Topaz Workbench User Guide

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Introduction to Topaz Workbench

Eclipse Development Environment

Topaz Workbench is a modernized Eclipse-based development environment and an alternative to TSO/ISPF, enabling developers from a variety of technical backgrounds to be productive in a mainframe environment more quickly. It provides a common framework and integrated user interface from which to initiate Compuware's mainframe products as well as non-Compuware and distributed products. Most IT organizations already use Eclipse for application development on non-mainframe technologies. Eclipse is ubiquitous in the industry as colleges and trade schools use it for its sophistication and no-cost availability.

Topaz Workbench can be run as a standalone Eclipse application or as a set of plug-ins that can be added directly to existing Eclipse developments or other Eclipse-based software such as IBM's RDz.

Topaz Innovation

Topaz is Compuware's newest and highly innovative solution that empowers IT organizations to preserve and advance their mainframe investments. Topaz's elegant simplicity in design and usability helps a new mainframe development workforce quickly understand, update, maintain, and troubleshoot even the oldest, most complex, and/or most poorly documented systems.

Topaz for Program Analysis

Program Analysis intelligently analyzes mainframe programs and presents the results of that analysis in a visually intuitive manner using program structure and logic flow charts. Program Analysis reduces learning curves for programmers unfamiliar with the mainframe or unfamiliar with the structure of a program.

Program Analysis also includes Runtime Visualizer, a feature that provides unprecedented graphical visibility into complex interactions between mainframe programs. This visibility makes it easy for veteran and novice developers alike to quickly understand, update, and troubleshoot even the oldest and most complex mainframe code.

Topaz for Enterprise Data

Enterprise Data enables mainframe developers and mainframe data architects to discover, visualize, and work with both mainframe and non-mainframe data in a common, intuitive manner. Using Topaz, next-gen mainframe developers as well as seasoned IT pros can manipulate Enterprise Data and applications with greater agility, speed, and confidence to better meet the demands of mobile and analytics.

Edit Data with a Single Enterprise Editor - Source-specific tools to browse and edit data are no longer needed for mainframe development. Topaz Workbench's Enterprise Data Editor features a single intuitive user interface to manage Oracle, SQL Server, IMS, DB2, and other data types across the enterprise.

Visualize Data Relationships - Many times developers struggle to understand the complex relationships among their enterprise data. Now users can visually manage vast quantities of data objects using Topaz's Data Visualizer, a graphical representation of data relationships across the enterprise. This feature is especially useful when extracting data for testing purposes.

With Data Visualizer, you can create, view, manipulate, export, and print graphical representations of data objects and the relationships between them.

Base Functionality within Topaz Workbench

Topaz Workbench brings the power of Compuware's world-class products to IT staff of all experience levels. Technicians can flow seamlessly from task to task while developing and maintaining a complex mix of cross-platform applications. Behind the user interface are the same Compuware mainframe products that have provided solid, reliable value for decades—Abend-AID, File-AID, Hiperstation, Xpediter, and Strobe. The intuitive and easy-to-use interfaces provide the essentials of software development, testing, and maintenance:

- Fault diagnosis
- Data browse and edit: Sequential, indexed, VSAM, DB2, IMS, and z/OS UNIX
- Advanced data and source search
- Interactive debugging: Mainframe-hosted COBOL, PL/I, C language, and HLASM
- Application performance tuning and analysis
- Audit reporting

Additionally, Topaz Workbench reaches beyond the traditional Compuware mainframe development functionality listed above and provides a framework that delivers additional ISPF-like functionality, including:

- Source code edit
- Invocation of mainframe compiler
- JES functions: Job submission, review, print, purge
- Dataset management (such as allocation, compression, deletion)

This means that much of what happens in a "day in the life of a mainframe programmer" can be done within Topaz Workbench.

Compuware provides a comprehensive API that allows custom capabilities to be directly integrated into the development environment. Developers can focus on the task at hand rather than on which tool or command they need to use to get the job done.

This Topaz Workbench contains a base set of features that are enabled automatically for existing users of the Compuware mainframe tools.

Window to the Mainframe with HOST EXPLORER

Easily conduct core tasks, such as:

- Navigate mainframe datasets, network and local file structures; create, rename and delete files.
- Create, edit, browse, save, rename, delete, move, copy, and compress datasets and PDS members and copy data across LPARs.
- Submit JCL and view held output.
- Catalog and uncatalog datasets; recall or delete migrated datasets; manipulate Compuware DDIO files.

Refer to the *Topaz Workbench Host Explorer User Guide* for more information on configuring and using the Host Explorer feature.

Debugging with XPEDITER

Debugging capabilities for batch, CICS, IMS MPP, and DB2 Stored Procedures. Functionality includes:

- The power of Xpediter debugging within the Eclipse debugging framework
- Cross LPAR Shared IMS Queue Support and cross-LPAR debugging
- Enhanced navigation and the ability to retain breakpoints across debugging sessions

Integration with Atlassian JIRA enables users to log faults and performance problems found via Abend-AID and Strobe with the information to automatically create an Xpediter debug configuration.

Refer to the *Topaz Workbench Xpediter/Eclipse User Guide* for more information.

Measure Testing Efficiency with CODE COVERAGE

Measure testing efficiency and risk metrics for mainframe programs:

- Display results and drill down to annotated listing.
- Quickly access testing efforts, percentage code tests, and relative risk of changed code.

Refer to the *Topaz Workbench Code Coverage/Eclipse User Guide* for more information.

Powerful Data Access with FILE-AID

Extensive browse, edit, and search capabilities of data:

- Manipulate Sequential, DB2, VSAM, IMS, compressed data, and z/OS UNIX.
- Common "data is data" spreadsheet look and feel for all data types; single-table edit and browse; highlighted find/replace.
- Enhanced navigation, bookmarking, and data status indicators
- Powerful data filtering (Selection Criteria) capabilities, with provisions to save and reuse requests
- XREF support

Refer to the *Topaz Workbench File-AID/Eclipse User Guide* for more information.

Intelligent Source Code Editor

This powerful, multi-language, multi-platform, source code editor streamlines the creation and maintenance of application programs. Language-specific aids are available for mainframe COBOL, PL/I, HLASM, and C Language. Additionally, this editor can emulate several other industry-standard editors, including ISPF.

Refer to the *SlickEdit Core for Eclipse* help for more details.

Integration with SonarLint with Topaz Workbench enables developers to rapidly delivery quality COBOL by providing them with automated on-the-fly quality and standards checking with the toolset that is already a standard for technical debt management across a wide range of technologies. SonarLint is produced by SonarSource, the same company that drives the industry leading SonarQube quality platform that helps large enterprises optimize their agility across both mainframe and non-mainframe platforms.

Hiperstation Application Auditing

Graphical interface to the Hiperstation application auditing log analysis and review facilities.

Refer to the *Topaz Workbench Hiperstation/Eclipse User Guide* for more information.

Abend-AID, iStrobe, and Fault Analytics Plug-Ins

This collection of plug-ins allows licensed users to launch Abend-AID, iStrobe, and Fault Analytics.

For more info on configuring and using the Mainframe Tool Access Plug-ins, from the **Help** menu, select the following:

- *Topaz Workbench Abend-AID User Guide*
- *Topaz Workbench iStrobe User Guide*
- *Topaz Workbench Fault Analytics User Guide*

Compuware Host Services SDK

The Host Services SDK includes the Host Services API along with developer resources such as examples, an examples template, code snippets, and Javadoc. The Host Services API provides users with methods to programmatically access and perform dataset and JES operations, as well as launch and communicate with z/OS programs.

Refer to the *Compuware Host Services SDK* help for more details.

File-AID Data Privacy

The File-AID Data Privacy plug-in facilitates the definition of test data disguise projects. The plug-in requires Topaz Workbench and provides a GUI interface to create "disguise rules" and a central "rules repository" to contain them.

The "dynamic privacy rules" can be applied from File-AID products to disguise personal identification information when creating test data for mainframe or distributed databases.

The File-AID Data Privacy plug-in is installed with the Topaz Workbench to facilitate the definition of data privacy projects. The plug-in requires Topaz Workbench and provides a GUI interface to create disguise rules and a central rules repository to contain them. The dynamic privacy rules can be applied from File-AID products to disguise personal identification information for mainframe or distributed data.

Refer to the *Topaz Workbench File-AID Data Privacy User Guide* for more information

Compuware Menu

A top-level menu, **Compuware**, is provided to enable easy access to the various plug-ins (features). Selecting an item from this menu is equivalent to opening the perspective corresponding to the listed item.

Companion Product Compatibility

To work with mainframe data, Topaz Workbench requires connection to a z/OS host that contains at least one licensed Compuware mainframe product. If the selected host does not have a valid Compuware mainframe license, an error message appears.

Further, when a user first logs in to a mainframe host, a check is performed to validate the presence and versions of several Compuware products (such as CSS and File-AID) that are configured for the host connection. Status messages are written to the **Console** view. Refer to the *Topaz Workbench Host Explorer User Guide* for information on the **Console** view.

For information about Topaz Workbench companion product requirements, go to the Compuware Support Center at https://go.compuware.com.

Integration with Compuware Enterprise Services

Configuring Host Connections

Before you can use the Host Explorer to interact with the mainframe, you will need to have a Host Connection configured.

Topaz Workbench's central administration functionality allows users to easily synchronize host connection settings with Compuware Enterprise Services (CES). Topaz Workbench monitors these settings, which are stored in CES, and notifies the user when changes have occurred so the user can synchronize to the CES settings.

Alternatively, some sites may stage the host connections preferences so that you can import them and start working with hosts quickly after installing Topaz Workbench.

To configure host connections

If host connections preferences are not provided, in the Host Explorer view, right-click **Hosts** and select **Configure**. The **Host Connections** configuration preference dialog box appears. Details on host configuration for Host Explorer are provided in the *Topaz Workbench Host Explorer User Guide*.

Central Administration of Connection and Configuration Settings

Topaz Workbench's central administration functionality allows users to easily synchronize host connection settings; Abend-AID, Fault Analytics, iStrobe, and other configuration settings; and p2 repo update sites with Compuware Enterprise Services (CES). This allows Topaz Workbench to monitor these settings, which are stored in CES, and notify the user when changes have occurred so the user can synchronize to the CES settings.

To enable synchronization notifications

1. Start Topaz Workbench. The **Compuware Enterprise Services Synchronization** dialog box appears asking whether to synchronize host connection settings and other configuration settings with CES now. This message does not appear if a CES URL was not entered during Topaz Workbench installation or on the **Enterprise Services** preferences page after installation, or if the user previously clicked **Never** on the **Compuware Enterprise Services Synchronization** dialog box.

    > **Note:** If the Compuware Enterprise Services (CES) server has been set up to require credentials for authentication, the **Compuware Enterprise Services Login dialog box** appears when Topaz Workbench is first started. However, this dialog box will not appear if the user previously opted to save credentials or is already logged in for the current Topaz Workbench session. After logging in, the **Compuware Enterprise Services Synchronization** dialog box appears as described above.

2. Click **Now** to synchronize the host connection settings and other configuration settings now and to display a notification the next time Topaz Workbench is launched and there are updated settings to be synchronized. The **Synchronize Remote HCI Connections** dialog box appears.

    > **Note:** Click **Remind Me Later** to not synchronize now but to display a notification the next time Topaz Workbench is launched and there are updated settings to be synchronized.

    > **Note:** Click **Never** to not be notified of connection or configuration changes when Topaz Workbench is launched. To later change this choice, from the **Window** menu, select **Compuware> Enterprise Services**, then select or clear the **Disable synchronization notification messages** check box as needed.

3. Select the remote HCI connections to be synchronized with CES. The following icons indicate the connection changes that have occurred since the last synchronization:

    - ✚ indicates a connection that has been added in CES and will be available after synchronization.

- ■ indicates a connection that has been deleted from CES and will no longer be available after synchronization.
- ■ indicates a connection that has been changed in CES and will be updated after synchronization.

> **Note:** There are no selections for the user to make regarding configuration settings, only for host connection settings. All changes to configuration settings are included when synchronization happens.

> **Note:** Selecting a group check box indicates a desire to keep in sync with any new connections that are later added to the selected connection group.

4. Click **Finish**. All configuration settings—such as for Abend-AID, Fault Analytics, iStrobe—as well as any selected host connection settings are synchronized. The results of the host connection synchronization, such as the number of connections added, appears in the **Synchronization Complete** message box. The host connections appear on the **Host Connections** preference page and in the Host Explorer tree. Whenever Topaz Workbench is launched and updated host connections or configuration settings are available, a notification box appears and contains a link to the **Synchronize Remote HCI Connections** dialog box.

To manually synchronize host connection settings and configuration settings

1. From the **Window** menu, select **Preferences**. The **Preferences** dialog box appears.

2. Select **Compuware > Enterprise Services**.

3. Click **Sync**. The **Synchronize Remote HCI Connections** dialog box appears.

> **Note:** If the Compuware Enterprise Services (CES) server has been set up to require user ID and password for authentication, the **Compuware Enterprise Services Login dialog box** appears when **Sync** is clicked. However, this dialog box will not appear if the user previously opted to save credentials or is already logged in for the current Topaz Workbench session. After logging in, the **Compuware Enterprise Services Synchronization** dialog box appears as described above. After logging in, the **Synchronize Remote HCI Connections** dialog box appears as described above.

4. Complete the dialog box as described above.

Topaz Workbench License

Topaz Workbench users can check out a license to enable Topaz Workbench functionality. By default, the checkout period lasts 10 hours but can be changed. Refer to the Compuware Enterprise Services Administration online help for information on changing the checkout period.

The Topaz Workbench license is validated whenever Topaz Workbench is launched, and manually when desired. Refer to the *Topaz Workbench Installation Guide* for information on the initial license setup.

To address a license failure message when Topaz Workbench is launched

1. On the **Topaz Workbench License** dialog box that appears, click **Preferences**. The **Enterprise Services** page of the **Preferences** dialog box appears.

2. In the **URL** field, enter the URL for Compuware Enterprise Services, then click **Test Connection**. If a message appears indicating that the connection is not successful, click **OK**, enter a valid URL, then click **Test Connection** again.

3. Click **OK**. The **Topaz Workbench License** dialog box appears again.

4. Click **Checkout**.

To set the URL for Compuware Enterprise Services

1. From the **Help** menu, select **Topaz Workbench Licensing**.

   Note: If the Compuware Enterprise Services (CES) server has been set up to require credentials for authentication, depending on the type of credentials required, a prompt to enter credentials may appear. However, no prompt appears if the user previously opted to save credentials or is already logged in for the current Topaz Workbench session.

2. Click **Preferences**. The **Enterprise Services** page of the **Preferences** dialog box appears.

3. In the **URL** field, enter the URL for Compuware Enterprise Services, then click **Validate Connection**. If a message appears indicating that the connection is not successful, click **OK**, enter a valid URL, then click **Validate Connection** again.

4. Click **OK**.

To check the status of the license

From the **Help** menu, select **Topaz Workbench Licensing**. The **Topaz Workbench License** dialog box appears, showing whether the product is licensed as well as when the license was checked out and when it expires.

   Note: If the Compuware Enterprise Services (CES) server has been set up to require credentials for authentication, depending on the type of credentials required, a prompt to enter credentials may appear. However, no prompt appears if the user previously opted to save credentials or is already logged in for the current Topaz Workbench session.

To renew the license checkout

1. From the **Help** menu, select **Topaz Workbench Licensing**. The **Topaz Workbench License** dialog box appears.

   Note: If the Compuware Enterprise Services (CES) server has been set up to require credentials for authentication, depending on the type of credentials required, a prompt to enter credentials may appear. However, no prompt appears if the user previously opted to save credentials or is already logged in for the current Topaz Workbench session.

2. Click **Renew**. The current license is released and an attempt is made to check out another license. If a failure message appears, resolve the reason for the checkout failure.

To resolve checkout failures

Checkout failures are caused by the following:

- An inaccurate URL
- An expired license
- The web application no longer running
- The server being down
- All available licenses are in use

Resolve the cause of the failure and click **Try Again**.

To enable cloud licensing

A cloud license can be used to access licensed features in Topaz Workbench in situations in which a CES server is not available to provide these features. If interested in leveraging Compuware's cloud licensing service for Topaz Workbench's licensed features, contact your Compuware sales representative or contact Customer Solutions via the Compuware Support Center.

1. To enable cloud licensing once Compuware indicates that it is available, from the **Window** menu, select **Preferences**. The **Preferences** dialog box appears.

2. Toggle open the **Compuware** node and select **Enterprise Services**.

3. Select the **Use Compuware cloud license service for Topaz Workbench licensing** check box.

4. Click **OK**.

Note: Compuware recommends, for long-term use in large deployments, that a CES server be installed for easier administration of Topaz Workbench. When a CES server is available for licensing, the **Use Compuware cloud license service for Topaz Workbench licensing** check box must be cleared so Topaz Workbench leverages the CES server rather than the cloud service for licensing.

Note: An internet connection is required to connect to the cloud licensing service and the connection uses HTTPS to encrypt the data transmitted. If a network proxy is required for internet access, from the **Preferences** menu, select **General>Network Connections**. On the **Network Connections** preference page, select the appropriate HTTPS proxy entry and click **Edit**. Complete the **Edit Proxy Entry** dialog box by entering the host and port for your proxy server so Topaz Workbench can connect to the cloud licensing service.

Authenticating to Compuware Enterprise Services

If the Compuware Enterprise Services (CES) server has been set up to require credentials for authentication, the **Compuware Enterprise Services Login** dialog box appears so that users can provide the required credentials to connect to CES. For example, this might be required when requesting license checkout or synchronizing host connection settings.

To authenticate to CES

1. From the **Window** menu, select **Preferences>Compuware>Enterprise Services**. The **Enterprise Services** page of the **Preferences** dialog box appears.

2. After entering a valid URL, if a message regarding authentication appears below the **URL** field, click **Credentials**. The type of security that is set up on CES appears below the **URL** field and the **Compuware Enterprise Services Login** dialog box appears.

3. If required, enter the credentials for logging into CES, then click **OK**.

Import and Export Compuware Configuration Settings

The import and export wizards enable users to save and retrieve various resource settings and configurations to and from the file system. Alternatively, Topaz Workbench's central administration functionality allows users to easily synchronize host connection settings with Compuware Enterprise Services (CES). Topaz Workbench monitors these settings, which are stored in CES, and notifies the user when changes have occurred so the user can synchronize to the CES settings.

Note: To import and export Compuware Mainframe Projects, use the Compuware Mainframe Project Import/Export Wizard.

To export resource configurations and settings

1. From the Host Explorer's **File** menu, select **Export**. The **Export** dialog box appears.

2. Select **Compuware>Compuware Configuration Settings** and click **Next**. The **Export Compuware Configuration Settings** dialog box appears.

3. Do one of the following:

    - To export all settings, click **Export all**.

    - To select specific settings to export, click **Choose specific configuration settings to export**. Then select from the **Configuration Settings** box the specific settings to export.

    Note: Selecting a setting in the tree displays a description of the item in the **Description** box.

4. In the **To directory** field or by clicking **Browse**, specify the directory to which to export the configuration settings.

5. Select or clear the **Overwrite existing files without warning** check box, depending on whether an existing file with the same name should be overwritten by the new file.

6. Click **Finish**. The configurations settings are exported to the specified directory for later retrieval.

To import resource configurations and settings

1. From the Host Explorer's **File** menu, select **Import**. The **Import** dialog box appears.

2. Select **Compuware>Compuware Configuration Settings** and click **Next**. The **Import Compuware Configuration Settings** dialog box appears.

3. In the **From directory** field or by clicking **Browse**, specify the directory containing the exported configuration folder and/or files you want to import.

4. Do one of the following:

    - To import all settings, click **Import all**.

    - To select specific settings to import, click **Choose specific configuration settings to import**. Then select from the **Configuration Settings** box the specific settings to import.

    Note: Selecting a setting in the tree displays a description of the item in the **Description** box.

5. Click **Finish**. The configurations settings are imported into Topaz Workbench.

Compuware Preferences

All Topaz Workbench plug-in preferences are listed in the **Preferences** dialog box under the **Compuware** node.
Refer to the plug-in documentation for information on setting preferences for plug-ins.

Fix Requests

Fix Requests

Licensed iStrobe and Abend-AID users can access fix requests in Topaz in a variety of ways:

- Users can import a launch configuration from a JIRA fix request. Refer to the *Compuware Enterprise Services* online help for information on creating the JIRA issue.
- Users can import a fix request file that was exported from iStrobe or from Abend-AID. From this imported fix request file, a Mylyn task and/or Xpediter launch configuration can be created. Refer to the *iStrobe* online help for information on exporting a fix request from iStrobe. Refer to the *Abend-AID Web Browser Interface* help for information on exporting a fix request from Abend-AID.

Importing a Fix Request File from iStrobe or Abend-AID

Users can import a performance problem fix request file that was exported from iStrobe or an abend fix request file that was exported from Abend-AID. From this imported fix request file, a Mylyn task and/or Xpediter launch configuration can be created. Mylyn is a task management application that is shipped with Topaz Workbench. Refer to the *iStrobe* online help for information on exporting a fix request from iStrobe. Refer to the *Abend-AID Web Browser Interface* help for information on exporting a fix request from Abend-AID.

To import a fix request

1. From the **File** menu, select **Import**. The **Import** dialog box appears.

2. Toggle open the **Compuware** node and select **Fix Request**.

3. Click **Next**. The **Import a Fix Request** wizard appears.

4. In the **File name** field, type the path and filename of the file to be imported. Alternatively, click **Browse** and navigate to and select the file. The **Summary** and **Description** fields populate with information from the selected file.

    Note: By default, fix request files have a .fxr extension, however it can be changed to any file extension.

5. Click **Next**. The **Create Fix Request Artifacts** page appears. By default, the **Name** field contains the summary and event date and time from the imported file, however it can be renamed.

6. From the **Artifacts** box, select the check boxes for the types of artifacts (a Mylyn task and/or an Xpediter launch configuration) to be created:

    - Select **Mylyn task** to create a Mylyn task that describes the fix request.
    - Select **Xpediter launch configuration** to create an Xpediter launch configuration.

    Note: If a fix request file does not contain all of the information that an artifact creator needs, the check box for that artifact creator will be grayed out. For example, if the LPAR value is missing from the file to be imported, the Xpediter launch configuration check box will be grayed out.

7. Optionally, select the **Overwrite existing artifacts that don't allow duplicate names** to overwrite an existing file with the same name if encountered.

8. Click **Finish**.

    Note: If an error is encountered, the **Artifact Creation Results** page appears. Click **Close**.

9. Do one of the following:

   ▪ If **Mylyn task** was selected above, the **Task** view and **Task List** view appear and give details about the fix request. Refer to the Eclipse documentation for information on Mylyn and these views.
   ▪ If an Xpediter launch configuration artifact was created, refer to the *Topaz Workbench Xpediter/Eclipse User Guide* to complete the configuration.

Importing a Launch Configuration for a Fix Request

Users can use Compuware Enterprise Services to create a JIRA issue and an attached launch configuration file containing the relevant fix request information. This file can then be imported into Topaz Workbench so the program requiring a fix can be debugged. Refer to the *Compuware Enterprise Services* online help for information on creating the JIRA issue and the associated launch configuration.

To import the launch configuration into Topaz Workbench

1. In the JIRA issue, right-click the launch configuration attachment and select **Save target as**. The **Save As** dialog box appears.

2. Save the launch configuration.

3. Launch Topaz Workbench.

4. From the **File** menu, select **Import**. The **Import** dialog box appears.

5. Select **Run/Debug>Launch Configurations** and click **Next**. The **Import Launch Configurations** dialog box appears.

6. In the **From Directory** field, enter the file location where the launch configuration is stored on the local file system, or click **Browse** to navigate to the location. The selected directory and all subdirectories are listed in the left column.

7. Do any of the following:

   ▪ Click a directory or subdirectory name to display all of the launch configuration files (*.launch) within that directory in the right column. Individual files can be selected when displayed in the right column.
   ▪ Select the directory's check box to select all of the configuration files contain in that directory.

8. Click **Finish**.

To open the launch configuration in Topaz Workbench

1. In Xpediter/Eclipse, from the **Run** menu, select **Debug Configurations**. The **Debug Configurations** dialog box appears.

2. Toggle open the folder containing the launch to be opened.

3. Select the debug configuration that was imported.

4. If desired, click **Debug** to debug the launch configuration. Refer to the Compuware *Xpediter/Eclipse User Guide* for more information on launch configurations.

Compuware Diagnostic Tools

Topaz Workbench includes an on-demand diagnostic tool to help Compuware diagnose issues related to the usage of these products. This tool does the following:

- Provides a central point for enabling tracing for plug-ins and companion mainframe products
- Produces a diagnostic report that is packaged in one file for diagnosis by Compuware

During problem resolution, Compuware Customer Support may request that the Compuware Diagnostic Tools be used to capture diagnostic data. The Compuware Diagnostic Tools are reserved for issues opened with Compuware Customer Support.

To generate a diagnostic report if the problem *can* be recreated

1. From the **Help** menu, select **Compuware Diagnostic Tools>Enable Diagnostic Tracing** to enable diagnostic tracing.

2. Repeat the steps that led to the problem needing resolution.

3. From the **Help** menu, select **Compuware Diagnostic Tools>Generate Diagnostic Report**. A diagnostic report file is generated in the location specified in the **Progress Information** dialog box.

4. Send the diagnostic report file to Compuware Customer Support for diagnosis.

To generate a diagnostic report when the problem *cannot* be recreated

1. From the **Help** menu, select **Compuware Diagnostic Tools>Generate Diagnostic Report**. A diagnostic report file is generated in the location specified in the **Progress Information** dialog box.

2. Send the diagnostic report file to Compuware Customer Support for diagnosis.

Product Assistance

Compuware provides assistance for customers with its documentation and Compuware Support Center.

Documentation

The product documentation set includes the following:

- The *Topaz Workbench Installation Guide* provides information on installation.
- The online help provides descriptions of the product operating procedures and reference information.

The release notes and installation guide can be found at https://go.compuware.com.

Online books are provided in PDF format, and require a supported version of Adobe Reader to view them. The free Adobe Reader is available on the Adobe web site at http://www.adobe.com.

If you cannot locate the information you need, or the information is not clear, please let us know by contacting Customer Solutions.

Compuware Support Center

Visit the Compuware Support Center, https://go.compuware.com, to find product documentation, knowledge articles, and other technical resources. You can open a case with the Customer Solutions team, order products, and much more.

Contact Customer Solutions by 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 https://go.compuware.com.

Please gather the following information before calling Compuware's 24-hour telephone support:

- The name, release number, and build number of your product. This information is displayed in the **About** dialog box.
- Installation information including installed options, whether the product uses local or network databases, whether it is installed in the default directories, whether it is a standalone or network installation, and whether it is a client or server installation.
- Environment information, such as the operating system and release on which the product is installed, memory, hardware and network specification, and the names and releases of other applications that were running when the problem occurred.
- The location of the problem within the running application and the user actions taken before the problem occurred.
- The exact application, licensing, or operating system error messages, if any.

Visit Compuware on the web at http://www.compuware.com for additional product information.

Compuware also offers user communities, online forums to collaborate, network, and exchange best practices with other Compuware solution users worldwide. Go to http://groups.compuware.com/ to join.

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