ONLY     *
*   IF THE FIELD ASXBUSER IS NULL UPON RETURN FROM THE RACROUTE      *
*   SERVICE. FOR EXAMPLE, IT DETERMINES THE PRIMARY AUTH ID FOR      *
*   ENVIRONMENTS WITH NO SECURITY SYSTEM INSTALLED AND ACTIVE.       *
*                                                                    *
*********************************************************************
         SPACE
--->     LA    R1,AIDLPRIM       LOAD PARM REG1
--->     CALL  FOCDSN3           GO GET EXIT
         CLI   AIDLPRIM,BLANK    IS THE INPUT PRIMARY AUTHID NULL
         BH    SATH020           SKIP IF A PRIMARY AUTH ID EXISTS
         L     R7,ASCBCSCB       GET CSCB ADDRESS
         CLI   CHTRKID-CHAIN(R7),CHTSID IS IT TSO FOREGROUND ADDR SPACE
         BNE   SATH010           BRANCH IF NOT
         L     R7,ASCBJBNS       GET ADDRESS OF LOGON ID
         MVC   AIDLPRIM,0(R7)    MAKE IT THE PRIMARY AUTH ID
         B     SATH019           TO END OF THIS ROUTINE
SATH010  DS    0H                NOT TSO, BUT BATCH OR STC SPACE
         L     R6,PSATOLD-PSA    CURRENT TCB ADDRESS
         L     R7,TCBJSCB-TCB(,R6) CURRENT JSCB ADDRESS
```

```
            L     R5,JSCBJCT-IEZJSCB(,R7) CURRENT JCT ADDRESS
            LA    R5,X'10'(,R5)       ADJUST FOR CORRECT DSECT MAPPING
            CLI   JCTUSER-INJMJCT(R5),X'4E' IF JCTUSER PLUS SIGN OR LESS
            BNH   SATH019             THEN LEAVE AIDLPRIM BLANK  KEB0026
            MVC   AIDLPRIM(7),JCTUSER-INJMJCT(R5)  COPY JOB USER ID
            MVI   AIDLPRIM+7,BLANK    ASSURE BLANK PADDING
SATH019  DS    0H                  END OF ROUTINE
            EJECT
*****SECTION 2:  DETERMINE THE LIST OF SECONDARY AUTHORIZATION IDS*****
*                                                                     *
*    THIS SECTION IS WRITTEN SPECIFICALLY FOR THE RACF ENVIRONMENT.   *
*    IT CAN/SHOULD BE REPLACED FOR OTHER SECURITY PRODUCTS.           *
*                                                                     *
***********************************************************************
*                                                                     *
*    IF RACF IS ACTIVE AND THE LIST OF GROUPS OPTION IS ALSO ACTIVE,  *
*    USE THE CGRP AREA TO GET THE CONNECTED GROUP NAMES.              *
*    COPY THEM TO THE SECONDARY ID LIST IN THE AIDL.                  *
*                                                                     *
***********************************************************************
            SPACE
            CLI   AIDLPRIM,BLANK      IS THE INPUT PRIMARY AUTHID NULL
            BNH   SATH090             EXIT IF PRIMARY AUTH ID NULL
SATH020  DS    0H                  BRANCH TO HERE IF PRIMARY EXISTS

*****OPTIONAL CHANGE @CHAR7:  FALLBACK TO SEVEN CHAR PRIMARY AUTHID****
*                                                                     *
*    IF YOUR INSTALLATION REQUIRES ONLY SEVEN CHARACTER PRIMARY       *
*    AUTHORIZATION IDS (POSSIBLY TRUNCATED) DUE TO DB2 PRIVILEGES     *
*    GRANTED TO TRUNCATED AUTHORIZATION IDS, THEN YOU MUST BLANK OUT  *
*    COLUMN 1 OF THE ASSEMBLER STATEMENT IMMEDIATELY FOLLOWING THIS   *
*    BLOCK COMMENT. THEN ASSEMBLE THIS PROGRAM AND LINK-EDIT IT INTO  *
*    THE APPROPRIATE DB2 LOAD LIBRARY AS EXPLAINED IN AN APPENDIX     *
*    OF "THE DB2 ADMINISTRATION GUIDE".                               *
*                                                                     *
*    OTHERWISE, YOU NEED DO NOTHING.                                  *
*                                                         @KYD0271*
***********************************************************************
*        MVI   AIDLPRIM+7,BLANK    BLANK OUT EIGHTH CHARACTER   @CHAR7
            SPACE
            L     R5,CVTPTR           ADDRESS MVS CVT
            L     R7,CVTRAC-CVT(,R5)  RACF CVT ADDRESS
            LTR   R7,R7               IF RACF CVT ADDRESS ZERO,
            BZ    SATH049             RACF IS NOT EVEN INSTALLED
            USING RCVT,R7             SET BASE FOR RACF CVT
            TM    RCVTSTAT,RCVTRNA    IS RACF ACTIVE
            BO    SATH049             SKIP AROUND IF NOT
            SPACE 1
*   RACF IS ACTIVE ON THIS MVS
```

```
               USING ACEE,R6            ESTABLISH BASE FOR ACEE    @KYL0108
               ICM   R6,B'1111',AIDLACEE CALLER PASSED ACEE ADDRESS? @KYL0108
               BZ    SATH024            NO, USE ADDRESS SPACE ACEE  @KYL0108

               CLC   ACEEACEE,EYEACEE   IS IT REALLY AN ACEE?       @KYL0108
               BE    SATH027            YES, PROCEED NORMALLY       @KYL0108
               SPACE 1
     SATH024   DS    0H                 USE ADDRESS SPACE ACEE      @KYL0108
               L     R6,ASCBASXB        GET ADDRESS SPACE EXTENSION BLOCK
               L     R6,ASXBSENV-ASXB(,R6)  GET ACEE ADDRESS
     --->      CALL  FOCDSN4            GO GET EXIT  (4=GROUP AUTH)
               LTR   R6,R6              DOES AN ACEE EXIST?  IF NOT,
               BZ    SATH049            SKIP AROUND CONNECTED GROUP NAME
               CLC   ACEEACEE,EYEACEE   DOES IT LOOK LIKE AN ACEE?
               BNE   SATH049            NO, THEN CAN'T DO GROUPS
               DROP  R8                 DROP ASCB BASE REG          @TU25003
               SPACE 1
     SATH027   DS    0H                 CHECK LIST OF GROUPS OPTION @KYL0108
               TM    RCVTOPTX,RCVTLGRP  IS LIST OF GROUPS CHECKING ACTIVE
               BZ    SATH040            SKIP TO SINGLE GROUP COPY IF NOT
               DROP  R7                 DROP RCVT BASE REG          @TU25003
               SPACE 1
     *   RACF LIST OF GROUPS OPTION IS ACTIVE
```

Example   Changing DSN3SATH for CA-ACF2 Sites

```
     **************************************************************
     *       PRIMARY AUTHORIZATION ID                            *
     **************************************************************
     *
     -->       LA    R1,AIDLPRIM         POINT TO AUTH FIELD
     -->       CALL  FOCDSN3             CALL TASK-LEVEL-EXIT
               CLI   AIDLPRIM,C' '       PRIMARY AUTHID THERE?
               BH    PRIMTSO             ..YES, EVERYTHING OK HERE
               L     R3,PSAAOLD-PSA(0)   CURRENT ASCB ADDRESS
```

Example ## Modifying the Link JCL for DSN3SATH

This is sample link JCL for the IBM exit DSN3SATH. Modify the JCL to link the modules into the DB2 security exit as follows.

```
//LKED  EXEC PGM=IEWL,PARM='LIST,XREF,LET,RENT,AMODE=31'
//OBJECT    DD DSN=db2pref.SDSNSAMP.OBJ,DISP=SHR <--OUTPUT OF ASSEMBLE
STEP
//EDAMOD    DD DSN=qualif.HOME.LOAD,DISP=SHR
//SYSLMOD   DD DSN=db2pref.DSNEXIT,DISP=SHR
//SYSPRINT  DD SYSOUT=*
//SYSUT1    DD UNIT=SYSDA,SPACE=(100,(50,50))
//SYSLIN    DD *
  INCLUDE OBJECT
  INCLUDE EDAMOD(FOCDSN3)
  INCLUDE EDAMOD(FOCDSN4)       <---OMIT FOR CA-ACF2
        ENTRY DSN3@ATH
  NAME DSN3@ATH(R)
/*
```

where:

db2pref

Is the prefix for the DB2 data sets.

qualif

Is the high-level qualifier for the data sets.

Once this job finishes successfully, you must recycle the DB2 subsystem in order for the changes to take effect.

Note: For the DB2 CAF adapter, it may be a site requirement for the STEPLIB allocation in the ISTART JCL to include the DB2 SDSNLOAD library. The ISETUP procedure does not do this for you, it will have to be added manually.

Adding a Configuration Instance

To add a configuration instance, perform the following steps.

Note: Adding a configuration instance allows you to run different server configuration instances using the same server binaries. For example, if you installed using a Full Function Server license code, you can use a WebFOCUS license to add a second configuration for a WebFOCUS Reporting Server. However, if you wish to run multiple instances of a single configuration type (two Full Function Server instances), you should run a second complete install.

1. Execute ISETUP again. You should have a *qualif*.HOME.DATA PDS unloaded from the installation tape. Use option 6 in ISPF to execute the ISETUP member of this PDS.

   Note: If this PDS is not available, run an IEBCOPY job to allocate and unload it from the installation tape.

2. Complete the first Installation and Configuration panel as follows:

`Enter selection`	Choose option 2, *Add Additional Configuration Instance*.
`Enter License Key`	Enter the 10-digit License Key for the configuration.
`Input source`	Choose the input source, T for Tape or D for Disk. The default value is T.
`Enter Job Card information`	To provide valid JCL for submitting jobs to the JES queue, provide a valid job name (a maximum of the first seven characters following the // on the first JCL line), which defaults to the user ID that you are currently using. This job name, plus a job name character (A,B,C and so on) is used in the JCL generated by the installation procedure.
`Override JOB name checking`	To provide your own JOB Card information, provide valid JCL and select 'Y' for the "Override JOB name checking" question. This will cause the same JCL to be used for all jobs created.

3. Press *Enter* to continue to the next panel.

4. Complete the panel as follows:

Configuration Parameters	
`HFS Base Directory`	This indicates where to install the configuration (EDACONF) and where the binaries (EDAHOME) are installed. The installation procedure checks whether this directory exists and has enough space. If either test fails, you receive a message indicating the failure and available options.
`HFS APPROOT Directory`	This indicates where application components will reside for the configuration. The default value is based on the value specified for *HFS Base Directory*. To specify another location for application components, change the value for this field.
`Server System Userid`	This shows the default value, ISERVER. To change this value, see the requirements in *Step 2. Set Up User IDs* on page 4-4.
`TCP Base Port`	This indicates the first of four consecutive ports that must be available for the listeners and other internal needs. Ensure that you choose ports that are not currently used by another configuration or process.
MVS Installation Libraries	
`EDACONF Library`	This is the full data set name the installation procedure will use to allocate the EDACONF configuration library on MVS. If you are running from *qualif*.HOME.DATA, this field will have the default value *qualif.server_type*.DATA (where *server_type* is based on License key). If you used another name to unload the first data set, this field will be blank. Change the value as necessary.
`EDAHOME Library (Reference only)`	This is the full data set name for the EDAHOME library to which the new configuration applies.

5. Press *Enter* to proceed to the next panel. Depending on your license key, you may receive the Data Adapter panel before the Demonstration Files panel. The Data Adapter panel lists adapters that require the allocation of MVS libraries in the ISTART JCL.

6. If you receive the Data Adapter panel:

    a. Place a 'Y' next to the required adapters and press *Enter* to proceed to the next panel.

    b. Supply the information required and press *Enter* to proceed to the Demonstration Files panel.

For more information, see *Step 3. Collect Required Information for Data Adapters* on page 4-7.

Note: After the configuration is installed and configured, you can use its Web Console to complete configuration of these data adapters and to configure adapters that do not have MVS JCL requirements.

7. In the Demonstration Files panel, place a Y next to the desired language and press *Enter* to proceed to the Confirmation panel.

Note: If you do not select a language, demonstration files are not installed.

8. Ensure that all values on the Confirmation panel are correct, then select one of the following options:

    •   *N*. Select this option to return to the initial screen and change installation values.

    •   *C*. Select this option to create JCL to be submitted at a later time. The JCL is placed in your configuration library

    •   *S*. Select this option to create JCL and submit the job immediately.

9. As the job is processed, in SDSF, check the JESLOG for errors and return codes.

Following is a list of the jobs created. All members are created in the configuration library.

`ISETUPJ2` `ISOPTS2`	Main JCL Job stream that is used to add a server configuration.
`ISTART`	Starts the server.
`ISTOP`	Stops the server.
`ICLEAR`	Clears server resources after abnormal end.
`ICLRDIR`	Clears super-user-owned directories from a previously run secure server.
`ISHOW`	Shows current workspace status.
`ITRCON`	Turns on dynamic tracing (server will be started if not already running).
`ITRCOFF`	Turns off dynamic tracing (server will be started if not already running).
`ISAVEDIA`	Creates a directory called sd*nnnnnn* and populates it with full diagnostic information.

A configuration HFS directory is created.

`/u/iadmin/ibi/srv52/`*server_type*
 	
where:
 	
server_type
    Is one or more of the following:
 	
    `ffs`   Full-Function server
    `wfs`   WebFOCUS Reporting Server
    `etl`   ETL Server
    `wfm`   WebFOCUS Maintain Server
    `cgw`   Communications Gateway
    `aas`   Application Adapter Server
	Configuration directories are created under this directory. The license key specified in the ISETUP procedure determines the *server_type*.

Upgrading Your Server Release

When upgrading a 5.2.x server from an earlier 5.2.x release, you can either:

- Completely reinstall the server using the procedures under *Installing a New Server for OS/390 and z/OS* on page 4-3.

  or

- Reinstall only the binaries files (Refresh Installation) and use your existing configuration as explained below.

Note:

- We recommend not setting the SECURITY_TYPE variable in the EDAENV DDNAME and choosing the default security path.

- Make sure you follow the steps that appear after the installation to re-enable security and reconfigure adapters.

Step 1. Copy the Installation Software From Tape or FTP

There are two ways to unload the installation media:

- **From Tape.** The software is provided on a cartridge in 3480 or 3490 format with both MVS PDSs and HFS tar files. You must unload the installation data set from the tape before you can run the installation as explained below in *Unloading From Tape* on page 4-35. This is how most installations are performed.

- **From FTP/Disk.** The software can be downloaded from a special FTP site and includes both an MVS data set and HFS files. You must allocate space and ensure that the MVS data set and HFS files are in the appropriate locations as explained below in *Copying From FTP/Disk* on page 4-37. You must contact your Information Builders representative if you wish to use this option.

Unloading From Tape

The software is provided on a cartridge in 3480 or 3490 format with both MVS PDSs and HFS tar files. Perform the following to unload the installation data set from the tape:

1. Log on to TSO with the iadmin user ID. This user ID must have an OMVS segment defined and access to the HFS directory where the product will be installed.

2. Run an IEBCOPY job to allocate and unload the *qualif*.HOME.DATA data set. This PDS contains the members needed for the actual installation.

The following is sample JCL for overwriting an existing *qualif*.HOME.DATA:

```
//IEBCOPY  EXEC PGM=IEBCOPY,REGION=0M
//SYSPRINT DD SYSOUT=*
//SYSUT1   DD UNIT=workunit,SPACE=(CYL,(5,1))
//OUT1     DD DISP=SHR,
//         DSN=qualif.HOME.DATA
//IN1      DD DISP=(OLD,PASS),
//           DSN=HOME.DATA,
//           UNIT=cart,
//           VOL=(,RETAIN,,SER=volser),
//           LABEL=(1,SL)
//SYSPRINT  DD  SYSOUT=*
//SYSIN     DD  *
  COPY INDD=IN1,OUTDD=OUT1
```

where:

workunit

Is the unit for the work data set.

qualif

Is the high-level qualifier for HOME.DATA and for all other MVS data sets that the installation procedure allocates. We recommend that the high-level qualifier reflect the release of the server (for example, IADMIN.SRV52). However, you can use any site specific value.

Note: Using a low-level qualifier such as HOME.DATA is recommended, but any site specific value can be used.

cart

Is the unit type of the tape drive. Common names include 3480, TAPE, or 3490. Change as needed.

volser

Is the value shown on the media label.

After this job has run, *qualif*.HOME.DATA is allocated, cataloged, and populated with the members needed to continue the product installation.

Proceed to *Step 2. Run ISETUP* on page 4-38.

Copying From FTP/Disk

This section only applies when installing from FTP/Disk. You must contact your Information Builders representative before attempting this.

1. Log on to TSO with the iadmin user ID. This user ID must have an OMVS segment defined and access to the HFS directory where the product will be installed.

2. Allocate a temporary sequential data set with a name such as the following:

    `qualif.ISERVER.DATA`

    and the following attributes:

    `LRECL(80),RECFM(F,B),BLKSIZE(3120),SPACE=(TRK,(2,2))`

    Note: Substitute the name you use for *qualif*.ISERVER.DATA in the steps below.

3. Create a temporary HFS directory to hold the installation files. For example:

    `/u/iadmin/download.`

4. Using TSO or ISPF option 6, connect to the FTP site using the information provided by your Information Builders representative.

5. Once connected, type the following to indicate a binary transfer:

    `binary`

6. Type the following to get the MVS installation software:

    `get iserver.data 'qualif.ISERVER.DATA' (replace`

7. Type the following to indicate the location for the HFS files:

    `lcd /u/iadmin/download`

8. Type the following to get the HFS files

    `mget *`

    You will be prompted to accept the transfer of 7 files (6 HFS files and 1 MVS data set).

    `Mget inu.out (Yes|No|Quit|Stop prompting)?`

9. Enter:

    `Yes`

    to accept the transfer of all **except for** the iserver.data data set indicated by a prompt such as the following:

    `Mget iserver.data (Yes|No|Quit|Stop prompting)?`

10. When you receive the above prompt, enter:

    `No`

11. When all 6 HFS files have been transferred, type the following to exit FTP:

```
quit
```

12. Under TSO, explode the sequential file *qualif*.ISERVER.DATA created above into a PDS using the following command:

```
RECEIVE INDSN('qualif.ISERVER.DATA')
```

13. At the restore parameters prompt, type the following to create the *qualif*.HOME.DATA PDS:

```
DSNAME('qualif.HOME.DATA')
```

Note: Using a low-level qualifier such as HOME.DATA and a high-level qualifier that reflects the release of the server (for example, IADMIN.SRV52) is recommended. However, you can use any site specific value.

In the ISETUP procedure below, be sure to specify *(D)isk* for the Input Source and provide the HFS directory into which you transferred the installation files.

Step 2. Run ISETUP

Note: Ensure that all server processes are stopped before upgrading.

Server upgrade consists of a series of ISPF panels, which gather information for the upgrade. After the panel dialog is complete, JCL is created and submitted (if required) to upgrade the server on OS/390 and z/OS. This JCL job retrieves the remainder of the MVS libraries and HFS files from the media and configures a basic working server.

To begin the upgrade, using option 6 in ISPF, execute the ISETUP member in your *qualif*.HOME.DATA. The first Installation and Configuration panel opens.

1. Complete the first Installation and Configuration panel as follows:

`Enter selection`	Choose option 3, *Refresh Installation*. This refreshes the programming files under the server installation directory as well as the MVS load library.
`Enter License Key`	Enter the 10-digit License Key that was provided for your current release of the server.
`Input source`	Choose the input source, T for Tape or D for Disk. The default value is T.

`Enter Job Card information`	To provide valid JCL for submitting jobs to the JES queue, provide a valid job name (a maximum of the first seven characters following the // on the first JCL line), which defaults to the user ID that you are currently using. This job name, plus a job name character (A,B,C and so on) is used in the JCL generated by the installation procedure.
`Override JOB name checking`	To provide your own JOB Card information, provide valid JCL and select 'Y' for the "Override JOB name checking" question. This will cause the same JCL to be used for all jobs created.

2. Press *Enter* to continue to the next panel.

3. Complete the panel as follows:

Input Media	
Note: If installing from disk, provide the directory name where the compressed software resides.	
`Volume serial number`	Provide the volume serial number for the server media. This volume serial number is located on the tape supplied in you server package. The value shown is an example of the required format.
`Volume unit type`	Review the default value and change if necessary.
`Work unit type`	Review the default value and change if necessary. **Note:** The *Work Unit Type* field can specify a UNIT= type value (for example, SYSDA) or to direct work files to a specific volume serial number you can specify, in single quotation marks ('), 'SYSDA,VOL=SER=volume'.

Installation parameters	
`HFS Base Directory`	This indicates where to install the server. The default value is the home directory of the user ID you are using to install the product. This should be the same base directory as the server you are updating to ensure that the configuration can find the binaries.
`HFS APPROOT Directory`	This indicates where application components will reside. The default value is based on the value specified for *HFS Base Directory*. To specify another location for application components, change the value for this field.

MVS Installation Libraries	
`EDACONF Library`	This is the full data set name to which the refresh installation procedure will add configuration jobs. It is best to use the current configuration library, but you can place these new jobs in a different library if you wish.

MVS Installation Libraries	
`EDAHOME Library`	This is the full data set name the installation procedure will use to allocate the EDAHOME load library on MVS. This should match the EDAHOME library you are updating.
`EDAHOME Library Unit/Volume`	These show the values that the installation process will use to allocate the EDAHOME load library on MVS. If necessary, you can change these to site specific values. **Note:** These two values are important when the previous LOAD library is APT authorized. To retain the APF attribute, the LOAD library must be allocated on the same volume as the current LOAD library.

4. Press *Enter* to proceed to the Confirmation panel.

5. Ensure that all values on the Confirmation panel are correct, then select one of the following options:

   - *N*. Select this option to return to the initial screen and change installation values.

   - *C*. Select this option to create JCL to be submitted at a later time. The JCL is placed in your configuration library

   - *S*. Select this option to create JCL and submit the job immediately.

6. As the job is processed, in SDSF, check the JESLOG for errors and return codes.

The following jobs are added to the configuration library:

`ISETUPJ3` `ISOPTS3`	Main JCL Job stream that is used to install the server.

The following directories are added to the HFS directory structure of the existing server:

`/u/iadmin/ibi/srv52/tape`	Contains HFS files from the input media.
`/u/iadmin/ibi/srv52/install`	Working directory for the installation process. Log and error files reside here.

Step 3. Add the Server System ID in the Server Configuration File

Due to a change in the 5.2.3 server, you must manually update the following configuration file to use an earlier configuration with 5.2.3 or later binaries:

`/u/iadmin/ibi/srv52/ffs/bin/edaserve.cfg`

Determine where this file is on your system and use a text editor, such as TSO OEDIT, to add the following line:

`server_system_id=iserver_system_ID`

where:

`iserver_system_ID`

Is the Server System ID you assigned during initial installation of the server. The default value is ISERVER.

Step 4. Test the Server Installation

To test the server installation:

1. Log on to TSO as iadmin.

2. Submit the ISTART JCL to start the server.

3. Check the job output for errors. Look for the EDAPRINT message:

   `Workspace initialization completed`

4. Start the Web Console by opening a browser pointed at the listener port of the server. The URL format is

   `http://host:port`

   where:

   `host`

   Is the name of the machine on which the server is installed.

   `port`

   Is one port higher than the port specified when installing the server. For example, if you specified port 8100 during installation, then use port 8101 to access the Web Console.

   The Web Console opens.

5. Click *Test* to run a sample report.

When you are finished using the server, you can use the Web Console to stop the server by selecting the Workspace link on the left and then choosing Stop.

If you experience problems at start up, examine the job output for more information.

Step 5. Reconfigure Server Security

The server runs in one of the following security modes:

- Security OFF. This is the default unless security is configured.

- Security ON. All connecting users are authenticated against the security package (RACF, ACF2, Top Secret), and the data agents are impersonated according to the deployment mode to control access right to data files and dbms objects.

To reconfigure server security:

1. Log on to TSO using an ID with read access to BPX.FILEATTR.APF FACILITY.

2. Using the name of the actual EDAHOME directory, change file attributes by entering the following TSO commands in ISPF Command Shell (option 6):

```
OSHELL extattr +a /u/iadmin/ibi/srv52/home/bin/tscom300.out
OSHELL extattr +a /u/iadmin/ibi/srv52/home/bin/tsqprx.out
```

3. Verify your changes by issuing the following command:

```
OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tscom300.out
OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tsqprx.out
```

The extended attributes portion of the output should be a-s-

4. The libraries allocated to STEPLIB in the ISTART JCL must be APF-authorized. Any non APF-authorized libraries must be allocated the TASKLIB DDNAME.

5. Test server security by repeating the process described in *Step 4. Test the Server Installation* on page 4-42.

Step 6. Reconfigure Adapters

While most adapters do not require additional steps after updating binary files, the following table notes the adapters that do require some consideration:

Data Adapter	Steps After Updating Binaries
Adabas	• Re-enable the module containing SVC using the Web Console adapter configuration page. • Test the adapter from the adapter page before running your applications.
DB2	• Rebind the DB2 plan using the Web Console adapter configuration page. • Test the adapter from the adapter page before running your applications.

Migrating From an MVS Server

Applications running on a traditional MVS server will not require any changes when migrated. The server supports read and write access to all PDSs, such as Master, Access, FOCEXEC, and data. DYNAM is fully supported in release 5.2 of the server. The server can read and write sequential files and FOCUS files, both locally and using the FOCUS Database Server (FDS).

To migrate application components (Master Files, Access Files, and FOCEXECs):

1. Transfer the following allocations from your MVS server JCL to ISTART JCL: MASTER, FOCEXEC, ACCESS, HTML, GIF, and data files (if DYNAM is not to be used). Note that you may not have all of them.

2. Edit edaserve.cfg using the OS/390 and z/OS equivalents of MVS parameters as described in the following sections.

For new applications, your files (Master, Access, and FOCEXEC) are placed in a pre-specified directory on HFS. All temporary files (such as FOCSORT) are written to the EDATEMP directory on HFS by default.

Installation and Configuration

- **MVS**

    1. **IEBCOPY** - Unload EDALIB.DATA.

    2. **EDAJINS2** - Unload and allocate PDSs.

    3. **EDACFGF** - Configuration Routine.

    4. Add Jobcard to server JCL and submit.

- **OS/390 and z/OS**

    1. **IEBCOPY** - Unload HOME.DATA.

    2. **ISETUP** - An ISPF panel-driven installation which unloads and allocates the Load library, creates the server directory structure, and copies the files to HFS.

    3. Submit the ISTART server JCL.

Server JCL

- **MVS**

  qualif.INSTALL.DATA(FFSJCL)

  ```
  //JOBCARD
  //
  //*
  //EDASERVE    EXEC PGM=SSCTL
  //STEPLIB  DD  DISP=SHR,DSN=qualif.EDALIB.LOAD
  //EDARPC   DD  DISP=SHR,DSN=qualif.EDARPC.DATA
  //FOCEXEC  DD  DISP=SHR,DSN=qualif.EDARPC.DATA
  //MASTER   DD  DISP=SHR,DSN=qualif.EDAMFD.DATA
  //ACCESS   DD  DISP=SHR,DSN=qualif.EDAAFD.DATA
  //EDAPRINT DD  SYSOUT=*
  //IBISNAP  DD  SYSOUT=A
  //EDASERVE DD  DISP=SHR,DSN=qualif.INSTALL.DATA(FFSSERV)
  //ERRORS   DD  DISP=SHR,DSN=qualif.EDAMSG.DATA
  //EDACSG   DD  DISP=SHR,DSN=qualif.INSTALL.DATA(FFSCSG)
  //EDACONS  DD  DISP=SHR,DSN=qualif.INSTALL.DATA(FFSCONS)
  ```

- **OS/390 and z/OS**

  qualif.HOME.DATA(ISTART)

  ```
  //JOBCARD
  //
  //*
  //TSCOM300 EXEC PGM=TSCOM300
  //STEPLIB  DD  DISP=SHR,DSN=qualif.HOME.LOAD
  //FOCEXEC  DD  DISP=SHR,DSN=qualif.EDARPC.DATA
  //MASTER   DD  DISP=SHR,DSN=qualif.EDAMFD.DATA
  //ACCESS   DD  DISP=SHR,DSN=qualif.EDAAFD.DATA
  //EDAPRINT DD  SYSOUT=*
  //SYSPRINT DD  SYSOUT=*
  //SYSOUT   DD  SYSOUT=*
  //EDAPARM  DD  *
  //*
  //EDAENV   DD  *
  PATH=/bin
  TZ=EST5EDT      <--- Time Zone Setting
  EDACONF=/u/admin/ibi/srv52/ffs
  SHELL=/bin/sh
  ```

Data File Allocations

- **MVS**

  Allocations for all file types supported via DYNAM or JCL.

- **OS/390 and z/OS**

  PDS+

  > Existing Master Files and Access Files can be read from existing JCL or DYNAM allocations.
  >
  > New applications will reside on UNIX System Services.

  VSAM, FIXED, and FOCUS

  > R/W Access to files via DYNAM works are unchanged.
  >
  > All DYNAM options are supported with the exception of HIPER/NOHIPER.

  HIPER/NOHIPER

  > These keywords will be ignored.

FOCUS Files on a FOCUS Database Server

Separate batch jobs.

- **MVS**

  A DDNAME was allocated in the server JCL to point to the communications data set to be used to identify the FOCUS Database Server job on which the FOCUS files reside.

  A USE statement was then issued to connect the FOCUS Master File to the DDNAME allocated to the communications file.

  For example:

  ```
  //FOCSU01  DD  DSN=X.Y.Z,DISP=SHR
  ```

  The USE statement in a FOCEXEC:

  ```
  USE
  CAR ON FOCSU01
  END
  ```

- **OS/390 and z/OS**

  The USE command is left unchanged but the FOCSU01 value now is a NODE name in the server's communications configuration file, odin.cfg.

  For example:

  ```
  USE
  CAR ON FOCSU01
  END
  ```

Identifies SINK machine via communications DD //FOCSU01

```
NODE=FOCSU01   <===== USS server (odin.cfg file)
  BEGIN
   PROTOCOL=SBS
   CLASS=SUCLIENT
   PORT=X.Y.Z   <====== communications dataset
END
```

The above NODE block resides in odin.cfg and can be constructed using the Web Console.

Global Configuration Settings

In configuration file, EDASERVE.CFG.

- **MVS**

  qualif.install.data(EDASERVE)

  ```
  EXTSEC = OFF|ON
  SMFNUM = 254
  FASTLOAD = **AUTO**
  LONGSYNM= ON (in release 5.2, this is the default)
  LICENSE = 100-111-1231
  STORAGEABOVE = 4096
  STORAGEBELOW= 512
  SZERO=YES
  APFAUTH=INTERNAL
  ```

- **OS/390 and z/OS**

  /ibi/srv52/ffs/bin/edaserve.cfg

  ```
  edahome = /u/iadmin
  server_admin_id = EDADMA
  license = 100-111-1231
  approot = /ibi/edauss/TEST/apps
  server_name = "IWAY 52 Full Function Server"
  cfg_date = 07/24/2002 19:14:46
  smf_recno=255
  ```

  Currently not applicable:

  ```
  STORAGEABOVE = 4096
  STORAGEBELOW = 512
  FASTLOAD=**AUTO**
  ```

  Currently not available:

  ```
  SZERO=YES
  LONGSYNM=ON
  ```

Service Settings

- **MVS**

  `qualif.install.data(EDASERVE)`

  ```
  SERVICE             = EDAUSER
  PROGRAM             = TSCOM3
  NUMBER_READY        = 0
  DEPLOYMENT          = PRIVATE
  REFRESH_LIMIT       = 100
  MAXIMUM             = 3
  IDLELIM             = -1
  CPU_LIMIT           = 15
  MEMORY_LIMIT_ABOVE  = nnn
  MEMORY_LIMIT_BELOW  = nnn
  PRTYGROUP           = 10

  SERVINIT            = *,++
  DYNAM ALLOC FILE EDASPROF -
    DA EDADMA.P513.EDAPROF.DATA(FEDADMA) SHR REU
  DYNAM ALLOC FILE EDAPROF -
    DA EDADMA.P513.EDAPROF.DATA  SHR REU
  DYNAM ALLOC FILE IBITRACE -
    DA EDADMA.P513.INSTALL.DATA(IBITRACE) SHR REU
  ```

  *Multiple Service Blocks are supported.

- **OS/390 and z/OS**

  `/ibi/srv52/ffs/bin/edaserve.cfg`

  ```
  SERVICE = DEFAULT
  BEGIN
    maximum = 10
    number_ready = 2
    deployment = private
    queueing = off
    idle_session_limit = -1
    idle_agent_limit = 120
    profile = profile.fex
    cpu_limit = -1
    memory_limit = -1
    wlm_enclave_trname = wlm_service_class
    max_connection_per_user = -1
    agent_refresh = 100
    owner_control_request = no
  END
  ```

  *Multiple Services are supported.

  Note that wlm_enclave_trname performs the same function as PRTYGRP.

Enabling Tracing on the Server

- **MVS**

  Allocate IBITRACE in the EDASERVE member. Read the TRACE output from SDSF or send to a file.

  ```
  DYNAM ALLOC FILE IBITRACE -
    DA EDADMA.P513.INSTALL.DATA(IBITRACE) SHR REU
  ```

- **OS/390 and z/OS**

  IBITRACE allocation is not needed. There are two ways to enable tracing:

  1. On the Web Console under DIAGNOSTICS.

  2. Submit the ITRCON JCL job.

  For additional Diagnostics, see *Getting Diagnostic Information* on page 4-25.

Server Profiles

- **MVS**

  qualif.EDAPROF.DATA(Fuserid)

  Metadata Allocations:

  ```
  DYNAM ALLOC FILE EDASYNA SHR REU -
    DATASET EDADMA.V520SA.EDADMA.EDASYNA.DATA
  DYNAM ALLOC FILE EDASYNM SHR REU -
    DATASET EDADMA.V520SA.EDADMA.EDASYNM.DATA
  DYNAM ALLOC FILE EDASYNR SHR REU -
    DATASET EDADMA.V520SA.EDADMA.EDASYNR.DATA

  SQL EDA SET USER server/userid,password
  SQL EDA SET SERVER server
  SQL [EDA] SET AUTOCLOSE ON FIN|COMMIT
  SQL EDA SET JOINTYPE ={NestedLoop|SortMerge}
  ```

  HIPER Settings:

  ```
  SET HIPERINSTALL={ON|OFF}
  SET HIPEREDA={ON|OFF}
  SET HIPEREXTENTS=nnn
  SET HIPERFILE=nnn
  SET HIPERLOCKED={ON|OFF}
  SET HIPERSPACE=nnn
  ```

```
SET BLIM=buffersize
SET SLIM=n
SET CACHE={0|n}
SET EXTSORT={ON|OFF}
SET CDN={ON|OFF}
SET LANGUAGE=language
SET SMARTMODE={ON|OFF}
SET SQLENGINE=sqlengine
```

- **OS/390 and z/OS**

  /ibi/srv52/ffs/etc/edasprof.prf

  ```
  APP ENABLE
  APP PATH IBISAMP
  ```

  Note: The settings below are generated in the server profile, edasprof, as defaults to access MVS existing applications and metadata.

  ```
  APP MAP MVSAPP
  mas=//dd:master;fex=//dd:focexec;acx=//dd:access;htm=//dd:html
  APP APPENDPATH MVSAPP

  SQL EDA SET USER server/userid,password
  SQL EDA SET SERVER server
  SQL [EDA] SET AUTOCLOSE ON FIN|COMMIT
  SQL EDA SET JOINTYPE ={NestedLoop|SortMerge}
  ```

  HIPER Settings:

  ```
  DYNAM MEMIO ON      to enable this feature
  DYNAM MEMIO OFF     to disable feature (default) (I/O goes to disk)
  DYNAM MEMIO HIPER   to use HIPERSPACE memory for I/O
  DYNAM MEMIO MEMORY to use main storage for I/O

  SET BLIM=buffersize
  SET SLIM=n
  SET CACHE={0|n}
  SET EXTSORT={ON|OFF}
  SET CDN={ON|OFF}
  SET LANGUAGE=language
  SET SMARTMODE={ON|OFF}
  SET SQLENGINE=sqlengine
  ```

Configuring Data Adapters

	MVS	**OS/390 and z/OS**
Adabas	Edit and run *qualif*.EDALIB.DATA(GENEADL) to re-link ADALNK into FADALINK, which will be called by the server. The JCL must be edited with the appropriate values. Add Jobcard and submit.	During installation, you must provide the fully qualified data set name for the Adabas load library. Configure using the Web Console.
DATACOM	Create a DATACOM URT. Create a server-side URT.	Allocate the CA-DATACOM load library to your STEPLIB in the ISTART JCL. Configure using the Web Console.
DB2 CAF	Edit and run *qualif*.EDALIB.DATA(RELJINS) to link and bind the DB2 interface, which will be called by the server. The JCL must be edited with the appropriate values. Add Jobcard and submit.	Configure using the Web Console.
DB2 CLI	NO DB2 CLI available for SSCTL	During the installation, you must provide the location of the db2cli.ini file. Configure using the Web Console.
CA-IDMS/DB	Allocate CA-IDMS loadlibs in STEPLIB.	Allocate the CA-IDMS/DB loadlibs in STEPLIB. Configure using the Web Console.
CA-IDMS/SQL	Edit and run *qualif*.EDALIB.DATA(GENEIDQ) to link module IDQFOC. Allocate CA-IDMS loadlibs in STEPLIB.	Allocate the CA-IDMS/SQL loadlibs in STEPLIB. Configure using the Web Console.
IMS	Allocation of IMS loadlibs in STEPLIB.	Allocate the IMS loadlibs in STEPLIB. Configure using the Web Console.
MODEL 204	Edit and run *qualif*.EDALIB.DATA(GENE204).	Allocate the MODEL 204 loadlibs in STEPLIB. Configure using the Web Console.

	MVS	**OS/390 and z/OS**

Oracle	Edit and run *qualif*.EDALIB.DATA(GENEORA) to link and bind the Teradata interface, which will be called by the server. The JCL must be edited with the appropriate values. Add Jobcard and submit.
	
	Add appropriate load libraries to server JCL.
		Add the following EXPORT variables to the ISTART JCL:
		
		`ORACLE_SID=ORAT`
		`ORACLE_HOME=/usr/lpp/oracle9`
		`LIBPATH=$ORACLE_HOME/lib`
		
		Configure using the Web Console.

Supra	Edit and run *qualif*.EDALIB.DATA(GENEFSP) Allocate the SUPRA loadlibs in STEPLIB.	Allocate the SUPRA loadlibs in STEPLIB. Configure using the Web Console.
Teradata	Edit and run *qualif*.EDALIB.DATA(GENEDBC) to link and bind the Teradata interface, which will be called by the server. The JCL must be edited with the appropriate values. Add Jobcard and submit.	Configure using the Web Console.

Metadata

- **MVS**

  ADABAS, VSAM, IMS and IDMS use AUTOTOOLS to create Master File Descriptions (metadata). DB2, Oracle, Teradata metadata is created via CREATE SYNONYM.

- **OS/390 and z/OS**

  Metadata for the following DBMS is created via the Web Console using Create synonym: Adabas, DB2 CAF and DB2 CLI, Fixed, CA-IDMS/DB and CA-IDMS/SQL, IMS, Oracle, Teradata, VSAM.

Starting the Server Console

- **MVS**

  Type the following command at the prompt

  LOGON APPLID(*consoleapplid*)

  where:

  consoleapplid

  Is the LU2 applid used to communicate with the console. Its value can be found in the adapter JCL file (EDACONS).

- **OS/390 and z/OS**

  Open the Web Console by starting a browser pointed at the HTTP Listener Port of the server. The URL format is http://host:port. For example, http://host:8101 for the full-function server (if the default ports were used during installation). The actual HTTP Listener port number is one higher than the TCP Listener Port specified during the installation.

Media

- **MVS**

  The server software is provided on a cartridge in 3480 or 3490 format with MVS PDSs.

- **OS/390 and z/OS**

  The server software is provided on a cartridge in 3480 or 3490 format with both MVS PDSs and HFS tar files.

Configuring a Secured Server

- **MVS**

  In EDASERVE member, set EXTSEC=ON.

  The *qualif*.EDALIB.LOAD library used by the JCL must be APF-authorized.

- **OS/390 and z/OS**

  Logon to TSO with a user ID that has read access to the BPX.FILEATTR.APF Facility. This is for the security internal which is the default. See the documentation for the MVS security setting.

  Substituting in the actual EDAHOME directory, change the file attributes by entering the following commands in TSO or in ISFP Command Shell (option 6):

  ```
  OSHELL extattr +a /u/iadmin/ibi/srv52/ home/bin/tscom300.out
  OSHELL extattr +a /u/iadmin/ibi/srv52/home/bin/tsqprx.out
  ```

Verify your changes by issuing the following commands:

```
OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tscom300.out
OSHELL ls -E /u/iadmin/ibi/srv52/home/bin/tsqprx.out
```

The *qualif*.HOME.LOAD library used by the JCL must be APF authorized.

GETUSER Subroutine

- **MVS**

  Fully supported.

- **OS/390 and z/OS**

  Supported with minor adjustments.

WLM Enclave Feature

- **MVS**

  This parameter is placed in the service block of the EDASERVE configuration file so that an enclave name can be specified. This enclave is a feature of Workload Manager (WLM).

  ```
  WLM_ENCLAVE_TRNAME = wlm_transaction_group_name
  ```

- **OS/390 and z/OS**

  A parameter is available in the service block of the edaserve.cfg configuration file so that an enclave name can be specified. This enclave is a feature of Workload Manager (WLM).

  Based on this setting, the task will join a WLM enclave when a request starts, and leave the enclave when the request finishes. This gives control of the dispatching priority of the task to WLM. The rules for the WLM enclave will determine how the request is run.

  This feature balances a workload so that a long running request will not affect a short running request. This can be achieved through WLM rules designed to lower the priority of a long request after a certain period of time. Without this feature, all requests share the region's priority.

  ```
  WLM_ENCLAVE_TRNAME = wlm_transaction_group_name
  ```

  This is a service-level keyword and can be up to 8 alphanumeric characters; it is used in the edaserve.cfg. It defines the WLM service class, which is to be used by all requests associated with the service.

Agent Services

The server has the ability in the edaserve.cfg configuration file to divide its agents into different services. This is very similar to the service blocks found in the EDASERVE member for the Server for MVS. Each agent is running for a specific service, and each service can have different values for some of the configuration parameters. During installation, the "DEFAULT" service block will be configured in edaserve.cfg. Additional services can be configured as required, using the Web Console.

SMF Records

The server can write SMF records for each connect and disconnect. Accounting reports can be viewed through the Web Console. The recommended integer value is in an inclusive range from 128 to 255. This number represents the SMF number used by the accounting facility when it sends records to the SMF system. Numbers from 1 to 128 are not recommended. To activate usage accounting, place the smf_recno parameter in the edaserve.cfg before any service block entries.

Syntax   **How to Activate SMF Records**

To activate SMF records, use the following syntax:

```
smf_recno=255
```

Frequently Asked Questions

Q. What does it mean when the server abends with a U4039?

A. A U4039 is a generic abend which is the consequence of a problem that has happened prior. For information on the prior event, check the edaprint.log file and/or the MVS system log.

Q. How do I suppress unwanted INSUFFICIENT AUTHORITY to GETPSENT messages that clog JESLOG?

A. Suppressing these messages is described in IBM's APAR II11813. rint.log file and/or the MVS system log. It recommends issuing either of the following RACF commands:

```
SETROPTS LOGOPTIONS (NEVER(PROCACT))
SETOPTS LOGOPTIONS (DEFAULT(PROCACT))
```

Server Installation for MVS

Topics:

- Installation Requirements
- Unloading the Media

This topic describes the requirements and procedures for proper installation of the Server for MVS.

Installation Requirements

Before beginning the server installation, you should review the following requirements:

- Supported Platforms and Operating Systems
- Disk Space Requirements
- Memory Requirements

Supported Platforms and Operating Systems

The following software must be installed and operational before installing the server:

- OS/390 1.3 (or higher) or z/OS 1.1 (or higher).
- VTAM V3.2 or higher.
- An external security manager, if security is required.

Disk Space Requirements

Certain baseline data sets are required for the software, regardless of configuration (in addition to those data sets that depend upon actual configuration). The disk space requirements are as follows:

Baseline	
Data Set	**3380 or 3390 Cylinders**
qualif.EDALIB.DATA	5
qualif.EDALIB.LOAD	100
qualif.EDARPC.DATA	60
qualif.EDAMSG.DATA	20
qualif.EDACTL.DATA	16
qualif.EDA.DBRMLIB	1
qualif.EDAPROF.DATA	1
qualif.INSTALL.DATA	1
qualif.EDAREXX.DATA	1

Hub, Full-Function, and WebFOCUS Reporting Servers	
Data Set	**3380 or 3390 Cylinders**
qualif.EDAAFD.DATA	1
qualif.EDAMFD.DATA	2
qualif.owner.REMTRANS.LOG	1
qualif.owner.SYSCOLLN.FOCUS	1
qualif.owner.SYSCOLLT.FOCUS	1
qualif.owner.SYSRPC.FOCUS	1
qualif.owner.EDASYNA.DATA	1
qualif.owner.EDASYNM.DATA	1

WebFOCUS Reporting Servers Only	
Data Set	**3380 or 3390 Cylinders**
qualif.HTML.DATA	1
qualif.GIF.DATA	1
qualif.STY.DATA	1

IBM and OCS TCP/IP Only	
Data Set	**3380 or 3390 Cylinders**
qualif.EDASASC.LINKLIB	5

National Language Support (NLS) Only	
Data Set	**3380 or 3390 Cylinders**
qualif.EDANLS.DATA	40

Note: Retaining the full installation is recommended, in case other services are to be installed on the same system.

Memory Requirements

The following virtual memory is required for operation of the server.

Type of use	Virtual Memory Needed
Base	10 MB
Per Relational Gateway user	850 K
Per Automatic Passthru-only user	1.4 MB
Per Full-Function Server user	3.4 MB

Unloading the Media

Complete the following steps to unload data sets from the distribution media.

Step 1. Unload the Install Tools Data Set From the Media

Choose a high-level qualifier to store the software under and run an IEBCOPY job to allocate and initialize the *qualif*.EDALIB.DATA PDS. This PDS contains the JCL procedures needed for the actual software installation process. The following JCL can be edited to unload this PDS:

```
//COPYEM    EXEC PGM=IEBCOPY
//SYSUT1     DD UNIT=workunit,SPACE=(CYL,(5,1))
//OUT        DD DISP=(NEW,CATLG,DELETE),DSN=qualif.EDALIB.DATA,
//              DCB=(RECFM=FB,LRECL=80,BLKSIZE=1600),
//              SPACE=(CYL,(5,1,100)),UNIT=SYSDA
//IN         DD DISP=(OLD,PASS),DSN=EDALIB.DATA,
//              UNIT=CART,
//              VOL=(,RETAIN,,SER=tapvol),
//              LABEL=(1,SL)
//SYSPRINT  DD SYSOUT=*
//SYSIN      DD *
     COPY OUTDD=OUT,INDD=IN
//
```

where:

workunit

> Is the unit for the work data set.

qualif

> Is the selected high-level qualifier for EDALIB.DATA, and the subsequent data sets to be unloaded.

UNIT=CART

> Is the unit type of the drive where the media is mounted. The default is CART, but other common names include 3480, TAPE, 3420, or 3490; names can be changed as needed.

tapvol

> Is the volser label value as shown on the actual physical installation media.

After the job has run, the *qualif*.EDALIB.DATA Install Tools PDS will be allocated, cataloged, and populated with the procedures and jobs needed to continue the install.

Example   **Unloading the Install Tools Data Set From the Media**

This sample JCL specifically allocates and unloads the Install Tools PDS into a high-level qualified PDS of IWAY.V5R2M03.EDALIB.DATA. The IWAY.V5R2M03 qualifier was used to indicate a specific product and release, but any qualifier-naming convention may be used.

```
//COPYEM   EXEC PGM=IEBCOPY
//SYSUT1    DD UNIT=SYSDA,SPACE=(CYL,(5,1))
//OUT       DD DISP=(NEW,CATLG,DELETE),
//             DSN=IWAY.V5R2M03.EDALIB.DATA,
//             DCB=(RECFM=FB,LRECL=80,BLKSIZE=1600),
//             SPACE=(CYL,(5,1,100)),UNIT=SYSDA
//IN        DD DISP=(OLD,PASS),DSN=EDALIB.DATA,UNIT=CART,
//             VOL=(,RETAIN,,SER=T5203E),LABEL=(1,SL)
//SYSPRINT  DD SYSOUT=*
//SYSIN     DD *
     COPY OUTDD=OUT,INDD=IN
//
```

Step 2. Customize Low-level Qualifiers (Optional)

You can optionally complete this step to change the default low-level data set qualifiers to meet a corporate standard. Otherwise, proceed to *Step 3. Allocate the Software Data Sets and Unload the Media* on page 5-7.

Note: Changing low-level qualifier names is not recommended (unless necessary).

Edit the *qualif*.EDALIB.DATA(EDASNAME) member and change the low-level data set qualifiers to reflect corporate naming standards.

```
//   SET  EDALIBD='EDALIB.DATA'      Server installation library
//   SET  EDALIBL='EDALIB.LOAD'      Server base load library
//   SET  EDAAFDD='EDAAFD.DATA'      Server access files
//   SET  EDAMFDD='EDAMFD.DATA'      Server master files
//   SET  EDARPCD='EDARPC.DATA'      Server procedures
//   SET  EDAMSGD='EDAMSG.DATA'      Server messages
//   SET  EDACTLD='EDACTL.DATA'      Server base samples
//   SET  EDACICD='EDACICS.DATA'     Server CICS samples
//   SET  EDACICL='EDACICS.LOAD'     Server CICS load library
//   SET  EDASASC='EDASASC.LINKLIB'  Server sockets run-time lib
//   SET  EDADBRM='EDA.DBRMLIB'      Server plan library
//   SET  EDAPROF='EDAPROF.DATA'     Server profiles
//   SET  EDANLSD='EDANLS.DATA'      Server NLS library
//   SET  EDAINST='INSTALL.DATA'     EDA installation O/P Library
//   SET  EDAREXX='EDAREXX.DATA'     ECC REXX RPC Library
//   SET  WFRHTMD='HTML.DATA'        WebFocus HTML library
//   SET  WFRSTYD='STY.DATA'         WebFocus Style Sheet library
//   SET  WFRGIFD='GIF.DATA'         WebFocus GIF library
//   SET  WFRQUED='REQUESTS.DATA'    WebFocus Deferred requests Q
//   SET  WFRRESD='RESULTS.DATA'     WebFocus Deferred results
//   SET  WFRWFMD='WINFORMS.DATA'    Maintain screen library
//   SET  WFRFCMD='FOCCOMP.DATA'     Maintain compile library
```

Any given name on the list may be used in the install process, the configuration process, or both; it is a single control list for any creation.

Step 3. Allocate the Software Data Sets and Unload the Media

The following steps allocate the actual software data sets and unload them from the media.

Edit and then submit the *qualif*.EDALIB.DATA(EDAJINS2) member making sure to do the following:

1. Add a job card for your site.

2. Provide the high-level qualifier in place of *qualif*.

3. Provide the volser in place of *tapvol*.

4. Modify any additional parameters as required by your site.

5. If you are installing a WebFOCUS Reporting Server, uncomment the two *WFRALL lines and the two *WFRUNL lines.

6. If you are rerunning the installation uncomment the *EDADEL line so the current install is removed first. For WebFOCUS also uncomment the *WFRDEL line to remove WebFOCUS data sets.

The EDAJINS2 JCL parameters are as follows:

```
//EDAPROCS JCLLIB ORDER=qualif.EDALIB.DATA
//*EDADEL   EXEC PROC=EDAQDEL,PREFIX='qualif'
//*WFRDEL   EXEC PROC=WFRQDEL,PREFIX='qualif'
//EDAALL    EXEC PROC=EDAQALL,PREFIX='qualif',
//          DUNIT=SYSDA
//*WFRALL   EXEC PROC=WFRQALL,PREFIX='qualif',
//*         DUNIT=SYSDA
//EDAUNL    EXEC PROC=EDAQUNL,PREFIX='qualif',
//          TUNIT=CART,TVOL=tapvol,WORK=SYSDA
//*WFRUNL   EXEC PROC=WFRQUNL,PREFIX='qualif',
//*         TUNIT=CART,TVOL=tapvol,WORK=SYSDA
```

where:

qualif

Specifies the high-level qualifier for the data sets.

DUNIT

Specifies the disk unit used when allocating the data sets. In this JCL, the default is SYSDA. To specify volume and unit when allocating the data sets, use the following

```
DUNIT='myunit,VOL=SER=myvol'
```

For example:

```
DUNIT='SYSDA,VOL=SER=USERM1'
```

TUNIT=CART

Is the unit type of the drive where the media is mounted. The default is CART; other common names include 3480, TAPE, 3420, or 3490. Change as needed.

tapvol

Is the volser label value as shown on the actual physical installation media.

WORK

Specifies a DASD work unit. The default is SYSDA. Change as needed.

Example   **Allocating and Unloading the Software Data Sets From the Media**

The following sample JCL (for a modified EDAJINS2) allocates and unloads the remaining required data sets with a high-level qualifier of IWAY.V5R2M03. The IWAY.V5R2M03 qualifier indicates a specific product and release, but any qualifier-naming standard may be used.

```
//EDAPROCS JCLLIB ORDER=IWAY.V5R2M03.EDALIB.DATA
//*EDADEL  EXEC PROC=EDAQDEL,PREFIX='IWAY.V5R2M03'
//*WFRDEL  EXEC PROC=WFRQDEL,PREFIX='IWAY.V5R2M03'
//EDAALL   EXEC PROC=EDAQALL,PREFIX='IWAY.V5R2M03',
//         DUNIT=SYSDA
//*WFRALL  EXEC PROC=WFRQALL,PREFIX='IWAY.V5R2M03',
//*        DUNIT=SYSDA
//EDAUNL   EXEC PROC=EDAQUNL,PREFIX='IWAY.V5R2M03',
//         TUNIT=CART,TVOL=T5203E,WORK=SYSDA
//*WFRUNL  EXEC PROC=WFRQUNL,PREFIX='IWAY.V5R2M03',
//*        TUNIT=CART,TVOL=T5203E,WORK=SYSDA
```

Add a job card and submit to start the actual unload.

The JCL will allocate and load the following data sets:

Data Set	Description
qualif.EDALIB.LOAD	Server base load library.
qualif.EDAAFD.DATA	Server Access Files.
qualif.EDAMFD.DATA	Server Master Files.
qualif.EDARPC.DATA	Server procedures.
qualif.EDAMSG.DATA	Server messages.
qualif.EDACTL.DATA	Server base samples.
qualif.EDASASC.LINKLIB	Server sockets run-time library.
qualif.EDA.DBRMLIB	DB2 installation library.
qualif.EDAPROF.DATA	Server profile.
qualif.INSTALL.DATA	EDA installation O/P library.
qualif.EDAREXX.DATA	ECC REXX RPC library.

Note: When running EDAJINS2, a member named EDAPREFX will be generated in *qualif*.EDALIB.DATA. This member contains the following line

```
//  SET PREFIX='qualif'
```

where:

qualif

Specifies the high-level qualifier for the data sets.

This member is used by subsequent routines to provide the high-level qualifier information for data sets (such as catalogs). However, the JCL used in the actual configuration process requires that the qualifier is edited for actual use. See the *iWay Server for MVS Configuration* manual for more information on the configuration routines.

Step 4. Unload the NLS Data Set From the Media (Optional)

Complete this step when using National Language Support (NLS) features.

The following JCL steps allocate the data sets needed for NLS. Edit the *qualif*.EDALIB.DATA(NLSJINS2), add a job card, and submit the job. The JCL parameters to change are:

```
//EDAPROCS JCLLIB ORDER=qualif.EDALIB.DATA
//*NLSDEL   EXECPROC=NLSQDEL,PREFIX='qualif'   '  (remove * for job rerun)
//NLSALL    EXECPROC=NLSQALL,PREFIX='qualif',',
//          DUNIT=SYSDA
//NLSUNL    EXECPROC=NLSQUNL,PREFIX='qualif',
//TUNIT=CART,TVOL=tapvol
```

where:

qualif

> Specifies the high-level qualifier for the data sets.

DUNIT

> Specifies the disk unit used when allocating the data sets. In this JCL, the default is SYSDA. To specify a volume and unit when allocating the data sets, use the following form:

```
DUNIT='myunit,VOL=SER=myvol'
```

> For example,

```
DUNIT='SYSDA,VOL=SER=USERM1'
```

TUNIT=CART

> Is the unit type of the drive which the media is mounted. The default is CART, but other common names include 3480, TAPE, 3420, or 3490. Change as needed.

tapvol

> Is the volser label value as shown on the actual physical installation media.

Example   **Unloading the NLS Data Set From the Media**

This sample JCL (of a modified NLSJINS2) allocates and unloads the NLS data sets with a high-level qualifier of IWAY.V5R2M03. The actual qualifier must match the qualifier used in prior steps.

```
//EDAPROCS JCLLIB ORDER=IWAY.V5R2M03.EDALIB.DATA
//*NLSDEL   EXECPROC=NLSQDEL,PREFIX= IWAY.V5R2M03'
//NLSALL    EXECPROC=NLSQALL,PREFIX='IWAY.V5R2M03,
//          DUNIT=SYSDA
//NLSUNL    EXECPROC=NLSQUNL,PREFIX='IWAY.V5R2M03',
//TUNIT=CART,TVOL=T5203E
```

Note: To rerun this job, remove the * before NLSDEL. This will delete the data set before reallocating it.

The JCL will allocate and load the following data set:

Data Set	Description
`qualif.EDANLS.DATA`	National Language Support library.

This concludes the software installation process. Configuration is covered in the *iWay Server Configuration for MVS* manual. If a separate administrator performs the configuration, the high-level qualifier selected and used in the installation should be provided for configuration purposes.

Server Installation for OS/400

Topics:

- Installation Requirements
- Media Availability
- Installing the Server
- Verifying the Server Installation
- Configuring the Server With Different Security Modes
- General Server Start Up and Use
- Other OS/400 Start Up Options
- Troubleshooting
- Accessing IFS Files and QSYS Libraries
- Creating J.D. Edwards Metadata

This document describes the requirements and procedures for proper installation of the Server for OS/400.

Installation Requirements

Before beginning server installation, review the following requirements:

- Supported Platforms and Operating Systems
- QShell Requirements
- Disk Space Requirements
- Memory Usage
- Communications Requirements
- Requirements for TCP/IP
- Creating User IDs
- MQ XML Listener Requirements

Supported Platforms and Operating Systems

The following table lists supported platforms and operating system releases. Confirm that the platform and the intended operating system releases are supported combinations on the chart, and that the label on the actual media indicates the correct software.

Hardware / Operating System Vendor	Operating System Release	CD-ROM Label
IBM iSeries (RISC)	OS/400 V4R4	OS400 V04R04M00
	OS/400 V4R5	OS400 V04R05M00
	OS/400 V5R1 or Higher (required for DBCS)	OS400 V05R01M00

The software also supports data adapters. See the DBMS support chart for specific combinations. Specific DBMS information (such as release levels, user IDs, and passwords) is not used during the basic installation, but will be used later during configuration.

To use the server for DBCS language code page configurations (i.e. Japanese), you must be running OS/400 V5R1 or higher. The installation process for this level of software includes an additional prompt (as shown in the example below) to select the initial installation code page. Due to the limitations of the OS/400 V5R1 operating system, if you intend to configure for one of the listed DBCS code pages, you must select the initial code page during initial server installation, so that certain files will be unloaded properly. In all cases, the specific language and code page (both DBCS pages and non-DBCS pages) must then also be configured on the Web Console. If your DBCS language is not listed, please contact customer support.

The operating system should also have the latest cumulative patch levels applied.

QShell Requirements

The OS/400 - QShell Interpreter (OS/400 Installation Option 30) must be installed to use the server. The QShell Interpreter is a free, but optionally installable feature of OS/400. The easiest way to check if this feature is installed is to enter QSH on the OS/400 command line. If it is installed, a Unix like environment starts (F3 to exit). If it is not installed, you receive a "Command QSH in library *LIBL not found" message. If it is not installed, install it before proceeding.

Disk Space Requirements

The following are approximate disk space requirements. Specific sizes may vary slightly with options selected during configuration. The usage numbers do not include space for actual applications, data sources, sort space, output preparation, or logs.

Platform	Version	During Install	After Install
IBM iSeries OS/400	V4R4	1000 Megabytes	500 Megabytes
	V4R5	1000 Megabytes	500 Megabytes
	V5R1	1000 Megabytes	500 Megabytes

Memory Usage

Memory and shared memory usage depend on the following elements:

- Number of data access agents.

- Type of access that is performed: joins, large retrieval, etc.

- Connection queue.

Actual memory usage differs between applications and the server load.

Communications Requirements

The TCP/IP transport protocol is supported on all platforms and is the primary method of communications between iWay-enabled connector applications and servers. The following sections describe specific protocol requirements.

Requirements for TCP/IP

Up to 4 consecutive open ports for each server you want to run will be used. The starting port number (of the consecutive ports) is required during the installation process, since the initial installation also yields an initial configuration.

Creating User IDs

The installation of an iWay server requires an ID to install and own the files as well as to administer the server; this is also known as the "iadmin" ID. The iadmin ID should:

- not be QSECOFR, have a group of QSECOFR, or have other special authorities.

- have a message queue delivery of *NOTIFY if this is not the default for the system.

- have a HOMEDIR other than the OS/400 default of "/".

In addition to the ID you assigned to administer the server, referred to as *iadmin*, which can have any value you assign, you will need a second ID literally called iadmin to properly unload the CD-ROM library. If this literal iadmin ID is not being used to install and own the files, you can remove it after installation.

To properly create the real iadmin ID and home directory (as QSECOFR), issue the following:

```
CRTUSRPRF USRPRF(IADMIN) PASSWORD(MYPASS) HOMEDIR('/home/iadmin')
 TEXT('Server Administrator ID') DLVRY(*NOTIFY)
QSH CMD('mkdir /home/iadmin')
QSH CMD('chmod 755 /home/iadmin')
QSH CMD('chown iadmin /home/iadmin')
```

Running the server in secured mode also requires that particular files have their ownership changed to QSECOFR (this step is done after installation).

End users of the server will also require an ID for access if the server is running in secured mode. The data access agents of the server will impersonate these user IDs before performing any file access on their behalf. No special authorities or setup are needed for these IDs.

In this documentation, iadmin user ID names and group associations are "iadmin;" this name is only suggested for easier reference. You may use any actual name for the administrator ID.

Note: The iadmin ID should only be available to users who require administrative privileges to the server for security purposes.

MQ XML Listener Requirements

OS/400 System Administrators, note: the following PTFs must be installed for access to the MQ XML listener.

OS400 V4R4	OS400 V4R5	OS400 V5R1
SF66797 SF66796 SF66621 SF66573 SF66572 SF66428 SF66322 SF66304 SF66102 SF66101 SF66073 SF66071 SF65944 SF65919 SF65823 SF65822 SF65805 SF65128 SF65127 SF65088 SF64746 SF64739 SF64735	SF66797 SF66796 SF66715 SF66714 SF66621 SF66573 SF66572 SF66495 SF66428 SF66322 SF66304 SF66287 SF66102 SF66101 SF66100 SF66073 SF66071 SF65944 SF65939 SF65919 SF65823 SF65822 SF65814 SF65810 SF65805 SF65791 SF65260 SF65165 SF65128 SF65127 SF65088 SF65076 SF64746 SF64739 SF64735 SF63984	

Media Availability

CD-ROM is the only media in which software is available.

Installing the Server

The following steps detail the procedure for installing the software.

1. Log on as QSECOFR ID (or an ID with RSTLIB authority) and restore the product library from the CD to disk with:

```
RSTLIB SAVLIB(R720520BTP) DEV(OPT01)
```

Note: The actual device name may differ; to view available devices, use the command:

```
WRKCFGSTS CFGTYPE(*DEV) CFGD(*OPT)
```

If you have an existing library that you do not want to overwrite, use the following syntax, which assigns the name ABC:

```
RSTLIB SAVLIB(R720520BTP) DEV(OPT01) RSTLIB(ABC)
```

and substitute this alternate library name (ABC in the above example) wherever R720520BTP is used in these instructions.

The actual library name will also differ when you install a service pack (e.g., 5.2.1 versus 5.2.0). The numeric portion of the library name will match the service pack number; for instance, the library name for 5.2.1 would be R720521BTP, while for 5.2.3 it would be R720523BTP, and so forth. In the case of a service pack, the appropriate library name must be substituted as the product library name in these instructions.

2. If you are not using the real iadmin as the iadmin ID to own the files and manage the server, issue (as QSECOFR):

```
CHGOBJOWN OBJ(R720520BTP/INU) OBJTYPE(*PGM) NEWOWN(QSECOFR)
```

3. Log on with the iadmin ID. On the OS/400 command line, call the installation procedure:

```
CALL R720520BTP/ISETUP
```

The ISETUP program requires a license key (see the shipping manifest for the actual key) plus a few basic parameters. The ID being used to install the software is the server administrator ID (iadmin); its password is prompted for and required to accomplish certain operations. All other parameters have defaults and are displayed. Responding "yes" to this list of defaults skips the process to the final confirmation step; otherwise, you are prompted individually for each of the values.

NLS on a server is set to "off" by default. It is configured using the Web Console as of 5.2.x (unlike previous releases, which required individual prompting during ISETUP for NLS values).

The parameters are:

Parameter	Description
License Key	Installation Key (actual key will be on shipping documents).
EDAHOME	IFS Directory location for files. Any changes in the EDAHOME location must follow the pattern *ibi.srv52*.home* in its declaration.
EDAHOMELIB	QSYS library location for programs.
EDACONF	Location for the default configuration. The default value is based on the license key and any change in the EDAHOME directory pattern. The default will be a sibling directory to the EDAHOME directory in terms of its location, and have a name such as ffs, wfm, etl, spg or wfs (based on the key and on any change in the EDAHOME pattern).
APPROOT	Location for default applications and sample applications.
Server Admin Password	Server Administrator password. It is recommended to supply a password, although it is only required when running the server in the WCPROTECT mode.
TCP Base Port	The port number on which the server's TCP listener listens. Also the start of the set of port numbers used by the server for other TCP based services.

Install Example

The example below shows a Full-Function Server installation using the defaults. The prompts are self-explanatory.

Note: On OS/400 Version 5 Release 1 or higher, there are additional prompts for DBCS code pages.

From the command line on the OS/400 Menu:

```
CALL R720520BTP/ISETUP

------------------------------------------------------------------------

                Welcome to the Product Set Up Facility
      Please respond to the prompts or enter Q to quit at any prompt.

------------------------------------------------------------------------


Select an initial code page:

      1. Generic     37 (Configure Specific Code Page via Web Console)
      2. Japanese   939
      3. Japanese  5035

Enter a selection (Default=1) : 1

------------------------------------------------------------------------


Select an option:

      1. Install and Configure
      2. Add Additional Configuration Instance
      3. Refresh Installation (Reinstall, Keep Configurations))
      4. Install Debuggables to the Installation Directory

Enter a selection (Default=1) : 1

------------------------------------------------------------------------

Enter your License Key (Format 999-999-9999) : xxx-xxx-xxxx

      License Key has been checked

      Product: Full Function Server
      Maximum Number of Users: 2
      Maximum Number of CPUs: 2
```

```
ISETUP: License xxx-xxx-xxxx has been accepted

-----------------------------------------------------------------------

Please enter the media library name

(Default=R720520BTP)

Please supply media or <Enter> :

-----------------------------------------------------------------------

Enter the Server Administrator (IADMIN) Password: XXXXXXX

-----------------------------------------------------------------------

Please review the default settings.

EDAHOME = /home/iadmin/ibi/srv52/home
EDAHOMELIB = srv52
EDACONF = /home/iadmin/ibi/srv52/ffs
APPROOT = /home/iadmin/ibi/apps
TCP_BASE_PORT = 8100

If you are satisfied with the default settings you may proceed to
final confirmation else you will be prompted for individual values.
Proceed with defaults? (Y/N Default=Y) : Y

The following selections have been made for ...

Install Options ...
      INSTALLATION_DEVICE = R720520BTP
      PRODUCT = server
      EDAHOME = /home/iadmin/ibi/srv52/home
      EDAHOMELIB = srv52
      APPROOT = /home/iadmin/ibi/apps

Configure Options ...
      EDACONF = /home/iadmin/ibi/srv52/ffs
      EDAHOME = /home/iadmin/ibi/srv52/home
      EDAHOMELIB = srv52
      LICENSE = xxx-xxx-xxxx
      APPROOT = /home/iadmin/ibi/apps
      SERVER_TYPE = ffs
      SERVER_NAME = "IWAY 52 Full Function Server"
      SERVER_ADMIN_ID = iadmin
      SERVER_ADMIN_PASSWORD = ECECC5B1F12E735A
      TCP_BASE_PORT = 8100
```

```
Please confirm these values with one of the following responses ...

    Y = Accept and Proceed
    N = Start Over
    Q = Quit

Please supply confirmation: Y

Please, wait while we are installing the server ...

ISETUP: Installation Step completed

Please, wait while we are configuring the server ...

ISETUP: Configuration Step completed

-------------------------------------------------------------------

Would you like to start the server (Y/N Default=Y)? : Y

ISETUP: The server has been started

-------------------------------------------------------------------

To administer the server go to a web browser
and open the URL http://myhost.mycompany.com:8101

Press ENTER to end terminal session.
```

After pressing the ENTER key, control returns to the command prompt of the OS/400 Menu.

If you are satisfied with the selections, answer "yes" to the final prompt and wait for the return of the command prompt before proceeding to the next step.

If any of the target locations exist, they will be marked with "(*EXISTS*)" on the display line. This gives you the opportunity to change a location if you do not want to overwrite it by changing the default values.

If you decide to change a default, you will be prompted for the individual values. However, you must follow some rules about directory locations. The default root location is the iadmin user ID home directory. The EDAHOME directory path name is locked into the pattern *ibi/srv52*/home*. If you change EDAHOME, the default EDAHOMELIB and EDACONF follow the change in the pattern. The EDAHOMELIB and EDACONF may also be changed, but they are locked into a similar pattern (except for the lowest portion of the EDACONF directory name, which reflects the type of server).

Additional Configurations

If you have additional licenses and need to configure an additional server, log on with the iadmin ID, start QSH, and run EDAHOME bin/isetup, where EDAHOME is the directory on which the software was installed (ibi/srv52/home by default). At the main menu, select option 2, Add Additional Configuration Instance.

The prompts for adding a configuration are similar to those for an installation, but EDAHOME is the directory where the software was originally installed. Typically, you would not want to accept the defaults, as doing so will cause your current configuration to be overwritten. If the supplied EDACONF already exists, the installation will copy it to a directory called BACKUP.

Refreshing an Installation

Sometimes it is desirable to refresh the server software's installation directory (EDAHOME) because it has become accidentally damaged, populated with unwanted files, or needs updating with a service pack. To do this, run the ISETUP program on the CD-ROM from which the software was originally installed, or from a service pack CD-ROM. At the main menu, select option 3, Refresh Installation (Reinstall, Keep Configuration). This refreshes programming files under the server installation directory (EDAHOME) and does not affect any configuration directories. The complete directory tree (EDAHOME) and library (EDAHOMELIB) are removed and re-created; if any files need to be retained, they should be copied elsewhere beforehand.

Debuggable Version

As with any complex software product, there is sometimes a need to produce traces and other information in order to identify problems; thus debuggable software is needed. Whether the original software CD-ROM has these debuggables is generally dependent on disk space. The debuggable version should not be installed and activated unless explicitly requested by customer support for problem resolution. If a separate CD-ROM is required, it will be shipped as needed. When necessary, install the debuggable version by running ISETUP from the appropriate CD-ROM and selecting option 4, Install Debuggables to the Installation Directory, from the main menu.

Verifying the Server Installation

To test the installation, use the initial configuration created by the installation. The server may be brought up, checked, connected to, tested, disconnected, and shut down using the following steps.

1. Log on with the iadmin user ID.

2. There are several methods to start a server and options that may be used. The following method for starting a server (using the appropriate library name and TSCOM300 options) would be the most familiar to an OS/400 Administrator:

   ```
   CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs –start')
   ```

   Alternate startup methods and batch examples are noted below.

3. Check to ensure that the processes are up with -show:

   ```
   CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs –show)
   ```

4. Start the Web Console by starting a browser pointed at the listener port of the server. The URL format is http://host:port. For example, http://host:8101 for the iWay Server and http://host:8121 for the WebFOCUS Server (if the default ports were used during installation). The actual listener port number is one higher than the TCP listener port specified during the installation.

5. If the server is running in secured mode, you will receive a logon screen. Log on with the iadmin user ID.

6. The home page of the Web Console will open. The home page is arranged in a menu like context for the various features it supports. Use of the server admin ID (iadmin) to log on will display server administration features that non admin IDs would not normally see.

   Information on how to use the Web Console is available as a drill-down on the Console itself and in the *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

7. The home page has a drill-down for testing the server. Click the test drill-down to run a sample report.

8. If you are done using the server, use the Stop Server drill-down on the Web Console Menu.

9. If there are startup problems, examine the IFS/ home/iadmin/ibi/srv52/ffs/edaprint.log file.

Configuring the Server With Different Security Modes

There are three security modes for a Server.

1. **Security OFF.** This is the default unless security was configured.

2. **Security ON.** With security ON, users must either send a password to connect to the server or use some other form of verification.

3. **Security WCPROTECT.** With security WCPROTECT, users are not verified against the operating system, but will be verified against the edaserve.cfg file when logging into the Web Console.

Each of these security options can be set with the EDAEXTSEC variable, as follows.

```
export EDAEXTSEC={ON|OFF|WCPROTECT}
```

The default is OFF unless the server has been configured for Secured Mode, as described below; then the default is ON.

Procedure **How to Configure the Server for Secured Mode**

To run a server in secured mode on OS/400, certain files must claim ownership by QSECOFR or a QSECOFR authorized ID. Running with security ON forces users to send a password to connect to the server, or to use some other form of verification. While general installation of the server software is done by iadmin (an ordinary user ID), this step requires QSECOFR authority.

To change ownerships, do the following:

1. Login as QSECOFR.

2. Using the library specified during the installation, change the file ownership by entering the following commands:

```
CHGOBJOWN OBJ(SRV52/TSCOM300) OBJTYPE(*PGM)    NEWOWN(QSECOFR)

CHGOBJOWN OBJ(SRV52/R1SEC)     OBJTYPE(*SRVPGM) NEWOWN(QSECOFR)
```

Your software is now installed along with an initial configuration.

Procedure **How to Configure the Server for WCPROTECT Mode**

1.   Prior to starting the server, issue the variable EDAEXTSEC as follows:

```
export EDAEXTSEC=WCPROTECT
```

2. Start the server.

A user will only be authenticated when connecting to the Web Console. Only the ID and Password in the edaserve.cfg will have administrative access to the server.

General Server Start Up and Use

After configuring for secured mode (if desired), the server is started and managed using the same server startup and Web Console startup steps used for validating the server (steps 1 - 6). If the server has not been configured for adapters, now is an appropriate time to do so, using the Web Console and the *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

OS/400 Sites have the option of using QSH commands that run "edastart" or a CALL to TSCOM300 to start and manage a server.

The chart below lists commonly used "edastart" options and functions (the parameters are the same for TSCOM300 usage).

Command and Option	Function
edastart	(No parameters) Starts the server with the line mode console to actively view the server log (edaprint). Also allows dynamically issuing edastart options, such as show, traceon, traceoff, quit, stop, etc. Use your 5250 SysReq key and enter "2" to receive the console command prompt to enter commands. If you are using a PC and 5250 emulator software, see your emulator keyboard map for the PC's equivalent key or use your emulator's help instructions on how to create mapping for the SysReq key.
edastart -start	Starts the server in background; only a short message appears.
edastart -sstart n	Starts the server, but waits n seconds for actual startup.
edastart -show	Shows general status of server and agents.
edastart -stop	Stops the server.
edastart -quit	Exits the server's line mode console log (edaprint) and returns to the operating system command prompt, but leaves the server running.
edastart -console	Reenters the server's line mode console log (edaprint).
edastart -traceon	Turns on tracing. May be used at initial startup or after. Tracing should not be turned on (due to overhead) unless there is a problem that needs to be traced. It is always preferable to start traces at initial startup time unless instructed otherwise.

Command and Option	Function
`edastart -traceoff`	Turns off tracing.
`edastart -?`	Displays edastart options (this list, plus more).
`edastart -?s`	Displays support information and support related options.

Note: The OS/400 commands WRKACTJOB and WRKSBMJOB should not be used to shutdown a running server.

Alternate startup methods, which start the server either with command line options or as a submitted job, are detailed in *Other OS/400 Start Up Options* on page 6-15.

Other OS/400 Start Up Options

The methods below may be used to start or manage the server environment using either native OS/400 CALL syntax or QSH syntax. (The directory and library names specified during the installation process are used in these examples.)

• To start the server from the native OS/400 menu command line, use:

```
CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs -start')
```

• To start the server from the native OS/400 menu command line with traces, use:

```
CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs -start
-traceon')
```

• To stop the server from the native OS/400 menu command line, use:

```
CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs -stop')
```

• To clear all server resources after a malfunction or after server termination using WRKACTJOB or WRKSBMJOB from the native OS400 menu command line, use:

```
CALL SRV52/TSCOM300 PARM('-edaconf /home/iadmin/ibi/srv52/ffs -clear')
```

• To start the server from the command line of a QSH session, use:

```
QSH (starts QSH)
/home/iadmin/ibi/srv52/ffs/bin/edastart -start
```

• To stop the server from the command line of a QSH session, use:

```
QSH (starts QSH)
/home/iadmin/ibi/srv52/ffs/bin/edastart -stop
```

• To start the server as a QSH session, but from the OS/400 command line, use:

```
QSH CMD('/home/iadmin/ibi/srv52/ffs/bin/edastart -start &')
```

- To stop the server as a QSH session, but from the OS/400 command line, use:

```
QSH CMD('/home/iadmin/ibi/srv52/ffs/bin/edastart -stop')
```

- To start the server as a submitted QSH session on the OS/400 command line with a code page (Belgium), use:

```
SBMJOB CMD(QSH CMD('/home/iadmin/ibi/srv52/ffs/bin/edastart -start
&'))

JOB(MYJOB) LANGID(NLB) CNTRYID(BE) CCSID(500)
```

- To start the server as a submitted job on the OS/400 command line with a code page (Belgium) and specific job queue, use:

```
SBMJOB CMD(CALL SRV52/TSCOM300 PARM('-edaconf
/home/iadmin/ibi/srv52/ffs'))
JOB(MYJOB) LANGID(NLB) CNTRYID(BE) CCSID(500) JOBQ(MYQUEUE)
```

Note: The -start and -sstart options should not be used for submitted jobs. These options close the job log file, which causes the submitted job to end immediately.

You can issue other combinations of standard server control parameters by replacing the option in one of the examples above with another "edastart" option, such as -stop, -show, -traceon, and -traceoff.

Note: It is important in a submitted job to include "-start" and a trailing "&" in the QSH command (as shown above) when using this form of SBMJOB. Failure to do so will cause ENDSBS or ENDSYS to fail in shutting down the spawning processes.

CL and CMD Programs

The process of installing a server will also create and compile CL and CMD sources so that server functions such as start, stop, show and tracing may be activated on the OS/400 menu command line. The start command starts the server as a batch job issued to a specified job queue, and is particularly useful for automatically starting a server at boot time or with minimal effort.

The source is created and permanently assigned to a configuration's bin directory, then copied into QTEMP and compiled. If the ID being used to install the server has an explicit current library, the compiled programs will reside in *CURLIB; otherwise, they will go to QGPL. The user ID should have a current library (CURLIB). The core EDASTART program is generic for any installation and is driven by the defaults within the command files. If you want to have more than one configuration, use separate libraries or rename the programs to prevent overwriting. The basic commands and functions are listed in the table below.

Command	Function
ISTART	edastart

Command	Function
ISTOP	edastart -stop
ISHOW	edastart -show
ITRCON	edastart -traceon
ITRCOFF	edastart -traceoff
ICLEAR	edastart -clear

To use any of the commands, type the command at the OS/400 Menu command line. You may change any of the following settings by using the OS/400 F4 Prompt mode:

- EDACONF Directory EDASTART Parameter

- Subsystem Name

- Subsystem Library Name

- Language ID

- Country ID

- Coded Character Set ID

- Job Name Prefix

The CL and CMD script may be further customized, or the defaults may be changed, by manually copying the desired file to a library and then changing and recompiling it. Detailed instructions for all steps are contained within the EDASTART CL source. Configuration of a particular language on the Web Console does not currently change the defaults with the file sources; these must be changed manually.

Troubleshooting

Safe Mode

If the Server starts in safe mode normal use of the server is disabled. However the administrator can connect to the Web Console to fix the problem. When the Web Console is started the reason the server is in safe mode is listed on the HOME page. Click the fix hyperlink listed under the problem and make the correction. Save and restart the server. A common reason for the server to start in safe mode is that the server_admin_password is not correct.

If the server administrator does not have a password a secured server will always start in safe mode. To correct this a password will need to be added for this ID on the operating system.

Accessing IFS Files and QSYS Libraries

The location of FOCEXEC, MASTER, and FOCUS application files starting with release 5.x may be QSYS, IFS, or both. IFS is the preferred location, and is the location used for files created by the HTTP Web Console.

Syntax ## How to Use Conventions for IFS

IFS access follows the standards of a number of other platforms for EDAPATH, FILEDEF, USE, and APPS, but is most like UNIX because the file names follow the same rules. The following is a summary of the respective commands and conventions.

```
SET EDAPATH = directory  [: directory ]

FILEDEF ddname DISK filename [ ( options ]

USE
filename [AS name ]
END

APP MAP MYAPP directory
```

where:

directory

　Is the full path directory name (for example, /home/iadmin/acctng).

ddname

　Is the reference name for the file being opened.

filename

　Is either the relative or full path file name (for example, myfile.dat, acctng/myfile.dat or /home/iadmin/acctng/myfile.dat).

options

　Are the available access options such as LRECL or RECFM.

name

　Is the alternate name for the Master File.

Use of a relative path name is not recommended, since this varies with any given connection to the server. Use of environment variables or shortcuts (for example, $HOME or ~) are not supported in any context.

Using Conventions for QSYS

QSYS access works with libraries and has the following EDAPATH, FILEDEF, USE, and APP support for accessing existing applications.

iWay 5.x has two application search methodologies, APP and EDAPATH. The 5.1 default was EDAPATH and the 5.2 default is APP. APP is enabled by the APP ENABLE command in the server profile.

The EDAPATH command is used to access IFS. It is also used to access QSYS Libraries with an IFS style of references. The option to use IFS references to QSYS Libraries is a native feature of OS/400. IFS references to QSYS names, such MYLIB, use IFS style references such as /QSYS.LIB/MYLIB.LIB, which are clearly recognizable as a QSYS reference. IFS QSYS references used in EDAPATH or APP MAP must be capitalized for proper utilization.

EDAPATH searches recognize these QSYS type of specifications and make the application library members (for example, EDAMAS(*), EDAACX(*), FOCEXEC(*)) available.

Example   Accessing QSYS Libraries

In APP mode, the APP MAP command supports use of IFS QSYS Library references so the MAP NAME may be used for path search purposes in applications via the APP PATH command. However, the contents of a QSYS mapping are not available from the Web Console.

The syntax for APP MAP to a QSYS Library is:

```
APP MAP ACCTNG /QSYS.LB/ACCTNG.LIB
```

In EDAPATH mode, if accounting and shipping libraries, respectively named ACCTNG and SHIP, were created from applications built with Version 4.3.1, you would access them by issuing the following:

```
SET EDAPATH = /QSYS.LIB/ACCTNG.LIB : /QSYS.LIB/SHIP.LIB
```

The FILEDEF syntax to used access files that were created as single member source physical files of a QSYS Library is:

```
FILEDEF ddname DISK library/file
```

Note: The source physical does not need to pre-exist for file creation purposes.

The FILEDEF syntax used to access files that were created as members in a source physical file of a QSYS Library is:

```
FILEDEF ddname DISK library/file(member)
```

The source physical needs to pre-exist for file creation purposes.

The USE syntax used to access FOCUS database files, created as members in a source physical file starting with "F$" of a QSYS Library, is

```
USE
library/file(member name) [AS name ] [NEW]
END
```

where:

member name

> Is assumed as the FOCUS file name unless an AS phrase is explicitly issued. If the member name is left off the specification, then the member and file name are assumed to be the same. The NEW option allows new files to be created if they do not exist already.

This construction allows you to organize multiple FOCUS data sources within a single QSYS source physical name with a functionally name, such as FOCUS, ACCTG, SHIPPING, AR, or AP; or as individual QSYS source physical names, such as SHIP(SHIP), AR(AR), AP(AP), or SHIP(FOCUS).

Prior 3.x and 4.x Versions created FOCUS databases with an arbitrary "F$" added to the beginning of the source physical name and used "FOCUS" as the member name. Therefore, the name on the disk was in the form CURLIB/F$MYDB(FOCUS). The 5.x release does not assume this is a default, and therefore requires either a USE command with an explicit AS; or that the files are renamed to fit the 5.x conventions.

The source physical does not need to pre-exist for file creation purposes.

Reference **Environment Variables**

> EDAPATH may also be set as an environment variable before server startup using appropriate syntax for WRKENVVAR or OSH export and a list of desired (colon separated) directories.

Creating J.D. Edwards Metadata

> Creation of J.D. Edwards Metadata requires the use of the following iWay tools: AUTOTOOL and JDECONV. These tools are available on a separate CD entitled *iWay 5.2 OS/400 Tools*. The output from these tools will be in QSYS. You need to either map to this location or copy the files to an IFS location.

Server Installation for OpenVMS

Topics:

- Installation Requirements
- Software Availability
- Installing the Server
- Verifying the Server Installation
- Configuring the Server With Different Security Modes
- General Server Startup and Use
- Troubleshooting

This document describes the requirements and procedures for proper installation of the Server for OpenVMS.

Installation Requirements

Before beginning server installation, review the following requirements:

- Supported Platforms and Operating Systems
- Disk Space Requirements
- Memory Usage
- Workspace Manager Shared Memory Resources
- Communications Requirements
- Creating User IDs

Supported Platforms and Operating Systems

The following table lists supported platforms and operating system releases. Confirm that the platform and the intended operating system release are supported combinations on the chart, and that the label on the actual media indicates the correct software.

Hardware / Operating System Vendor	Operating System Release	CD-ROM Label
OpenVMS for Alpha	7.1	OpenVMS V7.1
	7.2-2 (Not 7.2 or 7.2-1)	OpenVMS V7.2-2
	7.3-1	OpenVMS V7.3-1

The software also supports a range of data adapters for ADABAS/C, Oracle, Progress, RDB and RMS; see the DBMS support chart for specific combinations on any given platform. Specific DBMS information (such as release levels, user IDs, and passwords) is not used during the basic installation, but will be used later during configuration.

Reference **Operating System Required Patches**

OpenVMS requires certain operating system patches to install and run a server. The chart below is based on operating system release levels.

OpenVMS 7.1 Patches	OpenVMS 7.2-2 Patches	OpenVMS 7.3-1 Patches
ALPBASE02_071	VMS722_UPDATE V 1.0	VMS731_RMS V3.0
ALPF11X03_071	VMS722_LAN V3.0	Compaq TCP/IP Services V5.3 ECO 2
ALPSYSA02_071	VMS722_RMS V4.0	VMS731_ACRTL V1.0

OpenVMS 7.1 Patches	OpenVMS 7.2-2 Patches	OpenVMS 7.3-1 Patches
ALPSYSB02_071	VMS722_PTHREAD V1.0	VMS731_F11X V1.0
ALPPORTS01_071	Compaq TCP/IP Services V5.3 ECO 2	VMS731_PTHREAD V1.0
ALPDCL01_071	VMS722_ACRTL V2.0	VMS731_SYS V3.0
ALPMONT02_071	VMS722_SYS V1.0	
ALPBACK04_071	VMS722_IPC V1.0	
ALPDISM01_071		
ALPINIT01_071		
ALPMTAA01_071		
ALPACRT06_071		
ALPDRIV11_071		
ALPMOUN07_071		
ALPSHAD06_071		
ALPBACK05_071		
ALPPTHR02_071		
Digital TCP/IP Services V4.2 ECO 5		

Third party TCP/IP packages from Process Software have also been tested at the Multinet 4.4 and TCPWare 5.6 levels for basic connect and data retrieval, and are known to be operational and require no special configuration. If you have a problem using third party TCP/IP products, be sure to specify the product, the release, and any installed patches when contacting Customer Support.

Disk Space Requirements

The following are approximate disk space requirements. Specific sizes may vary slightly according to the options that were selected during configuration. The usage numbers do not include space for actual applications, databases, sort space, output preparation, or logs.

Platform	Version	After Install
OpenVMS for Alpha	7.1	260000 blocks
	7.2-2	250000 blocks
	7.3-1	250000 blocks

Memory Usage

Memory usage in a configured environment is determined by the following factors:

- Workspace Manager.

- Listeners.

- Concurrently running application agents.

Actual memory usage varies depending on the features used by the application, and will increase or decrease as agents change between active and idle states.

Workspace Manager Shared Memory Resources

The Workspace Manager makes use of a specific system resource known as shared memory. Each individually configured Full-Function Server with or without Data Adapters uses one shared memory. The size of this memory varies based upon the sizes of the agents table and the queue.

Generally, shared memory use does not require special configuration; it is just a resource that system administrators like to know is being used so they can monitor it with the SHOW MEMORY/POOLED command (non-paged section).

Communications Requirements

The TCP/IP Transport protocol is supported on all platforms and is the primary method of communications between iWay-enabled connector applications and iWay servers.

The System Administrator should make sure that TCP/IP is communicating properly by using the ping command between the desired platforms.

Up to 4 consecutive open ports for each server you want to run will be used. The starting port number (of the consecutive ports) is required during the installation process, since the initial installation also yields an initial configuration.

Creating User IDs

The installation of an iWay server requires an ID to install and own the files as well as to administer the server; this is also known as the "iadmin ID". The same ID should be used for both functions (installation and administration) and should not be the SYSTEM ID. The iadmin ID is an any user ID with a set of privileges and quotas for secured or non-secured mode. Running the server in secured mode will require more privileges than running in non-secured mode. If you are planning to run a secured server, see *Configuring the Server With Different Security Modes* on page 7-14 and configure for that mode at this time.

The iadmin privileges for non-secured servers are:

Privilege	Function	Required for Use of
NETMBX	May create network device	Mailboxes
PRMGBL	May create permanent global sections	IPC Shared Memory
PRMMBX	May create permanent mailbox	IPC Control Pipes
SYSGBL	May create system wide global sections	IPC Shared Memory
SYSNAM	May insert in system logical name table	IPC Control Pipes
TMPMBX	May create temporary mailbox	Mailboxes
SYSLCK	May lock system wide resources	Progress Data Adaptor only

Any additional privileges required by particular underlying databases must also be authorized.

Running OpenVMS servers in secured mode is always recommended. This is because non-secured servers run as the privileged account and connecting end-users requests run as the privileged iadmin account, thus presenting a security risk. Non-secured mode should only be used when adequate safeguards have been taken so that the required privileges do not present a risk, or for short periods of time only (such as while debugging an issue).

The following OpenVMS minimal quota resources are also required:

Quota Resources	Value
PAGE_FILE	1000000
BUFFER_LIMIT	800000
IO_BUFFERED	200
IO_DIRECT	200

Quota Resources	Value
AST_LIMIT	300
QUEUE_LIMIT	50
PRIORITY	4
WORKING_SET	3076
MAXIMUM_WORKING_SET	8192
EXTENT	10240
FILE_LIMIT	300
ENQUEUE_LIMIT	2000
JOB_TABLE_QUOTA	10000

Note: The IMPERSONATE privilege (one of the requirements for secured mode operation) allows dynamic setting of quota levels and uses the above table of values. If the configuration is run in secured mode, the initial default values for server validation purposes need not be a concern unless the defaults are unusually low.

End-users connecting to a server will also require an ID with specific set up for access. See the *End-User Requirements* on page 7-18 for details.

Note: The iadmin ID should only be available to users who require administrative privileges to the server for security purposes.

Software Availability

The software is available only on CD-ROM, in OSD-2 format.

Installing the Server

For performance reasons, you should not install or access the software using FSD or NFS-mounted disks; a directly connected disk or cluster disk is always preferred.

1. The following steps detail the procedure for installation. Log on with the iadmin user ID.

2. Set the default protection mask to minimally read/execute (if it has not already been set this way). For example:

```
$ SET PROTECTION=(S:RWED,O:RWED,G:RE,W:RE)/DEFAULT
```

The installation procedure may be run from any directory; you do not need to set the default to that directory provided the full path name is used. Ensure that you have write privileges to the directory on which you are running the command. To test this, enter the following:

```
$ CREATE [.XXX] /DIRECTORY
```

Mounting the Software CD

To make the software on the CD accessible to the user performing the actual installation, the media can be mounted and either:

• the set up program can be directly accessed, or

• the contents can be copied to disk for future access.

To mount the software, insert the CD into the CD-ROM drive and issue the following command:

```
MOUNT /OVER=ID device_name:
```

where:

device_name

Is the system name for your CD-ROM device. Consult your OpenVMS System Administrator for the name of the device for your platform.

The CD will now be accessible for the ID doing the actual installation and will have a root directory of

```
[IWAY]
```

The actual installation process does not require copying any files to disk before running the set up program; you can access the program directly from the CD. However, it may be advantageous to copy all files to disk in order to speed installation.

Starting the Setup Procedure

The installation procedure name is called ISETUP. Run it using the appropriate full path name to the CD-ROM location (or where ever the procedure resides on the disk).

The ISETUP program requires a license key (see the shipping manifest for the actual key) plus a few basic parameters. The ID being used to install the software is the server administrator ID (iadmin); its password is prompted for and required for certain operations. All other parameters have defaults and are displayed. Responding yes to this list of defaults skips the process to the final confirmation step; otherwise, you are prompted individually for each of the values.

NLS on a server is set to "off" by default. It is configured using the Web Console as of 5.2.x (unlike previous releases, which required individual prompting for NLS values during ISETUP).

The parameters are:

Parameter	Description
License Key	Installation Key (actual key will be on shipping documents).
EDAHOME	IFS directory location for files. Any changes in the EDAHOME location must follow the pattern *ibi.srv52*.home* in its declaration.
EDACONF	Location for the default configuration. The default value is based on the license key and any change in the EDAHOME directory pattern. The default will be a sibling directory to the EDAHOME directory in terms of its location, and will have a name such as ffs, wfm, etl, spg or wfs (based on the key and on any change in the EDAHOME pattern).
	When EDASTART is used to control the server, if the full path name of the EDACONF directory exceeds 31 characters, the directory is automatically aliased as EDASHARE=EDAn where n is the TCP port number of the server.
	When aliasing occurs, a message similar to the following is displayed:
	`Warning: WSM id 'DISK$SOFTWARE:[IWAY.IBI.SRV52.FFS]` `has been aliased to EDASHARE=EDA8100 due to length.`
	In 5.1 releases, EDASHARE had to be declared manually. Manual declarations will continue to be respected. However, we recommend removing manual declarations.
APPROOT	Location for default applications and sample applications.

Parameter	Description
Server Admin Password	Server Administrator password. There is no default.
TCP Base Port	The port number on which the server's TCP Listener listens. It is also the start of the set of port numbers used by the server for other TCP based services.

Example   **Installing and Starting a Full-Function Server**

The example below shows a Full-Function Server installation using the defaults. The prompts are self-explanatory.

From the OpenVMS command prompt:

```
$ RUN CDROM:[IWAY]ISETUP

-----------------------------------------------------------------------

                 Welcome to the Product Set Up Facility
       Please respond to the prompts or enter Q to quit at any prompt.

-----------------------------------------------------------------------

Select an options:

   1. Install and Configure
   2. Add Additional Configuration Instance
   3. Refresh Installation (Reinstall, Keep Configurations)
   4. Install Debuggables to the Installation Directory

Enter a selection (Default=1) : 1

-----------------------------------------------------------------------

Enter your License Key (Format 999-999-9999) :   xxx-xxx-xxxx

   License Key has been checked

   Product: Full Function Server
   Maximum Number of Users: 2
   Maximum Number of CPUs: 2

ISETUP: License xxx-xxx-xxxx has been accepted

-----------------------------------------------------------------------
```

Please enter the full path name of the media for the product

(Default=CDROM:[IWAY]iserver.bck)

Please supply media or <Enter> :

Enter the Server Administrator (IADMIN) Password: XXXXXXX

Please review the default settings.

EDAHOME = IWAY:[iadmin.ibi.srv52.home]
EDACONF = IWAY:[iadmin.ibi.srv52.ffs]
APPROOT = IWAY:[iadmin.ibi.apps]
TCP_BASE_PORT = 8100

If you are satisfied with the default settings you may proceed to
final confirmation else you will be prompted for individual values.
Proceed with defaults? (Y/N Default=Y)   : y

The following selections have been made for ...

Install Options ...
   INSTALLATION_DEVICE = /cdrom/iserver.tar
   PRODUCT = server
   EDAHOME = IWAY:[iadmin.ibi.srv52.home]

Configure Options ...
   EDACONF = IWAY:[iadmin.ibi.srv52.ffs]
   EDAHOME = IWAY:[iadmin.ibi.srv52.home]
   LICENSE = xxx-xxx-xxxx
   APPROOT = IWAY:[iadmin.ibi.apps]
   SERVER_TYPE = ffs
   SERVER_NAME = "IWAY 52 Full Function Server"
   SERVER_ADMIN_ID = iadmin
   SERVER_ADMIN_PASSWORD = ECECC5B1F12E735A
   TCP_BASE_PORT = 8100

Please confirm these values with one of the following responses ...

   Y = Accept and Proceed
   N = Start Over
   Q = Quit

Please supply confirmation: Y

```
Please, wait while we are installing the server ...

ISETUP: Installation Step completed

Please, wait while we are configuring the server ...

ISETUP: Configuration Step completed

----------------------------------------------------------------------

Would you like to start the server (Y/N Default=Y)? : Y

ISETUP: The server has been started

----------------------------------------------------------------------

To administer the server go to a web browser
and open the URL http://myhost.mycompany.com:8101

$
```

If you are satisfied with the selections, answer yes to the final prompt and wait for the return of the command prompt before proceeding to the next step.

If any of the target locations exist, they will be marked with "(*EXISTS*)" on the display line. This gives you the opportunity to change a location if you do not want to overwrite it by changing the default values.

If you decide to change a default, you will be prompted for the individual values. However, you must follow some rules about directory locations. The default root location is the iadmin user ID home directory. The EDAHOME directory path name is locked into the pattern *ibi.srv52*.home*. If you change EDAHOME, EDACONF follows the change in the pattern. The EDACONF may also be changed, but it is locked into a similar pattern (except for the lowest portion of the EDACONF directory name, which reflects the type of server).

Your software is now installed along with an initial configuration.

Configuring an Additional Server

If you have additional licenses and need to configure an additional server, log on with the iadmin ID and run EDAHOME [.BIN]ISETUP.EXE, where EDAHOME is the directory on which the software was installed ([.IBI.SRV52.HOME] by default). At the main menu, select option 2, Add Additional Configuration Instance.

The prompts for adding a configuration are similar to those for an installation, but EDAHOME is the directory where the software was originally installed. Typically, you would not want to accept the defaults, as doing so will cause your current configuration will be overwritten. If the supplied EDACONF already exists, the installation will copy it to a directory called BACKUP.

Refreshing an Installation

Sometimes it is desirable to refresh the server software's installation directory (EDAHOME) because it has become accidentally damaged, polluted with unwanted files, or needs updating with a service pack. To do this, run the ISETUP program on the CD-ROM from which the software was originally installed, or from a service pack CD-ROM. At the main menu, select option 3, Refresh Installation (Reinstall, Keep Configuration). This refreshes programming files under the server installation directory (EDAHOME) and does not affect any configuration directories. The complete directory tree (EDAHOME) and library (EDAHOMELIB) are removed and re-created; if any files need to be retained, they should be copied elsewhere beforehand.

Debuggable Version

As with any complex software product, there is sometimes a need to produce traces and other information in order to identify problems; thus debuggable software is needed. Whether the original software CD-ROM has these debuggables is generally dependent on disk space. The debuggable version should not be installed and activated unless explicitly requested by customer support for problem resolution. If a separate CD-ROM is required, it will be shipped as needed. When necessary, install the debuggable version by running ISETUP from the appropriate CD-ROM and selecting option 4, Install Debuggables to the Installation Directory, from the main menu.

Dismounting the Software CD

When you have finished accessing the CD-ROM, dismount it with the following command:

`DISMOUNT` *`device_name`*`:`

where:

`device_name``:`

> Is the device name used in the original mount command.

Normally the CD-ROM will not be needed again unless a support situation requires debuggable versions of the software to be installed. A set of debuggables matching the original software is on the CD-ROM for this purpose. You will also need the CD-ROM if you refresh the installation.

Verifying the Server Installation

To test the installation, use the initial configuration created during installation. The server may be brought up, checked, connected to, tested, disconnected, and shut down using the following steps.

1. Log on with the iadmin user ID.

2. Activate the account privileges (if they are not already activated) with:

   `SET PROCESS /PRIV=ALL`

3. Start the server with the appropriate path to edastart and the -start option

   `@IWAY:[IADMIN.IBI.SRV52.FFS.BIN]EDASTART.COM -START`

4. Check to see whether the processes are active using -show

   `@IWAY:[IADMIN.IBI.SRV52.FFS.BIN]EDASTART.COM -SHOW`

5. Start the Web Console by starting a browser pointed at the Listener Port of the server. The URL format is http://host:port. For example, for the iWay Server, the URL is: http://host:8101; for the WebFOCUS server, the URL is http://host:8121 (if the default ports were used during installation). The actual Listener Port number is one higher than the TCP Listener Port specified during the installation.

6. If the server is running in secured mode, you will receive a logon screen. Log on with the iadmin user ID.

7. The home page of the Web Console will open. The home page is arranged in a menu-like context for the various features it supports. Use of the server admin ID (iadmin) to log on will display server administration features that non admin IDs would not normally see.

   Information on how to use the Web Console is available as a drill-down on the console itself and in the *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

8. The home page has a drill-down for testing the server. Click the test drill-down to run a sample report.

9. If you are done using the server, use the Stop Server drill-down on the Web Console Menu.

10. If there are startup problems, examine the IWAY:[IADMIN.IBI.SRV52.FFS]EDAPRINT.LOG file.

Configuring the Server With Different Security Modes

There are three security modes for a Server.

1. **Security OFF.** This is the default unless security was configured.

2. **Security ON.** With security ON, users must either send a password to connect to the server or use some other form of verification.

3. **Security WCPROTECT.** With security WCPROTECT, users are not verified against the operating system, but will be verified against the edaserve.cfg file when logging into the Web Console.

Each of these security options can be set with the EDAEXTSEC variable, as follows.

```
DEFINE EDAEXTSEC {ON|OFF|WCPROTECT}
```

The default is OFF unless the server has been configured for Secured Mode, as described below; then the default is ON.

Configuring the Server for Secured Mode

In order to run the server with security on, various privileges are required (depending upon the ID being used to connect to the server).

Reference **Server ID (iadmin) Requirements**

To connect to the server, users must either send a password or use some other form of verification. While actual installation can be done by an ordinary user, the changes listed here require the SYSTEM ID.

Run MCR AUTHORIZE to add the following privileges to the iadmin ID.

Privilege	Function	Required for Use of
CMKRNL	May change mode to kernel	Server impersonation features
IMPERSONATE	May impersonate another user	Server impersonation features

Privilege	Function	Required for Use of
NETMBX	May create network device	Mailboxes *
PRMGBL	May create permanent global sections	IPC Shared Memory *
PRMMBX	May create permanent mailbox	IPC Control Pipes *
SYSGBL	May create system wide global sections	IPC Shared Memory *
SYSNAM	May insert in system logical name table	IPC Control Pipes *
SYSPRV	May access objects using system protection	Server security features
TMPMBX	May create temporary mailbox	Mailboxes *
WORLD	May affect other processes in the world	Control of impersonated processes
SYSLCK	May lock system wide resources	Progress Data Adaptor only *

* Also required for non-secured servers.

Any additional privileges or changes in quota required by particular underlying databases must also be authorized and customized in the EDAENV.PRM file, as described in *How to Add/Change Privileges and Quotas (EDAENV.PRM)* on page 7-15.

The default minimal quota resources are also contained in the default EDAENV.PRM file. You do not need to have values explicitly declared in the UAF or SYSTEM tables, provided the iadmin user ID has IMPERSONATE privileges. However, some situations may require quotas to be increased (for instance, if there are problems accessing very large databases). This is also done by customizing the EDAENV.PRM file, as described below.

Procedure **How to Add/Change Privileges and Quotas (EDAENV.PRM)**

You can create privilege and quota settings using a configuration file (EDAENV.PRM). To customize the settings:

- Copy the default EDAHOME [.BIN]EDAENV.PRM file to EDACONF [.BIN].

- Edit and customize the EDACONF [.BIN]EDAENV.PRM file as needed (for edit rules, see below).

- Recycle the server.

- Repeat as needed until the desired effect is achieved (e.g., until the page file quota is large enough to access large files).

EDAENV.PRM edit rules:

Changing quota values are simply edited values.

To add a quota, use the form name=value with one declaration per line. Actual names follow the standard OpenVMS names for resources.

Privilege declarations lines have the format Privilege_n : privilege [, privilege, ...], where n is any integer from 1 to 99. The value for n must be unique among the Privilege_n lines. Any number of comma-separated privilege names per line may be declared, but each Privilege_n line must be on separate lines. Privilege names follow the standard OpenVMS names for these privileges.

The EDAENV.PRM file should not be confused with the EDAENV.COM file, which is used for running additional OpenVMS commands (typically logical declarations) at startup. An example of EDAENV.PRM follows:

```
io_direct = 200
queue_limit = 50
page_file = 1000000
buffer_limit = 800000
io_buffered = 200
ast_limit = 300
working_set = 3076
maximum_working_set = 8192
extent = 10240
file_limit = 300
enqueue_limit = 2000
job_table_quota = 10000
priority = 4
privilege_1 : TMPMBX, NETMBX, PRMMBX
privilege_2 : PRMGBL, SYSGBL, SYSNAM
privilege_3 : SYSPRV, CMKRNL, WORLD
privilege_4 : SYSLCK, IMPERSONATE
```

Procedure How to Configure the Server for WCPROTECT Mode

1. Prior to starting the server, issue the variable EDAEXTSEC as follows:

   ```
   DEFINE EDAEXTSEC WCPROTECT
   ```

2. Start the server.

A user will only be authenticated when connecting to the Web Console. Only the ID and Password in the edaserve.cfg will have administrative access to the server.

General Server Startup and Use

After configuring for secured mode (if desired), the server is started and managed using the same server startup and Web Console startup steps used for validating the server (steps 1 - 6 in the *Verifying the Server Installation* on page 7-13). If the server has not been configured for adapters, now is an appropriate time to do so using the Web Console and *Server Administration for UNIX, Windows, OpenVMS, OS/400, OS/390 and z/OS* manual.

Commonly used edastart options and functions are as follows:

Command and Option	Function
edastart	(No parameters) Starts the server with the line mode console to actively view the server log (edaprint). Also allows dynamically issuing edastart options, such as show, traceon, traceoff, quit, and stop. Use Ctrl+C to receive the console command prompt to enter commands.
edastart -start	Starts the server in background; only a short message appears.
edastart -sstart n	Starts the server, but waits n seconds for actual startup.
edastart -show	Shows general status of the server and agents.
edastart -stop	Stops the server.
edastart -quit	Exits the server's line mode console log (edaprint) and returns to the operating system command prompt, but leaves the server running.
edastart -console	Reenters the server's line mode console log (edaprint).
edastart -traceon	Turns on tracing. May be used at initial startup or after start. Tracing should not be turned on (due to overhead) unless there is a problem that needs to be traced. It is always preferable to start traces at initial startup time unless instructed otherwise.
edastart -traceoff	Turns off tracing.
edastart -?	Displays edastart options (those on this list, and more).
edastart -?s	Displays support information and support-related options.

Adding JOB, GROUP or Other Defined Environment Values (EDAENV.COM)

At server startup, all Process level logicals are copied to the startup job stream; System level logicals are present by default. If a server must be configured to "see" Job or Group level logicals, or there are Process level logicals that should only be declared for the server, they must be individually declared in an EDACONF [.BIN]EDAENV.COM file. The contents of this file must be valid DCL syntax (typically just consisting of logical declarations). An example of EDAENV.COM follows:

```
$ DEFINE /GROUP ORASID MYORASID
```

Note: If EDAENV.COM is needed, you must create it. An empty template is not supplied.

End-User Requirements

End-user IDs connecting to a server (secured or unsecured) have requirements in terms of privileges, and require specific setup.

The privilege requirements are as follows:

Privilege	Function	Required for Use of
NETMBX	May create network device	Mailboxes
TMPMBX	May create temporary mailbox	Mailboxes
SYSLCK	May lock system wide resources	Progress Data Adaptor only

The ID setup requirements are as follows:

- Logons must have a UIC group associated with the ID (so the calls for ID information under OpenVMS 7.x are returned in standard OpenVMS 6.x [group,member] format).

- An end-user ID must have QUOTA on the same disk where the server writes its temp files (typically EDACONF [.EDATEMP]).

To check the UIC, issue the following

```
WRITE SYS$OUTPUT F$USER()
```

Troubleshooting

Safe Mode

If the Server starts in safe mode normal use of the server is disabled. However the administrator can connect to the Web Console to fix the problem. When the Web Console is started the reason the server is in safe mode is listed on the HOME page. Click the fix hyperlink listed under the problem and make the correction. Save and restart the server. A common reason for the server to start in safe mode is that the server_admin_password is not correct.

If the server administrator does not have a password a secured server will always start in safe mode. To correct this a password will need to be added for this ID on the operating system.

Server Installation for VM

Topics:

This document describes the requirements and procedures for proper installation of the server software for VM. The process is described in two parts:

- **Installation.** Installation involves several required and optional steps. These include unloading the tape onto the disk (referred to as the maintenance disk); executing the GENEDAVM EXEC, which installs the NSS segments and copies the run-time files onto another disk (referred to as the production disk); linking the data adapter(s) used at your site; and optionally configuring Resource Governor and National Language Support.

- **Configuration.** Each client connecting to a Server for VM connects to a separate server instance. A server instance is a VM ID configured for TCP/IP communications. The steps you follow to configure a server instance depend on the protocol used at your site. See the *Server Configuration for VM* manual for details.

Note: The 5.x release of the Server for VM only supports the TCP/IP protocol. The LU2 and LU6.2 protocols are not supported.

Operating System Release Levels

The server runs on all VM operating system release levels supported by IBM.

Note: The server does not run in VM/ESA 370 mode.

Disk Space Requirements

The total disk space requirements for the server are summarized below.

Disk Type	3380 (in Cylinders)	3390 (in Cylinders)
Production	130	110
Maintenance (Version 5 Release 2 and higher)	275	225

The Production Disk

After installation, the server production minidisk will contain an executable copy of the server. This is the disk to which all server IDs must be linked when they start the server. It contains all the files necessary for running the server.

Most of the files on this disk are created by the CMS EXECs that generate the installed version of the server (which includes, for example, the server load modules and the text of server error messages). You can add your own locally created files, such as the text of user-written subroutines, or CMS EXECs of interest to users. The files created by the installation procedure on the production disk may vary from version to version.

The software does not explicitly use the CMS label for the production disk. However, we suggest that you use IWP as the label for the production disk of the current version of the server to which all users should be linked by default. If more than one version of the server is installed, we suggest a descriptive label for the server production disk, such as

IWP*nnn*

where:

nnn

Represents the version, release, and maintenance level. For example, IWP520 for the production disk of Version 5, Release 2, Maintenance Level 0 (5.2.0).

The Maintenance Disk

The maintenance disk is the CMS minidisk onto which you unload the distribution tape. Initially this disk should be empty; you should not store any other files on it.

Important: You must have different maintenance disks for different server versions. This requirement is critical. You may generate a defective copy of the server if you load the maintenance tape for one version onto the maintenance disk for another version.

When you phase out an older server version and want to reuse its maintenance disk for the next version, you must erase all the files on it. A simple way to do this is to use the CMS FORMAT command. It erases all of the files on the disk, and assigns a CMS label to it. Although you can label the disk any way you like, we suggest a name such as

`IWMnnn`

where:

`nnn`

Is the version, release, and maintenance level. For example, IWM510 for the maintenance disk of Version 5, Release 2, Maintenance Level 0 (5.2.0).

Note:

* When calling for support, always specify whether you are referring to an issue with the production disk or the maintenance disk.

* Client applications and servers should access only the current production disk, not the maintenance disk.

Installation Overview

Installation of the Server for VM requires planning and coordination. The following is an overview of the tasks you must complete to successfully install the VM server.

1. Review hardware and software requirements as described in this chapter.

2. Fill out the information requested in the Installation Worksheet, below.

Installation Worksheet

The information requested on the following worksheet applies to your hardware and software environment and will help you during the installation procedure. It may also be useful for reference in the future, when you update your server software or tune your operating system.

1. Which release and PUT level of VM and network software will be used to support the Server for VM?

   _____VM   _____VTAM   _____TCP/IP

2. Which security subsystem, if any, is used on the server?

   _____CA-ACF2   _____VMSECURE   _____Other

   _____RACF   _____CA-TOPSECRET

3. Which types of mainframe data sources are available and how will they be accessed?

	Data Source	Read Only	Read/Write
_____	ADABAS	_____	_____
_____	FOCUS	_____	_____
_____	NOMAD	_____	_____
_____	SQL/DS	_____	_____
_____	VSAM	_____	_____

Installation Personnel

The following personnel are needed to install the Server for VM:

Network Systems Programmer	Describes the network layout, defines the VTAM node definitions for the Server for VM, and sets up the AVS virtual machine for TCP/IP communications.
VM Systems Programmer	Performs the installation of the Data Access Engine and data adapters. Optionally, this programmer also installs National Language Support.

1. The following general requirements are necessary in order to configure the server: One user ID for the Attach Manager. This ID requires:

   - Class "B" and "E" privilege.

   - IUCV allow.

2. One user ID for the server. This ID requires:

   - Class "G" privilege.

   - IUCV allow.

   - XAutolog.

Requirements for TCP/IP

The following sections describe the hardware and software requirements for configuring a server for the TCP/IP communications protocol.

Hardware Requirements

To install a server using TCP/IP, you need any one of the following network processors and associated components:

- IBM 3172 Interconnect Controller Model 001, 002, or 003.

- IBM 8232 LAN Channel Station.

- IBM 3720 or 3745 Communications Controller.

- HYPERchannel A220 Processor Adapter 42990007.

Software Requirements

The following software must be functional on your mainframe before you can install and operate the server using TCP/IP:

- A VM operating system release level supported by IBM.

- IBM TCP/IP for VM Version 2 Release 3 or higher.

- Server Communications Protocol Interface for TCP/IP.

- A unique service port designation for the Server for VM.

Installing the Server

This list outlines the steps in the server installation procedure. Certain steps are optional depending on your site requirements; these are noted.

1. Unload the server distribution tape onto the maintenance disk.

2. Modify the EDADFSEG EXEC.

3. Generate the server.

4. Install the applicable data adapter(s).

Once you have completed the above steps, you can proceed to the *Server Configuration for VM* manual for instructions on setting up your server for TCP/IP communications.

Procedure **How to Unload the Distribution Tape**

The distribution tape is an unlabeled 1600 or 6250 BPI 9-track tape, or a 3480 cartridge, created by the VMFPLC2 command.

Note: The National Language Support (NLS) feature enables your site to provide messages in a variety of languages. The scope of NLS support (messages, data display, menus, and help files) varies from language to language. Contact your software representative for details on the support provided for a particular language.

1. Mount the tape on a 1600 BPI drive as virtual 181, or mount the cartridge on a 3480 drive as virtual 181.

2. Access the maintenance disk as your A disk, in read/write mode.

3. Issue the VMFPLC2 commands to unload all the files from the tape or cartridge onto the maintenance disk:

```
VMFPLC2 LOAD * * A
VMFPLC2 REW
VMFPLC2 FSF 2
VMFPLC2 LOAD * * A
```

4. If you are implementing NLS and using a 6250 BPI tape, issue the following commands immediately after unloading the files from the distribution tape:

```
VMFPLC2 REW
VMFPLC2 FSF 6
VMFPLC2 LOAD * * A
```

5. Once the tape or cartridge is unloaded, detach virtual 181.

Procedure **How to Modify the EDADFSEG EXEC File (Optional)**

The EDADFSEG EXEC defines the TRW, HLI, DLL, and RLM NSS segments to VM. By default, the NSS segments are called TRWSEGXA, HLISEGXA, DLLSEGXA, and RLMSEGXA.

The shared part of each NSS segment is defined by the SR attribute of the DEFSEG command; the nonshared part is defined by one or more EW attributes.

In this step, you may optionally modify the sample EDADFSEG EXEC supplied on the server distribution tape. EDADFSEG EXEC is shown below.

Example **Modifying EDADFSEG EXEC**

The following copy of the EDADFSEG EXEC illustrates the current version of this routine. Note that it now contains four requirements, with the latest being TRWSEGXA:

```
/*------------------------------------------------------------------*/
/* EDADFSEG EXEC              (c) Copyright IBI 1997               */
/*------------------------------------------------------------------*/
/******************************************************************
    NSS names and addresses.
    TRW - Table, Report Writer segment
    HLI - Host Language interface
    DLL - Dynamic Load Libraries
    RLM - Run time load modules

    Please modify the next 4 pairs of statements with:
    -->  your chosen segment names
    -->  the addresses selected for the segments
******************************************************************/
    trwname = 'TRWSEGXA'

    trwaddr = '2000-22FF SR 2300-25FF EW'

    hliname = 'HLISEGXA'
    hliaddr = '2600-26FF SR 2700-28FF EW'

    dllname = 'DLLSEGXA'
    dlladdr = '2900-2EFF SR 2F00-34FF EW'

    rlmname = 'RLMSEGXA'
```

```
     rlmaddr = '3500-37FF SR 3800-41FF EW'
/**************************************************************
 * * * * * * End of user modifications * * * * * * * * * * * *

*************************************************************/
Address 'COMMAND'
Trace 'O'

'GLOBALV SELECT IBIGEN GET LOADNSHR'          /* get LOADNSHR setting */

'GLOBALV SELECT IBIGEN SET  TRWNAME' trwname
'GLOBALV SELECT IBIGEN SETL TRWADDR' trwaddr loadnshr

'GLOBALV SELECT IBIGEN SET  HLINAME' hliname
'GLOBALV SELECT IBIGEN SETL HLIADDR' hliaddr loadnshr

'GLOBALV SELECT IBIGEN SET  DLLNAME' dllname
'GLOBALV SELECT IBIGEN SETL DLLADDR' dlladdr loadnshr

'GLOBALV SELECT IBIGEN SET  RLMNAME' rlmname
'GLOBALV SELECT IBIGEN SETL RLMADDR' rlmaddr loadnshr

Exit 0
```

The above NSS segments must reside above the 16M line and may not overlay any other NSS used during a session or the execution of an HLI program.

During the installation procedure, the mode is checked and the appropriate values from the XA variables are used. Remember, the server does not support VM/ESA 370 mode.

Note: You can change the values TRWSEGXA, HLISEGXA, DLLSEGXA, and RLMSEGXA. You can also change the NSS addresses in the EDADFSEG EXEC, but do not change the size. The record format must remain F, and the record length must remain 80. Do not change any other lines in EDADFSEG EXEC.

Procedure **How to Generate the Server**

This step creates a core of server load modules on the production disk. The majority of code in the NSS segments is defined in *How to Modify the EDADFSEG EXEC File (Optional)* on page 8-7. This step also inserts your site code into the release information that appears. The GENEDAVM EXEC, which you execute in this step, installs the NSS segments and copies the run-time files onto the production disk.

Before completing the instructions below, log on to a virtual machine with Class E privilege. You cannot generate the server from a general user virtual machine with only Class G privilege.

1. Spool the console for documentation purposes by entering the following command:

   `CP SPOOL CON START`

2. Use the DEF STOR command to set the virtual machine size. Define storage (DEF STOR *xx*M) for your virtual machine to at least 10M higher than the ending address of the highest of the four segments. For example, referring to the EDADFSEG EXEC supplied, the highest ending address is 41FF (hex), which equates to 66 (decimal); therefore, storage should be set to 76M.

3. Set the machine mode by entering the following command:

   `SET MACHINE ESA`

   Note: The server does not support VM/ESA 370 mode.

4. IPL CMS by entering the following command:

   `IPL CMS`

5. Release all unused CMS minidisks, including minidisks that are not required for the installation of the server. The server maintenance disk and the CMS system disks are required. The maintenance disk must be accessed as A, in read/write mode. The CMS system disks will most likely be 190 and 19E, accessed as S and Y/S, respectively.

6. The Attach Manager ID needs the privilege DIAGPCHK.

7. Prior to executing the GENEDAVM EXEC, it is recommended that you issue the following command to allow the console to scroll automatically:

   `CP TERM MORE 0 0 HOLD OFF`

   If you do not enter this command, the screen will have to be cleared every time it becomes full of messages. To reset this setting, enter the following command:

   `CP TERM MORE 50 10 HOLD ON`

   Additionally, verify that the maintenance disk is accessed as the "A" disk in R/W mode, and that the production disk is accessed as the "C" disk in R/W mode.

The NSS and other files needed by the server are generated by the GENEDAVM EXEC on the maintenance disk.

Execute the GENEDAVM EXEC:

```
GENEDAVM
```

The GENEDAVM EXEC writes messages to the terminal as it proceeds. If you receive any CMS error messages during this procedure (with the exception of "File Already Exists" messages), call Customer Support Service (CSS) or your software representative.

8. Close the terminal console spool by entering:

```
CP SPOOL CON CLOSE STOP
```

The terminal console input and output commands will be printed on a printer unless directed elsewhere by the CP SPOOL CON START command. Save this output for your own documentation and have it available if you call for support regarding installation problems.

Example   **Generating the Console Spool**

The following is a sample console spool. It has been modified to show the most useful system prompts and user responses. User responses are in boldface type, to distinguish them from system prompts.

```
Ready; T=0.01/0.01 16:01:49
q stor
STORAGE = 0522112K
Ready; T=0.01/0.01 16:01:54
genedavm
->EDM191  333   A    R/W ( EDASQL 191 )
->EDP192  192   C    R/W ( EDASQL 192 )
  DSK190  190   S    R/O
  CMSLIB  19E   Y/S  R/O
+GENEDAVM Check the minidisks accessed.  Is it true that:
          The Product Maintenance Disk,
          is accessed as 'A' and in Read/Write mode
          The Product Production Support disk,
          is accessed as 'C' and in Read/Write mode
          Enter 'YES' to proceed. Any other response will stop this exec.
yes
+GENEDAVM Product Generation Phase I...
+GENEDAVM Generating Product Segment, Modules, and Execs...
Initializing...
DMSLGT002I File CLI TXTLIB not found
DMSLGT002I File FUSELIB TXTLIB not found
DMSLGT002I File CLI TXTLIB not found
DMSLGT002I File FUSELIB TXTLIB not found
DMSLGT002I File CLI TXTLIB not found
```

```
DMSLGT002I File FUSELIB TXTLIB not found
DMSLGT002I File CLI TXTLIB not found
DMSLGT002I File FUSELIB TXTLIB not found
DMSLGT002I File CLI TXTLIB not found
DMSLGT002I File FUSELIB TXTLIB not found
Creating FUSELIB LOADLIB.
DMSXIN571I Creating new file:
DMSOPN002E File CLI TXTLIB * not found
DMSOPN002E File FUSELIB TXTLIB * not found
FUSELIB LOADLIB created successfully.
+GENEDAVM Defining the Product Support segment.
+GENEDAVM CP DEFSEG TRWSEGXA 2000-22FF SR 2300-27FF EW LOADNSHR
HCPNSD440I Saved segment TRWSEGXA was successfully defined in fileid
4177.
+GENEDAVM CP DEFSEG HLISEGXA 2800-28FF SR 2900-2AFF  EW LOADNSHR
HCPNSD440I Saved segment HLISEGXA was successfully defined in fileid
4178.
+GENEDAVM CP DEFSEG DLLSEGXA 2B00-31FF SR 3200-41FF EW LOADNSHR

HCPNSD440I Saved segment DLLSEGXA was successfully defined in fileid
4179.

+GENEDAVM CP DEFSEG RLMSEGXA 4200-44FF SR 4500-5CFF EW LOADNSHR
HCPNSD440I Saved segment RLMSEGXA was successfully defined in fileid
4180.
+GENEDAVM Loading the Product Support Segment...
DMSLIO201W The following names are undefined:
 #C#EXIT  $FPUTC   FILLB    VIEWRD
@@@@@@ Return code 4 from GENFS1XA before autocall
DMSLIO201W The following names are undefined:
 #C#EXIT  $FPUTC   FILLB    VIEWRD
@@@@@@ Return code 4 from GENFS1XA after autocall
Creating $FOET...
+GENEDAVM Saving the Product Support Segment...
HCPNSS440I Saved segment TRWSEGXA was successfully saved in fileid 4177.
+GENEDAVM Product Support Segment TRWSEGXA Created and saved...

GENLLSEG 07/16/00 16:22:00 V306
HCPNSS440I Saved segment DLLSEGXA was successfully saved in fileid 4179.
GENLLSEG COMPLETED SUCCESSFULLY
Checking whether Segment boundaries have been exceeded...
+GENEDAVM Generation of Product Support Segment completed...
Creating Support EDA EXEC...
DMSXCG517I 1 occurrence(s) changed on 1 line(s)
DMSXCG517I 1 occurrence(s) changed on 1 line(s)
Generating HLI segment and Sink Machine...
Generating HLI named saved segment and modules...
+GENEDAVM Initializing...
```

```
Defining the HLI segment...
+GENEDAVM Segment Skeleton Found for HLISEGXA
Loading the HLI Segment...
DMSLIO201W The following names are undefined:
 HBTCLR   HBTCHK   HBTCLO   DNINIT   FILLEXT   DELEXT   COMCTL   XBKATT
 XFNDBK   XDXCTF
@@@@@@ Return code 4 from GENHS1
Creating $HLIET DATA file...
Saving the HLI Segment.
HCPNSS440I Saved segment HLISEGXA was successfully saved in fileid 4178.
Checking whether HLI Segment boundaries have been exceeded...
Creating HLINFO DATA file...
Generation of HLI segment HLISEGXA completed...
HLI module "HLIMAIN" created successfully.
+GENEDAVM Completed...

+GENEDAVM Copying Product Support Files to Production mini-disk...
=====> Many files copied <=====
+GENEDAVM Product Generation Phase II...
DMSCPY721I Copy EDAMAIN MODULE A1 to EDAMAIN MODULE C1 (new file)
DMSCPY721I Copy FRSP15 MODULE A1 to FRSP15 MODULE C1 (new file)
DMSCPY721I Copy GENLLSEG MODULE A1 to GENLLSEG MODULE C1 (new file)
+GENEDAVM Bypassing LoadLib Segment Generation,
Already Completed During Phase I Generation...
+GENEDAVM Checking Segment Boundaries...
+GENEDAVM Generation of Product Segment completed...
+GENEDAVM Creating EDASTART EXEC...
DMSXCG517I 1 occurrence(s) changed on 1 line(s)
+GENEDAVM Bypassing File Copying To Production minidisk,
Already Completed During Phase I Generation...
+GENEDAVM Completed, ReturnCode 0
Ready; T=38.66/44.
```

Additional font files must be copied from the maintenance disk to the production disk. To accomplish this, issue the following commands:

```
COPY * AFM A = = C (REPL OLDD TYPE

COPY * FOCTMAP A = = C (REPL OLDD TYPE

COPY PSHDR ERRORS A PSHDR ERRORS C (REPL OLDD TYPE

COPY FOCFONT TXT A FOCFONT TXT C (REPL OLDD TYPE
```

Configuring the Server

After you have completed all the installation steps, you are ready to configure the server. The Server Administration manual for VM contains instructions on setting up your server for TCP/IP and data adapters.

Index

A

Adabas data adapter requirements for OS/390 and z/OS Server 4-7, 4-43, 4-51

B

batch execution of OS/390 and z/OS Server 4-24

C

CA-DATACOM data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

CA-IDMS/DB data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

CA-IDMS/SQL data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

CA-Top Secret configuration for OS/390 and z/OS Server 4-22

CL and CMD programs 6-16

communications requirements 1-1
    OpenVMS 7-4
    OS/400 6-3
    UNIX 3-5
    Windows NT/2000 2-3

configuring security modes
    Unix 3-14

connectors 1-2

D

data adapter requirements for OS/390 and z/OS Server 4-7

data adapters
    DB2 CLI 4-26

data file allocations for OS/390 and z/OS Server 4-46

DATACOM data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

DB2 CAF data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

DB2 CLI Data Adapter 4-26

DB2 CLI data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

DB2 Data Adapter 4-26
    security exit 4-26

debuggable version 2-14
    OpenVMS 7-12
    OS/400 6-11
    UNIX 3-14
    Windows NT/2000 2-14

diagnostic information for OS/390 and z/OS Server 4-25

disk space requirements 1-1
    MVS 5-2
    OpenVMS 7-4
    OS/400 6-3
    UNIX 3-3
    VM 8-2
    Windows NT/2000 2-2

distribution tape 8-3
    unloading 8-6

E

EDADFSEG EXEC File 8-7
    modifying 8-7

EDAENV.COM 7-18

H

hardware requirements 1-3
    VM 8-5

I

IDMS/DB data adapter requirements for OS/390 and z/OS Server 4-7, 4-51

Reader Comments

In an ongoing effort to produce effective documentation, the Documentation Services staff at Information Builders welcomes any opinion you can offer regarding this manual.

Please use this form to relay suggestions for improving this publication or to alert us to corrections. Identify specific pages where applicable. You can contact us through the following methods:

Mail:	Documentation Services - Customer Support Information Builders, Inc. Two Penn Plaza New York, NY 10121-2898
Fax:	(212) 967-0460
E-mail:	books_info@ibi.com
Web form:	http://www.informationbuilders.com/bookstore/derf.html

Name:_____

Company:_____

Address:_____

Telephone:_____Date:_____

E-mail:_____

Comments:

Reader Comments