



The Mainframe Software Partner
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Topaz for Java Performance Installation Guide

Release 16.03

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or comments on this document to:

Topaz for Java Performance Customer Support

<http://go.compuware.com>

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Introduction

This guide provides instructions on how to install Topaz for Java Performance. Topaz for Java Performance collects performance statistics for your Java Virtual Machines (JVMs) on z/OS. It provides information about performance inside of the JVMs. Topaz for Java Performance uses a sampling approach to approximate the amount of CPU that is used by different classes.

Intended Audience

This installation guide is intended for the individual(s) installing Topaz for Java Performance. You should be familiar with administering the operating system and your network security policies. If you are unfamiliar with any of the corequisite software, contact your administrator for help.

How This Guide is Organized

This guide contains the following chapters and appendixes:

Chapter 1, “Planning to Install Topaz for Java Performance”

Chapter 2, “Installing the Topaz for Java Performance Manager on z/OS UNIX”

Chapter 3, “Installing the Topaz for Java Performance Agent on z/OS UNIX”

Appendix A, “Installing the Topaz for Java Performance Manager on Windows”

Appendix B, “Installing the Topaz for Java Performance Manager on Linux”

How to Use This Guide

If you are installing Topaz for Java Performance for the first time, you should read the following chapters:

- Chapter 1, “Planning to Install Topaz for Java Performance”
- The appropriate installation chapter or appendix for your environment
- Chapter 3, “Installing the Topaz for Java Performance Agent on z/OS UNIX”

Topaz for Java Performance Publications

To learn more about using Topaz for Java Performance:

- See the Topaz for Java Performance online help within the product.
- Visit Compuware’s FrontLine at <http://frontline.compuware.com> and select Topaz for Java Performance for the latest technical information.

Compuware Topaz for Java Performance 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.

Compuware now offers User Communities, online forums to collaborate, network, and exchange best practices with other Compuware solution users worldwide. To join, go to <http://groups.compuware.com>.

Contacting Customer Support

Phone

- USA and Canada: 1-800-538-7822 or 1-313-227-5444.
- All other countries: Contact your local Compuware office. Contact information is available at <http://go.compuware.com>.

Web

You can report issues via the Quick Link **Create & View Support Cases** on the Compuware Go home page.

Note: Please report all high-priority issues by telephone.

Mail

Compuware Customer Support
Compuware Corporation
One Campus Martius
Detroit, MI 48226-5099

Corporate Website

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.

Planning to Install Topaz for Java Performance

This chapter describes what you need to know and the decisions you need to make before installing Topaz for Java Performance. It discusses the corequisites and requirements. It also identifies those individuals who will participate in the Topaz for Java Performance installation.

Note: When Topaz for Java Performance is installed on a standalone workstation, it supports a single user. To support more than one user, Topaz for Java Performance must be installed on a server.

Topaz for Java Performance Installation Overview

Topaz for Java Performance collects performance statistics for your Java Virtual Machines (JVMs) on z/OS. It provides information about performance inside of the JVMs. Topaz for Java Performance uses a sampling approach to approximate the amount of CPU that is used by different classes.

The Topaz for Java Performance Agent is required to take measurements and must be installed on z/OS UNIX only. Compuware License Management System (LMS) provides Topaz for Java Performance Agents licenses as a bundle of concurrent licenses tied to an LPAR. For example, a 20 Topaz for Java Performance Agent Feature Pack allows 20 agents to run on a single LPAR. Host Communications Interface (HCI) must be installed on the LPAR with the Agents, and their licenses must be defined to HCI.

Only one Topaz for Java Performance Manager is required to support multiple agents per LPAR. Although the Topaz for Java Performance Agents must be installed on z/OS UNIX, the Manager may be installed on z/OS UNIX, Linux, or Windows 64-bit operating systems with Compuware Enterprise Services (CES). Refer to the Topaz for Java Performance release notes for the supported versions of these operating systems. The Topaz for Java Performance web application resides within the CES user interface. End users access the Topaz for Java Performance web application using a supported browser.

Corequisites

The following Compuware products and components must be installed **with current maintenance applied** on the LPAR where you plan to install Topaz for Java Performance before you can use it:

- Compuware Shared Services (CSS) 9.0, 16.05
- License Management System (LMS) 4.0, 16.05
- Host Communications Interface (HCI) 3.0, 16.05
- Base Services 16.05
- Compuware Mainframe Services Controller (CMSC) 16.05
- Compuware Enterprise Services (CES) 16.03

Web Server Hardware Requirements

Ensure that the Web server where you will be installing Topaz for Java Performance meets the following hardware requirements:

- Minimum of 1 GB available disk space
- Minimum 2 GB of RAM
- Minimum 2 GHz processor
- Requirements may vary widely depending on the number of users

Database Requirements

Topaz for Java Performance requires an installed supported database that was configured by using the Database Settings feature of CES. Topaz for Java Performance supports the following databases:

- IBM DB2 for z/OS
- IBM DB2 for Linux, z/OS UNIX, and Windows (LUW)
- Microsoft SQL Server
- Oracle

Refer to the Topaz for Java Performance *Release Notes* for the supported versions of these databases.

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 an administrator familiar with one of the following environments as is appropriate for your site:

- z/OS UNIX System Services
- Linux
- Windows

The user performing the installation needs to have the appropriate authorizations in the selected environment.

Security Environment

A security administrator with knowledge of the security software at your site may be required to grant/restrict access to Topaz for Java Performance end users.

Installation Checklist

The following steps provide a checklist for installing Topaz for Java Performance..

Step 1. Review Chapter 1, “Planning to Install Topaz for Java Performance”.

- [] 1. Read “Topaz for Java Performance Installation Overview” on page 1-1 for a brief description of the Topaz for Java Performance product and installation.
- [] 2. Ensure the Compuware products listed in “Corequisites” on page 1-1 are installed with current maintenance applied on the LPAR where you plan to install Topaz for Java Performance.
- [] 3. Review “Web Server Hardware Requirements” on page 1-2.
- [] 4. Review “Database Requirements” on page 1-2.
- [] 5. Review “Individuals to Participate in the Installation” on page 1-2.
 - a. Determine who at your site should be involved in installation environment considerations and security requirements.
 - b. Determine the installation environment: z/OS UNIX System Services, Windows, or Linux.
 - c. Determine any security requirements appropriate for your site.
- [] 6. Use the “Installation Checklist” on page 1-3 to guide you through the installation process.

Step 2. Review the appropriate chapter or appendix for your site’s installation environment.

Note: At least one Topaz for Java Performance Agent is required for each installation regardless of the operating system environment, and may be installed only on z/OS UNIX.

- [] 1. See Chapter 2, “Installing the Topaz for Java Performance Manager on z/OS UNIX” if you plan to install on z/OS UNIX System Services.
 - a. Review “Before Beginning” on page 2-1 for the pre-installation requirements.
 - b. Complete the installation procedure as described in “Installing the Topaz for Java Performance Manager” on page 2-2.
 - c. Review “Post-Installation” on page 2-3 for the post-installation requirements.
- [] 2. See Chapter 3, “Installing the Topaz for Java Performance Agent on z/OS UNIX” for the Agent installation procedure required for all environments.
 - a. Review “Before Beginning” on page 3-1 for the pre-installation requirements.
 - b. Complete the installation procedure as described in “Installing the Topaz for Java Performance Agent” on page 3-2.
 - c. Review “Post-Installation” on page 3-3 for the post-installation requirements.

- [] 3. See “Installing the Topaz for Java Performance Manager on Windows” on page A-1 if you plan to install on Windows.
 - a. Review “Before Beginning” on page A-1 for the pre-installation requirements.
 - b. Complete the installation procedure as described in “Installing the Topaz for Java Performance Manager” on page A-1.
 - c. Review “Post-Installation” on page A-2 for the post-installation requirements.

- [] See Appendix B, “Installing the Topaz for Java Performance Manager on Linux” if you plan to install on Linux.
 - a. Review “Before Beginning” on page B-1 for the pre-installation requirements.
 - b. Complete the installation procedure as described in “Installing the Topaz for Java Performance Manager” on page B-1.
 - c. Review “Post-Installation” on page B-2 for the post-installation requirements.

Chapter 2.

Installing the Topaz for Java Performance Manager on z/OS UNIX

This chapter describes the installation procedure for installing the Topaz for Java Performance Manager on z/OS UNIX. Depending on your site standards, you may need the assistance of the following individuals:

- z/OS UNIX system administrator should install Topaz for Java Performance.
- Security administrator.

Before Beginning

Before you begin the Topaz for Java Performance Manager installation, you should have the following:

- A compatible Compuware Enterprise Services (CES) 16.3 installation for z/OS UNIX has been configured
- Location of the CES instance (installation folder).
- An installed supported database that has been configured for this CES instance.
- An installed Java version 1.7.0. or 1.8.0

To verify the version of Java:

Under z/OS UNIX, go to the bin directory for Java and issue the “java -version” command:

```
cd /path/to/java/bin
java -version
```

Sample Output:

```
java version "1.7.0"
Java(TM) SE Runtime Environment (build pmz3160sr9fp2-20110625_01(SR9
FP2))
IBM J9 VM (build 2.4, JRE 1.7.0 IBM J9 2.4 z/OS s390-31 jvmmz3160sr9-
20110624_85526 (JIT enabled, AOT enabled)
J9VM -20110624_085526
JIT -r9_20101028_17488ifx17
GC - 20101027_AA)
JCL - 20110530_01
```

- Port number for the Topaz for Java Performance Agent to communicate with the server. The default is 48128.
- The Topaz for Java Performance Manager installer requires 40000 1K blocks of preallocated temporary space during the installation. When the installation is complete, the temporary installation files are removed.

Installing the Topaz for Java Performance Manager

1. Select **Install Topaz for Java Performance for z/OS UNIX (Recommended)** from the product media image or RFN image (<network or hard drive>:\Disk1\setup.exe).

2. Click **Start Install**.

The Mainframe FTP Information tab appears.

3. Specify the following valid information for your site:

- Host
- Host Port
- User ID
- Password
- Existing z/OS UNIX Path to the planned Manager installation location

4. Click **Upload files to the mainframe**. The z/OS UNIX installation includes a file transfer utility that sends the Topaz for Java Performance product files to the mainframe.

5. Log on to the mainframe and navigate to an OMVS command prompt. Change the directory to the location where the Manager `install.jar` and the `install.sh` files were transferred. For example:

```
cd /installation_folder/manager
```

6. Ensure that the `install.sh` file has execute authority. Perform a `chmod 777` to open up permissions if necessary

7. Start the installation script by entering:

```
./install.sh
```

The system displays **RUNNING** in the lower-right corner for a few seconds. When it requests **INPUT**, press **Enter**.

8. At the Java version prompt, enter the path to a supported Java 1.7 or Java 1.8 version you want to use with this Topaz for Java Performance installation. For example,

```
/usr/lpp/java/J7.1_64.b1d111513
```

9. Respond **Y** or **N** whether you want to use another folder instead of the default system temporary folder for the Manager installation files. Press **Enter**.

- If you responded **Y**, enter the new folder name.
- If you responded **N**, the default system temporary file will be used.

The system displays **Launching installer...** and displays **RUNNING** in the lower-right corner for a few seconds.

10. When the system requests **INPUT**, press **Enter**.

The **Introduction** panel appears.

11. Read the **Introduction** panel.

Note: If you want to change something on a previous step, enter **back**. Cancel the installation at any time by entering **quit**.

12. Press **Enter** to continue.

The **CES Install folder** panel appears.

13. On the **CES Install Folder** panel, enter the path to the previously installed and configured CES instance you want to associate with this Topaz for Java Performance installation, or press **Enter** to accept the default path.

The **License agreement** panels appear.

14. Press **Enter** until you have read and scrolled through the agreement.
15. Enter **Y** to accept the terms of the license agreement.

The **Topaz for Java Performance** panel appears.

16. On the **Topaz for Java Performance** panel, enter the port on which Topaz for Java Performance will listen for communication between the Agent and server, or press **Enter** to accept the default port (48128).

The **Ready to Install** panel appears.

17. Review the displayed entries for the **CES Install folder**, **Topaz for Java Performance Service port**, and the **Topaz for Java Performance URL**.
18. Enter **back** to return to the previous panels to change any entries.
19. Review the display of any changes, and press **Enter** to begin the installation.

The system displays **Installing...** and displays **RUNNING** in the lower-right corner for a few seconds.

20. When the system requests **INPUT**, press **Enter**.

The **Installation Complete** panel appears.

21. Note the following for this Topaz for Java Performance Manager installation:

- Name and location of the **CES Install folder**.
- **Topaz for Java Performance Service port**
- **Topaz for Java Performance URL** to access this web application in CES, Bookmark this URL in your web browser.

22. Press **Enter** to exit the Topaz for Java Performance Manager installer.

Post-Installation

After you successfully complete the Topaz for Java Performance Manager installation procedure, do the following:

1. Restart the associated Compuware Enterprise Services (CES) before attempting to use Topaz for Java Performance. Refer to the *Compuware Enterprise Services Installation and Configuration Guide* for more information.
2. In order to initiate any performance measurements, install at least one Topaz for Java Performance Agent. See Chapter 3, "Installing the Topaz for Java Performance Agent on z/OS UNIX" for more information.

Chapter 3.

Installing the Topaz for Java Performance Agent on z/OS UNIX

This chapter describes the installation procedure for installing the Topaz for Java Performance Agent on z/OS UNIX. Unlike the Manager which may be installed on z/OS UNIX, Linux, or Windows, the Topaz for Java Performance Agent may be installed only on z/OS UNIX. Depending on your site standards, you may need the assistance of the following individuals:

- z/OS UNIX system administrator should install Topaz for Java Performance.
- Security administrator to grant access to end users.

Before Beginning

Before you begin the Topaz for Java Performance Manager installation, you should ensure the following:

- A compatible Compuware Enterprise Services (CES) 16.3 installation for z/OS UNIX has been configured
- Location of the CES instance (installation folder).
- An installed supported database that has been configured for this CES instance.
- An installed Java version 1.7.0. or 1.8.0

To verify the version of Java:

Under z/OS UNIX, go to the bin directory for Java and issue the “java -version” command:

```
cd /path/to/java/bin
java -version
```

Sample Output:

```
java version "1.7.0"
Java(TM) SE Runtime Environment (build pmz3160sr9fp2-20110625_01(SR9
FP2))
IBM J9 VM (build 2.4, JRE 1.7.0 IBM J9 2.4 z/OS s390-31 jvmmz3160sr9-
20110624_85526 (JIT enabled, AOT enabled)
J9VM -20110624_085526
JIT -r9_20101028_17488ifx17
GC - 20101027_AA)
JCL - 20110530_01
```

- A host name used as part of the Topaz for Java Performance and CES URLs. For example,

```
yoursitehostname.yoursitedomain.com:port/topazjava
```

- A port number for the Topaz for Java Performance Agent to communicate with the server. The default is 48128.

- The Topaz for Java Performance Agent installer requires 20000 1K blocks of preallocated temporary space during the installation. When the installation is complete, the temporary installation files are removed.

Installing the Topaz for Java Performance Agent

1. Select **Install Topaz for Java Performance for z/OS UNIX (Recommended)** from the product media image or RFN image (<network or hard drive>:\Disk1\setup.exe).
2. Click **Start Install**.
The Mainframe FTP Information tab appears.
3. Specify the following valid information for your site:
 - Host
 - Host Port
 - User ID
 - Password
 - Existing z/OS UNIX Path to the planned Agent installation location
4. Click **Upload files to the mainframe**.
The z/OS UNIX installation includes a file transfer utility that sends the Topaz for Java Performance product files to the mainframe.
5. Log on to the mainframe and navigate to an OMVS command prompt. Change the directory to the location where the Agent `install.jar` and the `install.sh` files were transferred. For example:


```
cd /installation_folder/agent
```
6. Ensure that the `install.sh` file has execute authority. Perform a `chmod 777` to open up permissions if necessary
7. Start the installation script by entering:


```
./install.sh
```

The system displays **RUNNING** in the lower-right corner for a few seconds. When it requests **INPUT**, press **Enter**.
8. At the Java version prompt, enter the path to a supported Java 1.7 or Java 1.8 version you want to use with this Topaz for Java Performance installation. For example,


```
/usr/lpp/java/J7.1_64.bld111513
```
9. Respond **Y** or **N** whether you want to use another folder instead of the default system temporary folder for the Agent installation files. Press **Enter**.
 - If you responded **Y**, enter the new folder name.
 - If you responded **N**, the default system temporary file will be used.

The system displays **Launching installer...** and displays **RUNNING** in the lower-right corner for a few seconds.
10. When the system requests **INPUT**, press **Enter**.
The **Introduction** panel appears.
11. Read the **Introduction**.

Note: If you want to change something on a previous step, enter **back**. Cancel the installation at any time by entering **quit**.
12. Press **Enter** to continue.

The **License agreement** panels appear.

13. Press **Enter** until you have read and scrolled through the agreement.
14. Enter **Y** to accept the terms of the license agreement.

The **Choose Install Folder** panel appears.

15. On the **Choose Install Folder** panel, enter an absolute path to specify the location of this Topaz for Java Performance Agent installation, or press **Enter** to accept the default path.
16. On the **Topaz for Java Performance Agent** panel:
 - Enter the **Topaz for Java Performance Manager host** or press **Enter** to accept the default.
 - Enter the **Topaz for Java Performance Service port** or press **Enter** to accept the default.

The **Ready to Install** panel appears.

17. Review the displayed entries for the **Install location**, **Topaz for Java Performance Manager host**, and the **Topaz for Java Performance Service port**.
18. Enter **back** to return to the previous panels to change any entries.
19. Review the display of any changes, and press **Enter** to begin the installation.

The system displays **Installing...** and displays **RUNNING** in the lower-right corner for a few seconds.

20. When the system requests **INPUT**, press **Enter**.

The **Installation Complete** panel appears.

21. Note the following for this Topaz for Java Performance Agent installation:
 - **Agent Install location path**
 - **Topaz for Java Performance Manager host**
 - **Topaz for Java Performance Service port**
22. Press **Enter** to exit the Topaz for Java Performance Agent installer.

Post-Installation

After you successfully complete the Topaz for Java Performance Agent installation procedure, do the following:

1. The Agent is the licensed Topaz for Java Performance component. Configure a Host Connection in CES for Compuware License Management System (LMS) license(s) for Topaz for Java Performance Agents.
2. Define a Host Communications Interface (HCI) with licenses available on the LPAR where you plan to use Topaz for Java Performance Agents.
3. Refer to the `readme.txt` file in the Agent installation folder root directory for an example of the Java agent parameter to add to the command line used to launch your Java application that you intend to measure. For example:

```
java -javaagent: <install-dir>/TopazJavaAgent.jar
```

where: <install-dir> is the directory where the Topaz for Java Performance Agent was installed.

4. For WebSphere usage, update the Generic JVM arguments to include the `-javaagent` parameter. Also, review the server policy file to ensure that the Topaz for Java Performance has the required security permissions to access required MXBeans and data.

5. In order to initiate any performance measurements, install at least one agent per LPAR.

Appendix A.

Installing the Topaz for Java Performance Manager on Windows

This chapter describes the installation procedure for installing the Topaz for Java Performance Manager on Windows. A Windows Server Administrator should install Topaz for Java Performance for departmental or corporate use. End-users with administration authority on their workstations can do a standalone workstation installation for their own use.

Before Beginning

Before beginning the installation, you should have the following:

- A compatible Compuware Enterprise Services (CES) 16.3 installation for Windows has been configured
- The CES instance name associated with this installation if more than one CES has been installed on this machine.
- An installed supported database that has been configured for this CES instance
- The ID and password for the Topaz for Java Performance Manager service (if required)
- A port number for the Topaz for Java Performance Manager to listen on. The default is 48128.

The installation does the following:

- Installs the Topaz for Java Performance Manager as a service.
- Deploys the Topaz for Java Performance web application.

Installing the Topaz for Java Performance Manager

1. Select **Install Topaz for Java Performance for Windows** on the Topaz for Java Performance Setup panel from the product media image or RFN image (<network or hard drive>:\Disk1\setup.exe).
2. Click **Start Install ...**

The InstallAnywhere application begins the installation process and the **Introduction** dialog box appears.

3. Read the Introduction.
4. Click **Next**.

One of the following occurs:

- If more than one Compuware Enterprise Services (CES) instance exists on the machine, the **Select Instance** dialog box appears. From the drop-down list, select which CES instance to associate with this installation. Click **Next** to display the **License Agreement** dialog box.
- Otherwise, Topaz for Java Performance identifies the one CES instance, and the **License Agreement** dialog box appears.

5. Read and accept the agreements.
6. Click **Next**.

The **Topaz for Java Performance** dialog box appears.

7. Enter a **Topaz for Java Performance Service** port for communication between the Topaz for Java Performance agent and the server, or press **Enter** to accept the default port (48128).
8. Click **Next**.

The **Pre-Installation Summary** appears.

9. Review the installation information for the following:
 - **Install Folder**
 - **CES Service Associated With This Installation**
 - **Topaz for Java Performance Service Port**
 - **Topaz for Java Performance URL**
10. If the values are not correct, click **Previous** to return to the associated dialog to make your changes. Click **Next** to display the corrected **Pre-Installation Summary**.
11. If the installation information is correct, click **Install**.

The **Installing Topaz for Java Performance feature ...** progress indicator appears.

When the installation process has completed, the **Install Complete** dialog box appears.

12. Review the installation information and required steps on the **Install Complete** dialog box:
 - Confirm that the installation information is the same as that you verified for the Pre-Installation Summary in step 9 and/or step 10.
 - Note the CES host connection URL and the Topaz for Java Performance URL. Bookmark these URLs in your web browser.
 - Note the required steps listed below if they have not already been completed for this Topaz for Java Performance installation at your site. You will not be able to use Topaz for Java Performance to take any performance measurements if they are not completed:
 1. Configure a Host Connection in CES for Compuware License Management System (LMS) license(s) for Topaz for Java Performance Agents.
 2. Define a Host Communications Interface (HCI) with licenses available on the LPAR where you plan to use Topaz for Java Performance Agents.
13. From the **Install Complete** dialog box, click **Done** to exit the installer.

Post-Installation

After you successfully complete the Topaz for Java Performance Manager installation procedure, do the following:

1. Restart the associated Compuware Enterprise Services before attempting to use Topaz for Java Performance. Refer to the *Compuware Enterprise Services Installation and Configuration Guide* for more information.
2. In order to initiate any measurements, install at least one Topaz for Java Performance Agent. See Chapter 3, “Installing the Topaz for Java Performance Agent on z/OS UNIX” for more information.

Appendix B.

Installing the Topaz for Java Performance Manager on Linux

This chapter describes the installation procedure for installing the Topaz for Java Performance Manager in a Linux environment. Depending on your site standards, you may need the assistance of the following individuals:

- Linux system administrator should install Topaz for Java Performance.
- Security administrator.

Before Beginning

Before you begin the Topaz for Java Performance Manager installation, you should have the following:

- A compatible Compuware Enterprise Services (CES) 16.3 installation for Linux has been configured
- Location of the CES instance (installation folder).
- An installed supported database that has been configured for this CES instance.
- An installed supported Java version 1.7.0. or 1.8.0
- Port number for the Topaz for Java Performance Agent to communicate with the server. The default is 48128.

Installing the Topaz for Java Performance Manager

1. Select **Install Topaz for Java Performance for Linux** from the product media image or RFN image (<network or hard drive>:\Disk1\setup.exe).

2. Click **Start Install**.

The Linux directory appears in your browser.

3. Transfer the contents of the following folder and subdirectories from the product media image or RFN image to your system:

```
<network or hard drive>:\cpwr\Linux
```

4. Log on to your system, navigate to where you have transferred the files, and locate the directory where `install.bin` is stored (Disk1\InstData\NoVM).
5. Ensure that the `install.bin` file has execute authority. Perform a `chmod 777` to open up permissions if necessary.
6. 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 -i console
```

The **Introduction** panel appears.

7. Read the **Introduction** panel.

Note: If you want to change something on a previous step, enter **back**. Cancel the installation at any time by entering **quit**.

8. Press **Enter** to continue.

The **CES Install folder** panel appears.

9. On the **CES Install Folder** panel, enter the path to the previously installed and configured CES instance you want to associate with this Topaz for Java Performance installation, or press **Enter** to accept the default path.

The **License agreement** panels appear.

10. Press **Enter** until you have read and scrolled through the agreement.
11. Enter **Y** to accept the terms of the license agreement.

The **Topaz for Java Performance** panel appears.

12. On the **Topaz for Java Performance** panel, enter the port on which Topaz for Java Performance will listen for communication, or press **Enter** to accept the default port (48128).

The **Ready to Install** panel appears.

13. Review the displayed entries for the **CES Install folder**, **Topaz for Java Performance Service port**, and the **Topaz for Java Performance URL**.
14. Enter **back** to return to the previous steps to change any entries.
15. Review the display of any changes, and press **Enter** to begin the installation.

The **Installation Complete** panel appears.

16. Note the following for this Topaz for Java Performance Manager installation:
 - Name and location of the **CES Install folder**.
 - **Topaz for Java Performance Service port**
 - **Topaz for Java Performance URL** to access this web application in CES, Bookmark this URL in your web browser.
17. Press **Enter** to exit the Topaz for Java Performance Manager installer.

Post-Installation

After you successfully complete the Topaz for Java Performance Manager installation procedure, do the following:

1. Restart the associated Compuware Enterprise Services daemon before attempting to use Topaz for Java Performance. Refer to the *Compuware Enterprise Services Installation and Configuration Guide* for more information.
2. In order to initiate any performance measurements, install at least one Topaz for Java Performance Agent. See Chapter 3, “Installing the Topaz for Java Performance Agent on z/OS UNIX” for more information.

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