



The Mainframe Software Partner
For The Next 50 Years

iStrobe Installation Guide

Release 05.02

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iStrobe Customer Support

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Introduction

This guide provides instructions on how to install iStrobe. iStrobe is an application performance analysis product designed to be used on workstations with the Strobe MVS Application Performance Measurement System. iStrobe uses a Web browser that enables you to create a custom view of Strobe MVS measurement data.

After installing iStrobe, you will be able to view the sample Performance Profile data packaged with it.

To create and analyze new Strobe measurement data using iStrobe, do the following:

1. Set up Strobe to communicate with iStrobe, as described in the *Strobe Installation and Customization Guide*.
2. Use Strobe to measure an application's performance, create an iStrobe Performance Profile data file, and store it in a directory where iStrobe users can access it, as described in the *Strobe User Guide*.

Intended Audience

This installation guide is intended for the database administrator or individual(s) installing iStrobe. You should be familiar with administering the operating system, your network security policies, and your web server. If you are unfamiliar with any of the prerequisite software, contact your administrator for help.

How This Guide is Organized

This guide contains the following chapters and appendixes:

Chapter 1, "Installation Overview"

Chapter 2, "Installing iStrobe on z/OS UNIX"

Chapter 3, "Installing iStrobe on Windows"

Chapter 4, "Installing iStrobe on Linux"

Chapter 5, "Configuring iStrobe"

Appendix A, "Installing the Compuware Workbench Plug-in for iStrobe"

Appendix B, "iStrobe Web Services"

How to Use This Guide

If you are installing iStrobe for the first time, you should read the following chapters:

- "Installation Overview"
- The appropriate installation chapter or appendix for your environment
- Chapter 5, "Configuring iStrobe"

iStrobe Publications

To learn more about using iStrobe:

- See the iStrobe online help within the product.
- Visit Compuware's FrontLine at <http://go.compuware.com> and select iStrobe, for the latest technical information on iStrobe.

iStrobe 3rd Party Licensing Documentation

To view iStrobe 3rd party licensing documentation, refer to the legal subdirectory that is included as part of the iStrobe installation.

Compuware iStrobe Customer Support

Compuware provides a variety of support resources to make it easy for you to find the information you need.

Compuware Go Customer Support Website

You can access online information for Compuware products via our Compuware Go customer support website at <http://go.compuware.com>.

Compuware Go provides access to critical information about your Compuware products. You can review frequently asked questions, read or download documentation, access product fixes, or e-mail your questions or comments. The first time you access Compuware Go, you are required to register and obtain a password. Registration is free.

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To access Compuware's site on the Web, go to <http://www.compuware.com>.

The Compuware site provides a variety of product and support information.

Chapter 1.

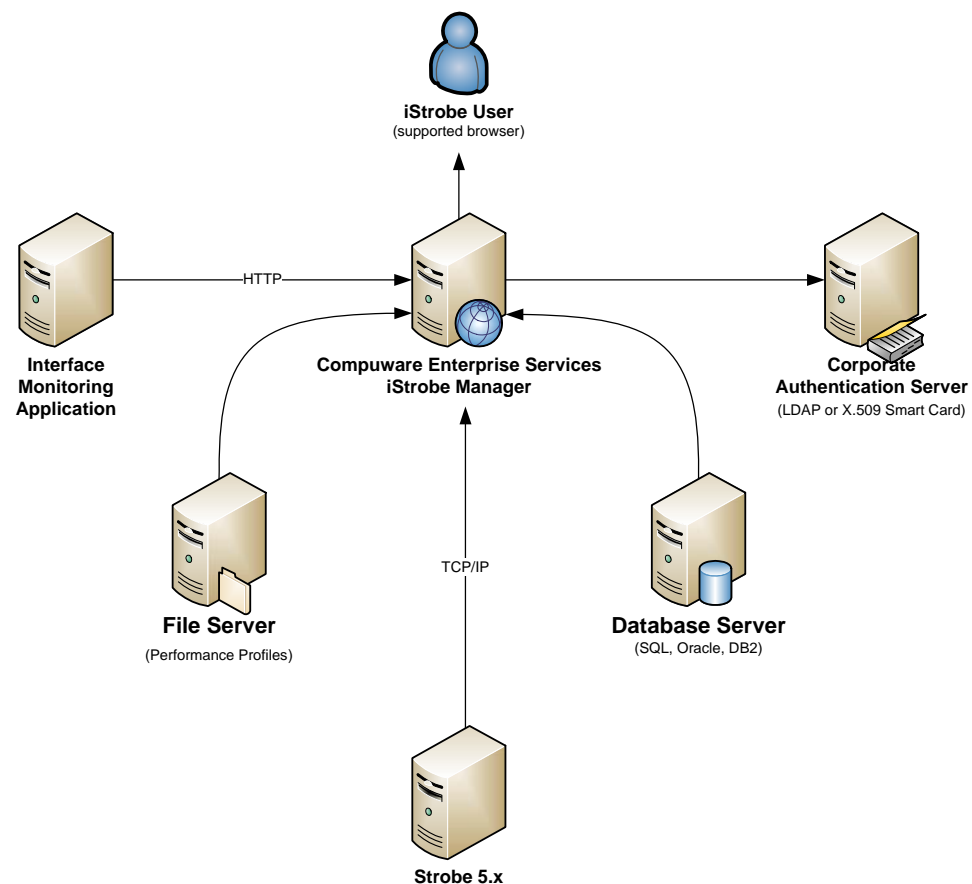
Installation Overview

This chapter provides an overview of the different hardware and software components needed to install iStrobe. It also identifies those individuals who will participate in the iStrobe installation.

iStrobe System Overview

The diagram below is an overview of the components and data flow in iStrobe. iStrobe should be on the same release level as Strobe to use all of the available features. Refer to the operating systems-specific installation chapters for setup and security considerations.

Figure 1-1. iStrobe Components and Data Flow



Starting at the bottom of the diagram, Strobe collects performance statistics for your z/OS applications. Strobe versions transfer the performance metrics directly to the iStrobe Manager. The iStrobe Manager then stores the Profiles on your file server as well as loading them into a database. The Manager listens for transfer requests from Strobe,

processes update requests from the Web server, and optionally watches for new profiles transferred from Strobe and prepares them for viewing.

The iStrobe web application can authenticate all users against your corporate authentication server, so you may secure performance measurements and iStrobe functionality. In addition, user preferences and state information are stored in the database. The performance reports use the individual profile data downloaded from Strobe for rendering them, while Strobe Insight obtains its data from the iStrobe repository by aggregating data from many profiles. The end user runs iStrobe using a browser.

Requirements

Installing iStrobe

If your site intends to use both Strobe and iStrobe, Compuware recommends that you install the latest version of iStrobe before installing the latest version of Strobe in order to utilize any new measurement functionality in iStrobe.

Server Software Requirements

For complete server software requirements, refer to the details described in the *iStrobe Release Notes* for this version.

Server Hardware Requirements

Web Server Requirements

Ensure that the Web server where you will be installing iStrobe meets the following hardware requirements:

- Minimum of 1 GB available disk space
- Minimum 2 GB of RAM
- Minimum 2 GHz processor

Note: These are the minimum requirements for a server dedicated to iStrobe with less than 20 users. If you experience performance problems, you may need to increase memory or processor speed.

File Server Requirements

The following are the minimum hardware and software requirements for the file server where iStrobe Performance Profiles are stored:

- 1 GB RAM
- Each Performance Profile requires 0.2 to 50 MB of disk space, depending on the measured application and the Strobe measurement parameters. Your space requirements may vary widely depending on the number of users and how many profiles they keep.

Individuals to Participate in the Installation

This section identifies individuals who should participate in the installation and the information needed to complete the installation.

Installation Environment

The installation environment requires the following:

- An administrator familiar with either the Windows, z/OS Unix, or zLinux, environment, as is appropriate for your site. The user performing the installation needs to have the appropriate authorizations in the selected environment.

Security Environment

The security features in iStrobe can utilize LDAP security servers for user authentication. To implement LDAP, the iStrobe server post-installation configuration requires a security administrator with knowledge of LDAP security settings.

Chapter 2.

Installing iStrobe on z/OS UNIX

This installation procedure leads you through the process of installing iStrobe on z/OS UNIX.

A z/OS UNIX system administrator should install iStrobe.

Depending on your site standards, you may also need an MVS systems programmer to set up the iStrobe Manager on JZOS. You may also need a security administrator.

If you are only running Strobe version 4.4, all profiles are transmitted directly to the iStrobe Manager running on JZOS. Therefore, the ID used to run the iStrobe Manager job is always the owner and is the only ID that needs *write* access to the profiles and quarantine directories.

Before Beginning

Before beginning the installation of iStrobe, you should have the following:

- A verified installation of Compuware Enterprise Services configured with a supported database.
- The known path to an iStrobe compatible version of Java on the machine. Those versions include Java Technology Edition V7 SR4 FP2, 7.1, or 8. This would have been known during the installation of Compuware Enterprise Services.
- The iStrobe media image downloaded from the iStrobe media; image downloaded from an RFN order; or from the Enterprise Common Components (ECC) EP Media Browser.
- Ensure that the installable media is on the machine on which you intend to install.
- Determine where you will store your Performance Profiles and how the profiles are transferred from z/OS to the directory where they are stored for iStrobe.
- If you decide to use the Web Service interface for requesting a Strobe measurement, contact your Strobe administrator to get the following Host Communications (HCI):
 - HCI Host
 - HCI Port

You may setup the HCI connection information in the Configuration section of Administration.

- Sufficiently allocated system temporary space to accommodate the installation. Compuware recommends 85,000 1k blocks. When the installation is complete, the temporary installation files are removed.
- Save your profiles.
- For your iStrobe Manager and Server:
 - Have the ID and password for the iStrobe Manager JZOS job. The system authority for the JOB or TASK that executes the Manager must be set on the z/OS system so that full-control access is enabled for the HFS/ZFS directories designated for storing the performance profiles.

- Have a port number for the iStrobe Manager to listen on (the default is 24354, which should not conflict with most systems).
- Have a port number for the iStrobe SMF Manager to listen on (the default is 24355).

The installation does the following:

- Installs the iStrobe application
- Creates the JCL to run the iStrobe Manager on JZOS
- Creates the JCL to run iStrobe SMF Manager on JZOS

Installing iStrobe

1. Select **Install iStrobe for z/OS UNIX**. The **Mainframe FTP Information** tab appears.
2. Specify a valid **Host**, **User ID/Password**, **Port** number (default = 21), and finally an existing **z/OS UNIX Path** in which to upload the `install.jar` and `install.sh` files from the Compuware Enterprise Services product image to the mainframe as binary.
3. Select **Upload files to mainframe** button to begin the upload.
4. Log on to the mainframe and navigate to an OMVS command prompt. Change the directory to the location where the `install.jar` and the `install.sh` files were transferred.

```
cd <directory containing the uploaded install.jar and install.sh files>
```

5. Ensure that the `install.sh` file has execute authority and execute it. Perform a `chmod 777` to open up permissions if necessary.
6. Execute the `install.sh` file. For example:

```
./install.sh
```

The iStrobe installer starts.

7. Enter the directory path to a supported installation of JAVA For example:
`/usr/lpp/java/J7.1_64.bld111513`
- The **Introduction** panel appears.

Notes:

- You can cancel the installation at any time by typing `quit`.
 - You can go back in the installation panels at any time by typing `back`.
8. The installer requires use of the system temp folder and may require up to 540,000 1k blocks of pre-allocated space. Specify **Y** (Yes) or **N** (No) for changing the installation temporary space location from the system's `/tmp` directory to another location. If **N**, the installation launches. If **Y**, you are prompted to enter a directory path to the designated temporary directory space. Press **Enter**. The **License Agreement** panel appears.
 9. You are required to read the agreement pressing **Enter** until you have scrolled through the agreement.
 10. Specify **Y** and press **Enter** to accept the terms of the license agreement. The **Install folder** panel appears.
 11. From the **Install folder** panel, enter the path to the location where you want to install iStrobe.

- Accept the default path or type an absolute path and press **Enter**. Confirm the path and press **Enter**. You must have permission to install to the directory you choose.

Note: If you choose an alternate installation directory instead of the default, the directory (and parent directories) will be created with privileges of 755. For example, if this directory structure exists:

```
/u/sb/abcdef1
```

and you enter:

```
/u/sb/abcdef1/dirA/dirB/dirC
```

then directories dirA, dirB, and dirC will be created and iStrobe will be installed into dirC.

12. Enter the location of the CES Install folder (where CES is installed) and press **Enter**.
13. Determine if CES will be accessed using HTTPS. Press **Enter** to accept the default entry or type **Y** and press **Enter** to modify the values. You may need to provide a keystore and password. The **iStrobe Manager** panel appears.
14. Enter the iStrobe Manager Host name and press **Enter**. The iStrobe Manager Ports panels appear.
15. Accept the default port values or press **Y** to modify the values.
 - Manager Port
 - SMF Manager Port
 - Parallel Profile Processing Port.
16. Enter the user ID needed to install and run the iStrobe Manager Daemon and press **Enter**.

CAUTION: If you do *not* specify the correct user ID, file permissions for both the iStrobe installation and repository directories will be incorrect. An incorrect user ID will require the installer to execute the *chown* Unix command to set the ownership of these directories to the user ID associated with the iStrobe Manager.

The **Ready to Install** panel appears.

17. Review the installation information. If it is incorrect, type **Back** and revise the installation settings as necessary. Otherwise, press **Enter** to start the iStrobe installation. When complete, the **Installation Complete** panel appears.

Note: This process may take several minutes. If you are using a 3270 device, you will need to press **PF8** to check the status of the installation.

18. The **Installation Complete** panel appears when the installation finishes. Press **Enter** to exit the installer.

To set up and start the iStrobe Manager, refer to “Running the iStrobe Manager and the iStrobe SMF Manager using JZOS” on page 16.

- edit and run the SAMPLE_FTP.JCL provided
- Modify the job card of the newly created member
- Submit the job.

19. After starting the iStrobe Manager, you must stop and start Compuware Enterprise Services to register iStrobe.
20. Although you have finished installing the iStrobe Web application, you may need to configure iStrobe in order to use the application. Refer to Chapter 5, “Configuring iStrobe” for configuration considerations.

21. After configuring iStrobe, you may now optionally set up and start the iStrobe SMF Manager by referring to “Running the iStrobe Manager and the iStrobe SMF Manager using JZOS” on page 16.

Running the iStrobe Manager and the iStrobe SMF Manager using JZOS

1. Create a dataset for the iStrobe Manager runtime files. A partitioned dataset (PDS) will lend itself better to updating and customizing the JCL prior to submission. The job shown in step 2 illustrates creation of a new PDS for this FTP transfer.
2. FTP the following files from the /Manager directory in the installation directory in z/OS UNIX to MVS:
 - PARMLIB.ISMGRADS
 - PARMLIB.ISMGRAMN
 - PARMLIB.ISMGRASP
 - PARMLIB.ISMGREMN
 - SAMPLE.JCL
 - JZOSPROC.JCL
 - PARMLIB.SMFMGRIN
 - PARMLIB.SMFMGRSH
 - PARMLIB.SMFMGRST
 - SMFSAMP.JCL

The names must be shortened to the eight-character member name limit. The files that start with PARMLIB are input parameter files used to start the appropriate iStrobe Manager service. These can be shortened to ISMGRxxx member names. The files that are qualified as JCL are the PROC and JOB samples for executing on the z/OS system; these can be shortened by removing the .JCL qualifier.

Refer to the **SAMPLE_FTP.JCL** in the Manager directory and edit it as follows:

- Modify the job card
- Change **sysid** on JOBPARM card to the target z/OS system name.
- Change **userid** to your z/OS user ID throughout the JCL.
- In the INPUT DD, make the following changes:
 - Change **sysid** on JOBPARM card to the target z/OS system name.
 - Change **password** to the password associated with the z/OS user id to the FTP server.
 - Change the **cd** directory to your iStrobe installation location.
 - Add the extra **get** command that appears at the bottom of the job before the **quit** command.

Submit the job to transfer the files.

3. After the FTP process is complete, modify the JCL members in the dataset you created in as needed:
 - JZOSPROC - Change the dataset name for DDNAME STDENV and MAINARGS to a system dataset where you store the PARMLIB.ISMGRxxx members. The PROC is shipped by default to use &QUAL.PARMLIB where QUAL defaults to SYSA. This PROC should be put into a system PROCLIB to be referenced automatically when the job for the iStrobe Manager is submitted. You can rename the PROC to follow your system standards (e.g. ISMANAGR).
 - VERSION - Set the VERSION variable to the level of Java installed on the system. The VERSION variable is used within the JZOSPROC to invoke the

proper version of the Java Batch Launcher. The default is set to 70 to invoke Java 7.

- REGSIZE - The REGSIZE variable specifies a specific region memory allocation. The default is 0, which sets the region memory size based on the system defaults defined within the JES2 sub-system.
- LEPARM - The LEPARM variable is the mechanism used by the JZOS to establish settings for the z/OS language environment. The initialization of Java is performed by LE as part of the z/OS operating system. By default, the setting assigns the UMASK to files created in the HFS file system. Note that UMASK is a compliment to the permission assignment. The default value is 022, which will give new files a permission setting of 644 for files and 755 for directories. Refer to z/OS UNIX documentation for valid values and other information.

– MANAGER - Change the job card to match your system requirements.

- ARGS=ISMGRAMN is set by default to start the iStrobe Manager.

```
000001 //ISTROBEM JOB ('ACCOUNT',78,1,1),'ISTROBE MANAGER',
000002 //          CLASS=L,MSGCLASS=R,NOTIFY=&SYSUID,REGION=0M
000003 //* optional JCLLIB ORDER=(<USERID>.ISTROBE.CNTL)
000004 //*****
000005 //* Use ISMGREMN for the ENV member for all uses
000006 //* Use ARGS=ISMGRAMN to run the iStrobe Manager
000007 //* Use ARGS=ISMGRASP to stop the iStrobe Manager
000008 //* Use ARGS=ISMGRADS to test activity in the iStrobe Manager
000009 //*****
000010 //ISMANAGR EXEC JZOSPROC Defaults are ENV=ISMGREMN,ARGS=ISMGRAMN
000011 //*
```

- As shown in the JCL above, you can insert a JCLLIB statement if you want to invoke the JZOSPROC from the ISTROBE.CNTL dataset.

For example:

```
// JCLLIB ORDER=(<USER>.ISTROBE.CNTL)
```

- Use ARGS=ISMGRASP to stop the iStrobe Manager cleanly.

Note: Your JOBNAME must be different from the JOBNAME that is running the iStrobe Manager in order for the stop request to execute.

- Use ARGS=ISMGRADS to get a current status of active tasks in the iStrobe Manager. This is useful to confirm that the iStrobe Manager is communicating normally.

– ISSMFMGR - Change the job card to match your system requirements.

- ARGS=SMFMGRST is set by default to start the iStrobe SMF Manager.

```
000001 //ISTROBES JOB ('ACCOUNT'),'ISTROBE SMF MANAGER',
000002 //          CLASS=L,MSGCLASS=R,NOTIFY=&SYSUID,REGION=0M
000003 //* optional JCLLIB ORDER=(<USERID>.ISTROBE.CNTL)
000004 //*****
000005 //* Use ISMGREMN for the ENV member for all uses
000006 //* Use ARGS="SMFMGRST" to start the iStrobe SMF Manager
000007 //* Use ARGS="SMFMGRSH" to shutdown the iStrobe SMF Manager
000008 //* Use ARGS="SMFMGRIN" to get current status of iStrobe SMF Manager
000009 //*****
000010 //ISSMFMGR EXEC JZOSPROC,ENV=ISMGREMN,ARGS=SMFMGRST
000011 //*
```

- As shown in the JCL above, you can insert a JCLLIB statement if you want to invoke the JZOSPROC from the ISTROBE.CNTL dataset.

For example:

```
// JCLLIB ORDER=(<USER>.ISTROBE.CNTL)
```

- Use ARGs=SMFMGRSH to shutdown the iStrobe SMF Manager cleanly.

Note: Your JOBNAME must be different from the JOBNAME that is running the iStrobe SMF Manager in order for the stop request to execute.

- Use ARGs=SMFMGRIN to get a current status of active tasks in the iStrobe SMF Manager. This is useful to confirm that the iStrobe SMF Manager is communicating normally.
4. Submit the JCL from member MANAGER, or start the system task (described below), to start the iStrobe Manager.
 5. You may optionally submit the JCL from member ISSMFMGR, or start the system task (described below) to start the iStrobe SMF Manager.

Executing the iStrobe Jobs as Started Tasks

You can, optionally, set up the iStrobe Manager to execute as a started procedure on your z/OS system by adding the start command to the SYS1.PARMLIB(COMMNDxx) member. Your installation may require special security authorizations for the started task to actually execute.

iStrobe Manager as a Started Task

You can rename the PROC at your discretion (for example ISMANAGR) so that the long-running task is identifiable as the iStrobe Manager or to match your systems standards. In this setup, you would only have to start the iStrobe Manager the first time with a z/OS console command:

```
START JZOSPROC
```

or

```
START ISMANGR
```

For stopping the iStrobe Manager, you can create a copy of the PROC (like ISMGRSTP) and set the ARGs value to ISMGRASP. The iStrobe Manager should not normally have to be stopped. But, if it becomes necessary for operational reasons to stop the manager, you can cleanly terminate it by using the following console command:

```
START JZOSPROC,ARGs=ISMGRASP
```

or

```
START ISMGRSTP
```

iStrobe SMF Manager as a Started Task

For starting the iStrobe SMF Manager, you can optionally create a copy of the PROC (like ISSMFM) and set the ARGs value to SMFMGRST. Use the console command:

```
START JZOSPROC,ARGs=SMFMGRST
```

or

```
START ISSMFM
```

For stopping the iStrobe SMF Manager, you can create a copy of the PROC (like ISSMFS) and set the ARGs value to SMFMGRSH. The iStrobe SMF Manager should not normally have to be stopped. But, if it becomes necessary for operational reasons to stop the SMF manager, you can cleanly terminate it by using the following console command:

```
START JZOSPROC,ARGs=SMFMGRSH
```

or

```
START ISSMFS
```

Changing the Time Zone for iStrobe Manager

The member name ISMGREMN defines the Time Zone variable.

For example:

```
TZ = EST5EDT
```

- EST is Eastern Standard Time
- Standard Time is 5 hours west of the universal reference time
- EDT is Eastern Daylight Savings Time

For more information on setting time zones in iStrobe, refer to IBM's z/OS Information Center on the Web.

Modifying Java Heap Size for iStrobe Manager

The member name ISMGREMN defines the startup options. The iStrobe Manager is configured with an initial heap size of 256 MB (java option = '-Xms256M') and a maximum heap size of 1024 MB (java option = '-Xmx1024m').

To modify these parameters:

1. Stop the iStrobe Manager.
2. Locate the following two lines in member ISMGREMN.

```
# INSTALLER: Sets java heap allocation if more becomes necessary
DEFS="-Xms256M -Xmx1024m "
```

3. Make the appropriate changes to the heap sizes.
4. Restart the iStrobe Manager.

Uninstalling iStrobe on z/OS UNIX

Follow the procedures in this chapter to uninstall iStrobe. If you are uninstalling in order to move the iStrobe application to a different server, and would like to retain the existing configuration, reports, preferences, etc., be certain to export your User-defined Help (see Help for User-defined Help).

Notes:

- There is a sample shell script named **uninstall.sh** located in `<CDROM>:\cpwr\USS` that you can use as a template.
- If you are executing the shell script, be sure to place it outside the directory where iStrobe is installed.

1. Log on to your system.
2. Stop both the iStrobe Manager and the Compuware Enterprise Services OSGi Manager. Instructions for stopping and starting the iStrobe Manager are found in the installation chapter applicable to your platform.
3. Issue the following commands individually or in a shell script:

```
export IBM_JAVA_ENABLE_ASCII_FILETAG=true
export JAVA_HOME=<directory location for Java>
```

```
export PATH=$JAVA_HOME/bin:$PATH
export LIBPATH=$JAVA_HOME/lib:$LIBPATH:.
java -Xnoargsconversion -Dfile.encoding=ISO8859-1 -jar/
  <istrobe_install_directory>/uninstall/uninstaller.jar -i console 2>
  /dev/null
```

4. Delete any additional files or folders that the uninstall did not delete.

Chapter 3.

Installing iStrobe on Windows

A Windows Server Administrator should install iStrobe for departmental or corporate use.

End-users with administration authority on their workstation can do a standalone workstation install for their own use.

Before beginning the iStrobe install for Windows, determine where you will store your Performance Profiles.

- When storing Performance Profiles locally on the machine where you've installed iStrobe, you may use the "local system" for the CES Manager service. This is usually the case for a standalone workstation install.
- When storing Performance Profiles on a file server, you need a domain ID for the iStrobe Manager service. The ID needs authority to run a service. The Profile Directory permissions for the CES Manager must include both update and create. And the service ID must have read access to the Profile directory.

Before Beginning

Before beginning the installation, you should have the following:

- CES installed and configured.
- A supported database installed.
- The ID and password for the iStrobe Manager service (if required).
- A port number for the iStrobe Manager to listen on (the default is 24354, which should not conflict with most systems).
- A port number for the iStrobe SMF Manager to listen on (the default is 24355).

The installation does the following:

- Installs the iStrobe Manager as a service.
- Installs the iStrobe SMF Manager as a service. You must manually start the iStrobe SMF Manager.

Installing iStrobe

1. Insert the product CD (or locate the FTP image). If you have Internet Explorer, the CD browser opens; if it does not, run `setup.exe` from the root folder of the CD.

Note: If installing from an FTP image, run `setup.exe` from the root of that image.

2. Click **Install iStrobe for Windows** on the CD browser. The **iStrobe Installation and Setup** dialog box appears.
3. Click **Next**. The **License Terms** prompt appears.

4. You are required to read and accept two agreements—one for Compuware and one for Oracle. Click **Next**.

The **Install Folder** prompt appears.

5. From the **Install Folder** prompt, confirm or change the location in which to install iStrobe and click **Next**.
6. If the URL to access CES uses HTTPS, select the **Use HTTPS** checkbox. You may need to provide a keystore and password. Otherwise, these fields can be ignored. Click **Next**.
7. From the **Ports** prompt, enter the following, and then click **Next**:
 - Manager Port
 - Manager Service Name
 - SMF Manager Port
 - Parallel Profile Processing Port

The **Review** prompt appears.

8. From the **Review** prompt, confirm the installation summary information. If any changes are required, click **Previous** and revise the installation settings. Otherwise, click **Install** to start the iStrobe installation. The installation process may run for several minutes. When complete, the **Install complete** prompt appears.
9. From the **Install complete** prompt, click **Done** to exit the installer.
10. The software installation is complete. You have successfully installed iStrobe.
11. Although you have finished installing the iStrobe Web application, you may now need to configure it in order to use the application.

Refer to Chapter 5, “Configuring iStrobe” for complete configuration considerations.

Starting and Stopping the iStrobe Manager

The iStrobe Manager is installed as a service and by default comes up with a Startup type of **Automatic**.

Starting the iStrobe Manager

Bring up the Services application (Administrative Tools). To start the iStrobe Manager, select the Compuware iStrobe Manager service and click **Start the service**.

If you do not want the iStrobe Manager to start every time the Windows machine is started, select the Compuware iStrobe Manager service and change the Startup type to **Manual**. The next time Windows starts up, the service will not start.

Restart the CES Service to recognize the new iStrobe installation.

Stopping the iStrobe Manager

Bring up the Services application (Administrative Tools). To shut down the iStrobe Manager, select the Compuware iStrobe Manager service and click **Stop the service**.

Starting and Stopping the iStrobe SMF Manager

By default, the iStrobe SMF Manager does not come up, but a service is created. It is created with a Startup type of **Manual**.

Starting the iStrobe SMF Manager

Bring up the Services application (Administrative Tools). To start up the iStrobe SMF Manager, select the Compuware iStrobe Manager SMF service and click **Start the service**.

To have the iStrobe SMF Manager start every time the Windows machine is started, find the Compuware iStrobe Manager SMF service. If the Startup type is Manual, change it to Automatic. The next time Windows starts up, the service will start.

Stopping the iStrobe SMF Manager

Bring up the Services application (Administrative Tools). To shut down the iStrobe SMF Manager, select the Compuware iStrobe Manager SMF service and click **Stop the service**.

Uninstalling iStrobe on Windows

Follow the procedures in this chapter to uninstall iStrobe. If you are uninstalling in order to move the iStrobe application to a different server, and would like to retain the existing configuration, reports, preferences, etc., be certain to export your User-defined Help (see Help for User-defined Help).

Note: Uninstalling iStrobe does not uninstall CES. CES must be uninstalled separately.

1. Log on to your system as a user with administrator authority.
2. Use the Windows **Programs and Features** dialog box to uninstall the iStrobe application.
3. Choose whether or not to remove the iStrobe database.

Delete any additional files or folders that the uninstall did not delete.

Chapter 4.

Installing iStrobe on Linux

This installation procedure leads you through the process of installing iStrobe on Linux.

A server administrator should install iStrobe in a Linux environment.

Before you begin the iStrobe installation, determine where you will store your Performance Profiles.

Before Beginning

Before beginning the installation, you should have the following:

- A verified installation of Compuware Enterprise Services configured with a supported database.
- The known path to an iStrobe compatible version of Java on the machine. Those versions include Java Technology Edition V7 SR4 FP2, 7.1, or 8. This would have been known during the installation of Compuware Enterprise Services.
- The iStrobe media image downloaded from the iStrobe media; image downloaded from an RFN order; or from the Enterprise Common Components (ECC) EP Media Browser.
- Ensure that the installable media is on the machine on which you intend to install.
- Determine where you will store your Performance Profiles and how the profiles are transferred from z/OS to the directory where they are stored for iStrobe.
- If you decide to use the Web Service interface for requesting a Strobe measurement, contact your Strobe administrator to get the following Host Communications (HCI):
 - HCI Host
 - HCI Port

You may setup the HCI connection information in the Configuration section of Administration.

- Location of the CES installation directory.
- ID and password for the iStrobe Manager daemon with full-control-access to the directories you plan to use for the performance profiles.
- Port number for the iStrobe Manager to listen on (the default is 24354, which should not conflict with most systems).
- Port number for the iStrobe SMF Manager to listen on (the default is 24355).
- The iStrobe installation may require up to 1 gigabyte (GB) of temporary space during the installation. When the installation is complete, the temporary installation files are removed.

By default, the /tmp directory is used for temporary disk space during the install. If an alternate location for temporary disk space is needed, the following parameter can be used:

```
-Dlax.nl.env.IATEMPDIR
```

For example, the following commands may be entered either individually at the command prompt or in a shell script:

```
export TMPDIR=/sample directory/tmp
export JAVA_HOME=/usr/lpp/java/J7.0
export PATH=$JAVA_HOME/bin:$PATH
export LIBPATH=$JAVA_HOME/lib:$LIBPATH:.
cd /iStrobe-install-dir/Linux/Disk1/InstData/NoVM
./install.bin -Dlax.nl.env.IATEMPDIR=$TMPDIR
```

The installation does the following:

- Installs the iStrobe Manager and sets it up as a daemon by putting script in the /etc/init.d directory. The daemon is enabled for run-levels 3 and 5 so that, during a reboot of the system, the Manager starts without manual intervention.
- Creates a shell script to install the iStrobe SMF Manager and sets it up as a daemon by putting script in the /etc/init.d directory. The daemon is enabled for run-levels 3 and 5 so that, during a reboot of the system, the Manager starts without manual intervention.

Installing iStrobe

1. Transfer the contents of the following folder and subdirectories from the product CD (or FTP image) to your system:

```
<CDROM drive>:\cpwr\Linux
```

2. Log on to your system, navigate to where you have transferred the files, and locate the directory where install.bin is stored.
3. Issue the following commands individually or in a shell script:

```
export JAVA_HOME=<directory location for Java>
export PATH=$JAVA_HOME/bin:$PATH
./install.bin
```

Note: Be sure to execute the commands in the directory where install.bin is located.

You must be logged in as a super user (root) to allow the daemon installation and you must have execute permission on install.bin. You may need to have the /sbin and /usr/sbin directories in your path.

The **Introduction** panel appears.

4. After reading the panel, press **Enter**. The **License agreement** panel appears. You are required to read the agreement pressing **Enter** until you have scrolled through the agreement.
5. Type **Y** and press **Enter** to accept the terms of the license agreements. The **Install folder** panel appears.
6. From the **Install folder** panel, enter the path to the location where you want to install iStrobe.
 - Accept the default path or type an absolute path and press **Enter**. Confirm the path and press **Enter**. You must have permission to install to the directory you choose.

Note: If you choose an alternate installation directory instead of the default, the directory (and parent directories) will be created with privileges of 755. For example, if this directory structure exists:
`/u/sb/abcdef1`

and you enter:
`/u/sb/abcdef1/dirA/dirB/dirC`

then directories dirA, dirB, and dirC will be created and iStrobe will be installed into dirC.

7. Enter the location of the CES Install folder (where CES gets installed) and press **Enter**.
8. Determine if CES will be accessed using HTTPS. Press **Enter** to accept the default entry or type **Y** and press **Enter** to modify the values. You may need to provide a keystore and password. The **iStrobe Manager** panel appears.
9. Enter the iStrobe Manager Daemon name and press **Enter**.
10. Enter the iStrobe Manager Host name and press **Enter**. The iStrobe Manager Ports panel appears.
11. Accept the default port values or press **Y** to modify the values.
 - Manager Port
 - SMF Manager Port
 - Parallel Profile Processing Port.
12. Enter the user ID needed to install and run the iStrobe Manager Daemon and press **Enter**.

CAUTION: If you do *not* specify the correct user ID, file permissions for both the iStrobe installation and repository directories will be incorrect. An incorrect user ID will require the installer to execute the `chown` Linux command to set the ownership of these directories to the user ID associated with the iStrobe Manager.

The **Ready to Install** panel appears.

13. Review the installation information. If it is incorrect, type **Back** and revise the installation settings as necessary. Otherwise, press **Enter** to start the iStrobe installation. When complete, the **Installation Complete** panel appears.
14. The **Installation Complete** panel appears when the installation finishes. Press **Enter** to exit the installer.
15. Although you have finished installing the iStrobe Web application, you may need to configure iStrobe in order to use the application.

Refer to Chapter 5, “Configuring iStrobe” for configuration considerations.

After configuring iStrobe, you may now optionally set up and start the iStrobe SMF Manager by referring to “Starting and Stopping the iStrobe SMF Manager” on page 28

Starting and Stopping CES

By default, CES is installed as a daemon.

Installing and Starting the CES Daemon

To install and start the CES daemon, issue the following command:

```
./ces_service.sh -install
```

Stopping the CES Daemon

To stop the CES daemon, issue the following command:

```
./excecces.sh stop
```

If you are having difficulty stopping the CES daemon, you may issue the following command:

```
./excecces.sh kill
```

Restarting the CES Daemon

To restart the CES daemon, issue the following command:

```
./excecces.sh start
```

Stopping and Uninstalling the CES Daemon

To stop and uninstall the CES daemon, issue the following command:

```
./ces_service.sh -remove
```

Starting and Stopping the iStrobe Manager

By default, the iStrobe Manager is installed as a daemon.

Installing and Starting the iStrobe Manager Daemon

To install and start the iStrobe Manager daemon, issue the following command:

```
./istrobemanager_service.sh -install
```

Note: After the iStrobe Manager daemon has been installed, you may choose to edit the `umask` command in the `/etc/init.d/excistrobe.h` file. By default, the `umask` command is set to `027`. This setting does not allow users in a different group to read profiles.

Stopping the iStrobe Manager Daemon

To stop the iStrobe Manager daemon, issue the following command:

```
kill -9 process id <of istrobe manager>
```

Starting and Stopping the iStrobe SMF Manager

By default, the iStrobe SMF Manager is not installed as a daemon.

Installing and Starting the iStrobe SMF Manager Daemon

To install and start the iStrobe SMF Manager daemon, issue the following command:

```
./istrobeSmfManager_service.sh -install
```

Stopping the iStrobe SMF Manager Daemon

To stop the iStrobe SMF Manager daemon, issue the following command:

```
./smfmgrcmd.sh SHUTDOWN
```

If you are having difficulty stopping the iStrobe Manager daemon, you may issue the following command:

```
./smfmgrcmd.sh kill
```

Restarting the iStrobe SMF Manager Daemon

To restart the iStrobe SMF Manager daemon, issue the following command:

```
./istrobeSmfManager_service.sh -start
```

Stopping and Uninstalling the iStrobe SMF Manager Daemon

To stop and uninstall the iStrobe SMF Manager daemon, issue the following command:

```
./istrobeSmfManager_service.sh -remove
```

Uninstalling iStrobe on Linux

Follow this procedure to uninstall iStrobe. If you are uninstalling in order to move the iStrobe application to a different server, and would like to retain the existing configuration, reports, preferences, etc., be certain to export your User-defined Help (see Help for User-defined Help).

1. Log on to your system as superuser (root).
2. Navigate to `<iStrobe_install_directory>/uninstall`.
3. Execute the command:

```
./uninstall
```

4. Choose whether or not to remove the iStrobe database.

Delete any additional files or folders that the uninstall did not delete.

Chapter 5.

Configuring iStrobe

After installing iStrobe, you may need to configure the application.

The iStrobe application icon is activated within Compuware Enterprise Services and you are able to launch the iStrobe application.

Further optional configurations are performed within the CES or iStrobe application interfaces.

iStrobe Configuration

Upon launching the iStrobe application, you may optionally configure the following:

- Security
- General Configuration
 - Email
 - Profiles
 - iStrobe Manager Communications
 - Logging Levels
 - Usage Data
- Host connection settings
- User and Roles
- Auto Delete
- SMF Data Management
- Profile History

1. Open the iStrobe application by pointing your web browser to:

```
<host address>:<application server port number>/<ces context root>
```

- *host address* is the name of the server where you just installed iStrobe.
- *application server port number* is the port on which the application server is listening.
- *iStrobe context root* is the name you entered when naming the application in any of the installation environments.

Ex. `http://myserver:48080/istrobe`

Default Password

The default password for configuring iStrobe settings is `isadministration`. Enter the administration password and click **OK**.

Security Configuration

The security features in iStrobe are optional and can utilize your existing LDAP security servers, X.509 certificates from a smart card, or Kerberos for user authentication. iStrobe does not store passwords, but does store user IDs. By requiring a user ID and either a password or PIN to access iStrobe, you are able to provide role-based content and give users access to specific functionality.

By default, iStrobe security is *disabled* upon first installing iStrobe and all content is available to all users.

As an administrator, you may configure and enable iStrobe security after installing iStrobe. The first time you click the button to the administration section, you are prompted to provide the administration password. The default password is "isadministration". Having been provided the password, you are able to act as the administrator and enable security. You also have the ability to change the administrator password. Do this by clicking the **Security** button within the **Administration** section.

Note: Although you are not required to secure content, you should consult with the network security group at your site to determine whether or not to enable security for iStrobe. You always have the ability to disable security that has been enabled.

With security configured, users must present credentials for authentication and access to iStrobe. When security is enabled with an LDAP authentication server, users are prompted for both a user ID and password. When security is enabled with an X.509 certificate from a smart card, users are prompted for a PIN only.

Enable security using LDAP

To configure and enable LDAP security, the security administrator must provide the following:

- iStrobe administrator(s) ID. *Do not* include the domain name in this field.
- Binding URL for binding the URL to the LDAP server
- Distinguished Name (DN) of a service account used to search LDAP for the service account
- Password of an account that can be used to bind to the LDAP server
- Search base and filter to use to locate the user's ID

When logging on, users are prompted for their user ID and password.

1. Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.
2. Click **Security**. The **Security** window appears.
3. Select the LDAP security mode:
4. Enter the required information in each of the fields:
 - LDAP server URL
The location of the server running LDAP (Lightweight Directory Access Protocol).
Ex. ldap://ldap.example.com
 - LDAP server port number
The port used for LDAP on the server
 - Bind with
The process where the LDAP server authenticates the client. This can be done with either a search filter or a DN. If binding with User DN, another dialog box will be displayed for Login ID and Password.
 - Distinguished name (DN)
A DN is a sequence of relative distinguished names (RDN) which are connected with commas. Each RDN is an attribute value pair (i.e., attribute1=value1,attribute2=value2). Note that spaces are not to be included after commas. If binding with DN, enter CN={0} and on the next dialog, whatever value supplied to Login ID will be used in place of {0}.
Ex. CN={0},OU=User Accounts,OU=Detroit Corp,DC=example,DC=corp

- Password for DN
Required only when binding with search filter. If binding with DN, another dialog box will be displayed for this information.
 - Search base
Required only when binding with search filter. This defines the base level in the directory where the search will begin at. This is defined with the DN of the search base object.
Ex. OU=Sales,DC=example,DC=com
 - Search filter
Required only when binding with search filter. This defines how to filter the search, such as including or excluding specific values.
Ex. (cn={0}) - This will search for an entry with the cn (common name) equal to the User ID entered. It is required for the search filter to have the parentheses such as listed in our example.
 - iStrobe administrator(s)
Required so that the iStrobe administrator account can be set in the database. Otherwise, you may be locked out of the system once the security mode is set.
5. Click **LDAP server connection test**. If an LDAP server connection is available, you will be able to apply this security configuration.
 6. Click **Apply**.

You *must* restart your web application for the security settings to become effective. When logging on, users will be prompted for their user ID and password.

Enable security using X.509 (Smart Card)

With security configured for X.509 (Smart Card), users must first have their smart card plugged into the reader. They must also have a valid X.509 certificate. And they must log on using the `https://` protocol as the first element in the URL.

To configure and enable X.509 (Smart Card) security, the security administrator must provide the following:

- iStrobe administrator(s) ID
- X.509 mask. This is needed to extract the user ID from the smart card certificate.

When logging on, users are prompted for their smart card PIN. Those users without both the smart card and PIN for that card are denied access to iStrobe.

1. Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.
2. Click **Security**. The **Security** window appears.
3. Select the X.509 (Smart Card) security mode:
4. Enter the required information in each of the fields:
 - X.509 mask
 - iStrobe administrator(s)
5. Click **Apply**.

You *must* restart your web application for the security settings to become effective. When logging on, users will be prompted for their smart card PIN.

Enable security using X.509 with LDAP

With security configured for X.509 with LDAP, users can log on with a smart card and PIN using the `https://` protocol or with LDAP using the `http://` protocol.

To configure and enable X.509 with LDAP security, the security administrator must provide the following:

- LDAP server URL
 - LDAP server port number
 - Distinguished name (DN)
 - Password for DN
 - Search base
 - Search filter
 - iStrobe Administrator
 - X.509 mask. This is needed to extract the user ID from the smart card certificate.
1. Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.
 2. Click **Security**. The **Security** window appears.
 3. Select the X.509 with LDAP security mode:
 4. Enter the required information in each of the fields:
 - LDAP server URL
The location of the server running LDAP (Lightweight Directory Access Protocol).
Ex. `ldap://ldap.example.com`
 - LDAP server port number
The port used for LDAP on the server
 - Bind with
The process where the LDAP server authenticates the client. This can be done with either a search filter or a DN. If binding with User DN, another dialog box will be displayed for Login ID and Password.
 - Distinguished name (DN)
A DN is a sequence of relative distinguished names (RDN) which are connected with commas. Each RDN is an attribute value pair (i.e., `attribute1=value1,attribute2=value2`). Note that spaces are not to be included after commas. If binding with DN, enter `CN={0}` and on the next dialog, whatever value supplied to Login ID will be used in place of `{0}`.
Ex. `CN={0},OU=User Accounts,OU=Detroit Corp,DC=example,DC=corp`
 - Password for DN
Required only when binding with search filter. If binding with DN, another dialog box will be displayed for this information.
 - Search base
Required only when binding with search filter. This defines the base level in the directory where the search will begin at. This is defined with the DN of the search base object.
Ex. `OU=Sales,DC=example,DC=com`
 - Search filter
Required only when binding with search filter. This defines how to filter the search, such as including or excluding specific values.
Ex. `(cn={0})` - This will search for an entry with the `cn` (common name) equal to the User ID entered. It is required for the search filter to have the parentheses such as listed in our example.
 - X.509 mask
Extracts the user ID from the smart card certificate.

- iStrobe administrator(s)
Required so that the iStrobe administrator account can be set in the database. Otherwise, you may be locked out of the system once the security mode is set.
5. Click **LDAP server connection test**. If an LDAP server connection is available, you will be able to apply this security configuration.
 6. Click **Apply**.

You *must* restart your web application for the security settings to become effective. When logging on, users will be prompted for their user ID and password for LDAP or their smart card PIN.

Enable security using Kerberos

With security configured for Kerberos, users are automatically signed on using their user ID.

To configure and enable Kerberos, the security administrator must provide the following:

- Service principal
 - Keytab location
 - iStrobe administrator(s).
1. Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.
 2. Click **Security**. The **Security** window appears.
 3. Select the Kerberos security mode:
 4. Enter the required information in each of the fields:
 - Service principal
 - Keytab location
Set this as a URL.
Ex. `file:///etc/s100086.keytab`
 - iStrobe administrator(s)
 5. Click **Kerberos login test**. If you are able to log in, you will be able to apply this security configuration.
 6. Click **Apply**.

You *must* restart your web application for the security settings to become effective. When logging on, users are not prompted.

Important:

Only administrators can add or remove users and manage access to specific functionality. This function appears in the list of functions on the administration tab in the Application Controls panel. See “Other Configuration Considerations” on page 36.

Disable security

Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.

1. Click **Security**. The **Security** window appears.
2. Select the None radio button.
3. Click **Apply**.

You must restart your web application for the security settings to become effective. When logging on, users are no longer prompted for their user ID and password, and all content and profiles are available to all users.

Other Configuration Considerations

Start iStrobe in your browser and click the **Administration** button. The **Administration** window appears.

The install sets up much of the configuration. Compuware recommends reviewing all the configuration parameters when you do the initial install. Refer to the online help for detailed instructions on updating each page.

1. Click **General Configuration**. The **General Configuration** window appears.

Note: If the **iStrobe Manager Connection Error** dialog box appears instead of the **iStrobe Configuration** page, review your installation for errors and resolve them. If you still have problems, refer to Frontline for additional information on connection problems.

- In the **Email** box, enter the Email server name and Sender address to allow you to use the email notification option when new profiles are downloaded from Strobe.
 - In the **iStrobe manager communications** box, do not change the values for the host or port fields unless there is an error. You may want to change the location of the Quarantine directory. The iStrobe Manager service or daemon ID must have update access to this directory.
2. Navigate back to the **Administration** window.
 3. Click **Users and Roles**. The **Users and Roles** window appears in the display pane.

If you want to restrict access to iStrobe content other than administration use the Roles page to create roles to assign to users. The install creates three roles:

USER - Has access to all content except Administration and defining new Strobe Insight Reports.

ADMINISTRATOR - This is not listed in the Role page to prevent accidental deletion. You can give others access to Administration by going to the user page and adding ROLE_ADMIN.

Super - Has access to all content.

Since users are created automatically when iStrobe is accessed, you would not need to visit this window at this time except to create another iStrobe administrator.

4. Navigate back to the **Administration** window.

5. Click **Host Connections**. The **Host Connections** window appears. Host Connections is used to define configuration connections to the Host Communications Interface (HCI) component to support measurement requests from the iStrobe Web Service.

The Compuware HCI can be configured to support multiple Strobe instances within a network. This tab allows you to enter specifications for multiple HCI instances. Refer to the Strobe/HCI Configuration documentation for more information on details to support multiple Strobe instances. If you wish to use this web service, contact Compuware Technical Support for full documentation.

Appendix A.

Installing the Compuware Workbench Plug-in for iStrobe

The Compuware Workbench plug-in for iStrobe can be either launched from within the Compuware Workbench or installed into an Eclipse or RDz instance. To use the iStrobe plug-in from within the Compuware Workbench, refer to the *Compuware Workbench Installation Guide* for installation instructions.

Appendix B.

iStrobe Web Services

iStrobe 5.2 accepts an HTTP request to initiate a Strobe measurement of an active z/OS process. You can use this feature with a performance monitor to start a Strobe measurement when you notice performance problems on the mainframe and would like a deep dive analysis.

iStrobe Configuration

To configure iStrobe you need to specify Host Name or IP address, Port number, and Strobe signature for each System you want to use with the Web Service. The z/OS systems programmer who set up Strobe and the HCI will have this information. Go to the **Administration** section and select **Host Connections**. You may configure as many HCIs as needed to connect to your Strobe Release 5.2 and above installations. The connection for an individual measurement is specified in the Web Service request. Refer to the iStrobe online help **Manage HCIs** page for more details about the individual fields.

How to Use the API

Measurement requests are sent to the iStrobe Web Server as a Web Service request via HTTP or HTTPS. You should consider using an HTTPS connection, because the z/OS ID and password are included in the request. The z/OS ID only needs permission to start a Strobe measurement. It does not need access to TSO.

Requesting WSDL URL

The Web Services Description Language (WSDL) of this Web Service can be retrieved using this URL:

Figure 5-1. URL to Retrieve WSDL

```
HTTP://istrobeHost:port/iStrobeWebApplicationName/ws/Measurement/measurement.wsdl
```

Web Service Request to iStrobe Server

The SOAP body expected by the iStrobe Web Service is described below. The requester will receive the return value formatted as a SOAP response. See below for the available request types.

Figure 5-2. URL Format of the Web Service Request to the iStrobe Server

```
HTTP://istrobeHost:port/iStrobeWebApplicationName/ws/Measurement
```

When the message for an “addActive” request is sent to the iStrobe Web Service, a response will be returned. If the request is successfully processed, the response will include the URL for the iStrobe measurement report.

Figure 5-3. Example Web Service Request SOAP Body Format

```
<!-- Copyright (c) 2010 Compuware Corporation. All rights reserved. -->
<AddActiveRequest xmlns="http://istrobe.compuware.com/ws/Measurement" >
  <reqType>addActive</reqType> <!-- addQueue for Add Queued request -->
  <logonid>mainframe-userid</logonid>
  <password>mainframe-password</password><!-- sample java code will ask this value at runtime -->
  <jobname>YOURJOB0</jobname>
  <system>yourSystem</system>
  <!-- Optional -->
  <tags>list of tags</tags>
  <profileName>profile name to be created</profileName>
  <emailto>email-id to notify</emailto><!-- iStrobe should be configured to use email notification -->
  <duration>minimum measurement time</duration>
  <samples>number of samples</samples>
  <limit>number of sample dataset to be created</limit>
  <finalAction>quit|stop|continue</finalAction>
  <hlq>MY.GROUP</hlq>
  <trandid>transaction id mask</trandid>
</AddActiveRequest>
```

Descriptions of Elements

reqType

addActive. Adds a request for measurement of an active job.

logonid

Required. z/OS logon ID.

password

Required. z/OS password. An SSL connection should be used to prevent exposing the password to the network.

jobname

Required. Jobname to be measured.

system

Required. Host Connection name defined by the iStrobe HostConnections configuration screen.

tags

Optional. Tags to be assigned to profile.

profileName

Optional. Name of the profile. The default is the jobname.

emailto

Optional. SMTP e-mail address to notify when the measurement is complete and the profile is ready to view.

duration

Optional. Estimated minimum measurement time in minutes. See the *Strobe User Guide* for details.

samples

Optional. The target number of samples to take during the measurement session. See the *Strobe User Guide* for details.

limit

Optional. Suspends sampling when the target number of samples is reached. See the *Strobe User Guide* for details.

finalAction

Optional. Controls the measurement session when the final dataset has been completed. Value can be one of the following: {QUIT | STOP | CONTINUE}. See the *Strobe User Guide* for details.

hlq

Optional. High Level Qualifier. DSNAME High level qualifier - Temporary dataset prefix.

tranid

Optional. May occur up to 5 times. Used for transaction profiling, the tranids are transaction ID masks used to specify the transactions to be measured.

Figure 5-4. Example of Returns: SOAP Body Format

```
<?xml version="1.0" encoding="UTF-8"?>
<ns2:AddActiveResponse xmlns:ns2="http://istrobe.compuware.com/ws/Measurement">
  <ns2:reqType>addQueue</ns2:reqType>  <!-- addActive | addQueue -->
  <ns2:returnCode>0</ns2:returnCode>
  <!-- below is the iStrobe reporter url when the returnCode is less than 5 -->
  <ns2:reportUrl>http://iStrobe.server:8080/iStrobe43/iStrobe.html?js=on&auto=on&
  amp;report=MSD&profile=D%3A%5Ceclipse%5C... Sample11</ns2:reportUrl>
  <ns2:messageList>
    <ns2:message>STR6300I Input = ADD SBHCI,STEP=*ALL,GOMIN=0002,SAMPLES=009999,
    NONOTIFY,LIMIT=(01,QUIT),ISPFLAG=0000,RJCLFILE=( _YES_ )</ns2:message>
    <ns2:message>STR6261I 0581 JOBNAME1 QUEUED STEP=*ALL CREATED=(09:29:53
    06/23/2011) GOMIN=2 SAMPLES=9999 LIMIT=(1,QUIT)</ns2:message>
    <ns2:message>STR6261I EXPIRATION=(06/30/2011) NONOTIFY</ns2:message>
    <ns2:message>STR6130I ADD operation completed</ns2:message>
  </ns2:messageList>
  <ns2:statusList>
    <ns2:status number="581" state="QUEUED"/>  <!-- QUEUED | RUNNUNG -->
  </ns2:statusList>
</ns2:AddActiveResponse>
```

If there is an error in the addActive request, the return code will be non-zero with an appropriate message.

connectTest Web Service Request to iStrobe Server - Detail

This request is used to test the z/OS connection information to confirm that it is correct and available.

Figure 5-5. URL Format of connectTest Web Service Request

```
HTTP://istrobeHost:port/iStrobeWebApplicationName/ws/Measurement
```

See Figure 5-6 for the available request types.

Figure 5-6. Web Service Request SOAP Body Format

```
<ConnectTestRequest xmlns="http://istrobe.compuware.com/ws/Measurement"/>
```

Figure 5-7. Returns (Response): Soap Body Format

```
<?xml version="1.0" encoding="UTF-8"?>
<ConnectTestResponse>
  <returnCode>nnnn</returnCode>
  <message>message_string</message>
</ConnectTestResponse>
```

If there is an error in the connectTest request, the return code will be non-zero with an appropriate message. If the request is successful, the return code will be 0, and the message will include the available system list.

Java Example

An example of using the Web service with a Java program was installed with the iStrobe manager in the `utilities\web-service\clientsample` sub-directory. See the `readme.txt` file for detailed instructions about using this sample.

Using SSL with the Web Service

You may secure communications between the web server and the web service client using Secure Sockets Layer (SSL/HTTPS). In order to request an Add Active via the SSL, the web server and the web service client should be configured for the SSL. The protocol is controlled by the web server. No special coding is needed in the iStrobe web service.

Settings for the web server configuration for SSL and the client should be documented by the web server provider. Here is an example of how to set up the SSL configuration for the CES server and the web service client using Java Secure Socket Extension (JSSE).

Compuware Enterprise Services Server Configuration for SSL

To configure the Compuware Enterprise Services server for HTTPS, use the instructions at the following link:

https://wiki.eclipse.org/Jetty/Howto/Configure_SSL#Setting_the_Port_for_https

The file to modify to add the SSL connector is:

```
<ces install dir>/data/jetty/etc/jetty_selector.xml
```

To use Smart Card support for authentication, use the following parameter in `jetty_selector.xml`:

```
-wantClientAuth=true
```

Web Service Java Client Using SSL Connection

To access iStrobe web service via SSL, use the following JVM parameter:

```
-Djavax.net.ssl.trustStore=client.keystore
```

Or, you can set the following parameter in your web service client Java program:

```
System.setProperty("javax.net.ssl.trustStore", "<proper-path>/client.keystore");
```

The file **client.keystore** is the same file generated in the previous section. The URL for the web service will be similar to the following:

```
https://istrobeHost:8443/iStrobe
```

