IBM® Workload Simulator Adapters for Rational® TestManager Version 1, Release 1.0.1

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Introduction

This white paper explains how to install and use the IBM® Workload Simulator Adapters for Rational® TestManager, Version 1, Release 1.0.1 (WSim Adapters). The paper is intended primarily for software testers familiar with either IBM Workload Simulator (WSim), Rational TestManager, or both products.

The WSim Adapters extend Rational TestManager for Windows 2000 and Windows XP. There are two sets of WSim Adapters in all, one for running Workload Simulator Test Manager (WSim TM) schedules and one for running custom JCL scripts. The WSim Adapters enable software testers to use Rational TestManager to run WSim TM schedules and custom JCL scripts remotely and in batch mode.

If you are not familiar with Workload Simulator for z/OS® and OS/390® or Rational TestManager, here are brief descriptions of those products:

Workload Simulator for z/OS and OS/390 is a z/OS-based, terminal and network simulation tool. WSim TM is a z/OS-based usability enhancement to Workload Simulator that guides the user through the test process. WSim TM creates projects that contain schedules for simulation runs.

For more about WSim and WSim TM, see the <u>Workload Simulator for z/OS and OS/390 web</u> site.

Rational TestManager is a Windows® console for test activity management, execution, and reporting. This tool is an open and extensible framework that unites all of the tools, assets, and data related to the testing effort. It is available stand-alone or as part of the following Rational products:

- IBM Rational Functional Tester for Java and Web
- IBM Rational Robot
- IBM Rational Performance Tester
- IBM Rational Team Unifying Platform

For more information about Rational TestManager, see the Rational TestManager web site.

The remainder of this paper explains how to install, register, and use the WSim Adapters with Rational TestManager.

Preinstall information

Before you can use the WSim Adapters, your Workload Simulator administrator must have already installed and run the PTF that fixes APAR PQ94132 on you z/OS or OS/390 system. The install executable for the WSim Adapters is included in this PTF. Contact your Workload Simulator administrator to download this executable.

Related documents

- Documents for IBM Workload Simulator for z/OS and OS/390
- Rational TestManager Help (available from the Rational TestManager Help menu)

Software prerequisites

- IBM Rational TestManager V2003.06.00 or higher for Windows 2000 or Windows XP
- IBM Workload Simulator Version 1 Release 1.0.1
- Windows 2000 (Service Pack 4) or Windows XP (Service Pack 1 or earlier)
- Microsoft Internet Explorer 5 or higher
- z/OS 1.4 or higher

Installation

The WSim Adapters install program installs two sets of dynamic link libraries. One set runs the WSim TM schedules; the other runs custom JCL scripts.

Installing the WSim Adapters

- 1. Run WSimAdaptersRTMinstall.exe.
- 2. Accept the license agreement.

The WSim Adapters for running WSim TM schedules and custom JCL scripts are installed in the Rational Test directory. The default is the Program Files\Rational\Rational Test\ directory. The WSim Adapters directory is created under the Rational Test directory.

The skeleton JCL file, backup skeleton JCL file, and this white paper are also installed.

Note that if you are accessing this paper from a web site, there's no need to check the box for displaying this white paper.

Uninstalling the WSim Adapters

To uninstall the WSim Adapters, you can run the same executable used for installation. Alternatively, you can use the Windows Add/Remove Programs feature in the Windows Control panel.

If you are planning to uninstall the WSim Adapters and did not use the WSim Registration tool to register them, you will need to delete the WSim Adapter script types from your registry. You will also need to delete any test cases that used the WSim Adapters.

Working with Workload Simulator Test Manager schedules

After installing the WSim Adapters for running WSim TM schedules, you need to register them as a new test script type. You can then use them to retrieve and display WSim TM projects and

schedules in Rational TestManager, run the schedules, and see the pass/fail results and job output of the run.

Remember that to run WSim TM schedules from Rational TestManager, the schedules must already exist in WSim TM on the host system. In addition, you need the following IDs and passwords to run WSim TM schedules:

- TSO FTP User Name and password
- TSO WSim User Name. This is the TSO user name that created the projects and schedules through WSim TM. This can be the same ID as the TSO FTP User Name.

Registering the WSim Adapters for running WSim TM schedules

The first step is to register the WSim Adapters for running WSim TM schedules. This registration is needed for each Rational TestManager project used to run WSim TM schedules. You must have administrator privileges to register the WSim Adapters.

You can register the WSim Adapters two ways: automatically, by using the WSim Registration Tool, or manually.

Automatic registration

1. From the <u>WSim web site</u>, run the WSim registration tool installation program (WSimAdaptersRTMRegInstall.exe).

This places the registration tool, WSimAdaptersRTMRegistrationTool.exe, into the WSim Adapters directory in the <Rational TestManager install path >.

- 2. Register the WSim Adapters by running the WSimAdaptersRTMRegistrationTool.exe program.
- 3. Enter a Rational TestManager user name and, if required, its password.
- 4. Select the projects in which you want to run WSim Test Manager schedules.

Manual registration

- 1. Log in to Rational TestManager by project.
- 2. Click Tools->Manage->Test Script Types.
- 3. In the Manage Test Script Types window, click the New button.

<u>14</u> 67W
<u>E</u> dit
<u>R</u> ename.
Cogy
Delete
Export

4. On the **General** tab of the **New Test Script Type** window, name the test script type you are creating. For example, you could name this test script type something descriptive such as "WSim TM schedules".

New Test Script Type
General Console Adapter Type Execution Adapter Type Sources Statistics
Name:
WSim TM schedules
Description:
×
J
admin
OK Cancel Help

5. On the **Console Adapter Type** tab, click **Use a custom console adapter** and enter the path to the installed adapter libraries: <Rational TestManager install path>\WSim Adapters\ITMWTMCA.dll.

New Test Script Type	×
General Console Adapter Type Execution Adapter Type Source	es Statistics
Console <u>a</u> dapter library:	
RTM install path>\WSim Adapters\ITMWTMCA.dll	
$C\$ Use the command line console adapter	
New instance command line:	
	Browse
Edit instance command line:	
	Br <u>o</u> wse
OK Cancel	Help

6. On the **Execution Adapter Type** tab, click **Use a custom execution adapter**, and enter the name of the execution adapter: ITMWTMEA.

New Test Script Type			×
General Console Adapter Type	Execution Adapter Type	Sources	Statistics
Use a custom execution adaption	oter		
Execution <u>a</u> dapter library:			
ITMWTMEA			
O Use the command line execu	tion adapter		
Execution command line:			
			Browse
Test Script Options			
	OK	Cancel	Help

7. Click OK.

The new test script type is displayed in the Manage Test Script Types window.

4anage Test Script Types		×
Command Line Java Script		<u>N</u> ew
Manual Script Robot GUI Script		<u>E</u> dit
Robot VU Script VB Script		<u>R</u> ename
WSim TM schedules		Cogy
		<u>D</u> elete
		Export
1		
	Close	Help

8. In the Manage Test Script Types window, click Close.

This completes the procedure for registering the WSim Adapters for running WSim TM schedules.

Creating a new test script source

The next step is to create a local test script source for the schedules. This local source corresponds to the schedules located on the host system. Think of the local source as corresponding to a host account.

- 1. Click View->Test Scripts.
- 2. In the **Test Scripts** window, right-click the test script type you created when registering the adapter (in the example, "WSim TM schedules") and click **New Source**.



3. On the **General** tab of the **New Test Script Source** window, name the source in the **Name** field. (for example, user7@zos108).

New Test Script Source	×
General Connection Data Configuration Statistics	
Name:	
user7@zos108	
Description:	
	A
	-
, Owner:	_
admin	•
OK Cancel	Help

- 4. Click the **Connection Data** tab.
- 5. In the **Data path** field of the **Connection Data** tab, use the **Browse** button to specify a path to a unique, local directory for the source. If the directory does not exist, you can type a source directory name and a directory will be created for you.

This directory must be a unique, local directory that is not used for anything else other than a single source. If the directory is used for anything besides a single source, run time errors can occur.

It is recommended that the directory share the name of the TSO user under which the WSim TM projects and schedules were created, along with the host name. For example, for the test script source user7@zos108, consider creating the directory <Rational TestManager install path>\user7@zos108.

Note that multiple users on the same machine should have their own test source directories.

New Test	Script Source				×
General	Connection Dat	a Configuration Stati	stics		
Data	path: // install>\user7@ omputer specific ction options:	Dzos108		<u>B</u> rowse	
0	ption name	Option value	Compute	rspecific 🔺	
			Π		
			<u> </u>		
				_	

- 6. Click OK.
- 7. Optional: To create paths to other test script sources, repeat this procedure. Remember that each test script source MUST have its own unique directory.

This completes the procedure for creating a new test script source for running WSim TM schedules.

Retrieving WSim TM projects and schedules

The next step is to retrieve WSim TM projects and schedules defined for the user ID specified in the test script source login information. The WSim Adapters retrieve all project names assigned to a WSim user ID and all schedule names for each of those projects.

The WSim Adapters retrieve the WSim TM schedules under each project. The WSim TM project and schedule names and associated information needed to run the schedules are also retrieved.

Note that you cannot view or edit the content of WSim TM schedules in Rational TestManager. You can view and edit schedules only on the host system.

- 1. If the **Test Scripts** window is not displayed, click **View->Test Scripts**.
- 2. In the **Test Scripts** window, expand the test script type you created (in the example, "WSim TM schedules") by clicking the + symbol next to the type.

The test script source you created is displayed (in the example, "user7@zos108").



3. Expand the test script source by clicking the + symbol next to the source.

If you are running a schedule for the first time, the **Login Information** window is displayed.

If you are not running a schedule for the first time but need to edit login information, right-click the source and select **Edit Login Information**. The **Login Information** window is displayed.

Login Information	
Login Information	
HostName	ļ
TSO FTP User Name	
Password	
TSO WSim User Name	
Same as TSO FTP User Na	me
TSO WSim User Name	
Job Name Suffix Character	R A
Monitor job execution with Ratio	onal TestManager
Job Execution Timeout-	
🔽 No timeout	
Hours 0 A Minutes	0 * Seconds 0 *
	Attempt to login to host
	OK Cancel Help

- 4. In the **Hostname** field of the **Login Information** window, enter the name or IP address of the host where the WSim TM schedules are located.
- 5. In the **TSO FTP User Name** and **Password** fields, enter your host FTP user name and password.
- 6. Do one of the following:
 - To log in to TSO with the same user name and password used for FTP, ensure that the **Same as TSO FTP User Name** box is checked. This is the default.

- To log in to TSO under a different user name from the one used for FTP, ensure that the Same as TSO FTP User Name box is unchecked, and then in the TSO WSim User Name field, enter the TSO user name where the WSim TM projects and schedules were created.
- 7. In the **Job Name Suffix Character** box, select a different suffix if needed. Otherwise, leave the default at "R".

Note: The WSim schedules associated with a TSO ID do not run in parallel unless they have been specifically designed to do so. This is because the schedules use VTAM APPL resources for terminal simulation, and most schedules reference the same VTAM APPL resources. To avoid problems, set a unique job name suffix character and FTP ID for each WSim TSO ID used to run a specific schedule. This forces duplicate job names, which forces the schedules to run serially.

- 8. Do one of the following:
 - To display job status while the job is running and to have Rational TestManager wait for the job to finish, check the Monitor job execution with Rational TestManager box. You can set an execution timeout value in the Job Execution Timeout fields. This timeout value specifies how long to monitor the job before it ends. The default is no timeout.

Note: If you specify a job timeout value and the job is cancelled, no host job output will be available for viewing.

- To not have Rational TestManager monitor job status, leave the **Monitor job execution with Rational TestManager** box unchecked. The job will continue to run without monitoring.
- 9. Test your connection to the host to see if there are any login errors by clicking the **Attempt to login to host button**. If you receive an error, correct any fields related to the login error.
- 10. Click **OK** to retrieve WSim TM projects and schedules from the host.

This completes the procedure for retrieving and displaying WSim TM projects and schedules.

Running a WSim TM schedule and viewing its output

The next step is to run a schedule and view its output.

1. In the **Test Scripts** window, expand a project under the test script source to see the list of schedules.



2. Right-click a schedule and click **Run** from the pop-up menu.



The Run Test Script window is displayed.

3. In the Run Test Script window, click OK to run the schedule.

If you checked the **Monitor job execution with Rational TestManager** box in the **Login Information** window, the job is monitored, the **Test Log** window is displayed when the job completes, and the host job output is retrieved.

If you did not check the **Monitor job execution with Rational TestManager** box in the **Login Information** window, the **Test Log** window is displayed when the job completes. To retrieve the job status and host job output, right-click the test script source and select the **Recover Job Statuses** option.

- 4. In the **Test Log** window, expand the events under **Event Type** to display any informational or failure messages that might have been generated by the schedule run. If the job was not monitored, an informational message of "Job *JobId* is left running" is displayed.
- 5. Right-click on any message and click Properties.

Event Type	Result	Date & Tim	e Failure	Computer	Defects
nporary Suite 1 🛛 📄 Suite Start (Temporary S	uit Pass	09/23/2004 03:5	7:	walden1	
, 📃 📄 User Start (Temporar	y Pass	09/23/2004 03:5	7:	walden1	
1. 😑 — Script Start (SAMF	'L Pass	09/23/2004 03:5	7:	walden1	
d 1 Message	Informational	09/23/2004 03			
Folder Script End (SA	M Pass	09/23/2004 03	Expand All		
User End	Pass	09/23/2004 03	Collapse <u>A</u> ll		
Suite End (Temporary	/ Pass	09/23/2004 03	<u>F</u> ind	Ctrl + F	
tion:			Find Next	F3	
			Submit Defect		
Date/Time:			Properties		
2004 03:57:53 F		_			

The **Log Event** window is displayed. If the job fails, the **Failure Description** field may provide details on error messages.

Property	Value	
vent Type	Message	
tart Date/Time	9/23/2004 8:06:36 PM	
top Date/Time	9/23/2004 8:06:36 PM	
esult	Informational	
ailure Reason		
ailure Description		
lessage Text 🕺	Job JOB15448 left running	
efects		

- 6. Use the scroll arrows on the right side of the **Log Event** window to view the values for the other properties of the log events. See Appendix E: Troubleshooting for more information about error messages.
- A host job output file may exist after a job completes for a schedule run. In the Test Script window, right-click the schedule and select the View Host Job Output option to view this log.



This completes the procedure for running a WSim TM schedule and viewing its output.

Notes:

- The same WSim TM schedule under a specific TSO user should not be run in parallel because of how the WSim TM schedule is set up.
- In addition to the **Run** menu option, the following options are also available from the menus that appear when you right-click a source, project, or schedule:

Edit Login Information. Available when you right-click a test script source, this option lets you edit the login parameters of the test script. If you edit these parameters, right-click **Refresh All** and then expand the test script source to refresh and reload the correct projects and schedules.

Clear Login Information. Available when you right-click a test script source, this option deletes the test script source's login parameters. Use this option to clear the login information before deleting the test script source. Then, to delete the source, right-click the source and select **Delete**. Deleting a test script source is expected after clearing login information. If you delete a test script source without clearing the login parameters first, and then create a new source in the same directory, the old login parameters will be used by the new source, and you may get a warning stating that another user is using the directory as a source repository.

Recover Job Statuses. Available when you right-click a test script source, this option displays the status of running jobs, if job monitoring is not specified in the **Edit Information** window. This option returns the status of all jobs and stores the host job output in the Logs directory under the test script source directory.

View Host Job Output. Available when you right-click a test script source, project, or schedule, this option displays the host job output logs resulting from schedule runs. All logs for the projects and schedules under a test script source are displayed when the test script source is highlighted.

Clear Host Job Output Files. Available when you right-click a test script source, project, or schedule, this option deletes the host job output files from the Logs directory and puts them into the Recycle Bin.

View Variables. Available when you right-click a test script source, project, or schedule, this option displays the WSim TM variables relative to the selected source, project, or schedule. For a test script source, the variables in the VARSINFO member are displayed. For a project, the variables in the PROJLIST member of the WSim TM TSO user's data set are displayed. For a schedule, the master and test log data sets are displayed.

View Description. Available when you right-click a project or schedule, this option displays the project or schedule description.

Editing the JCL skeleton file

A skeleton JCL file is installed with the WSim Adapters for running WSim TM schedules. The skeleton JCL file is the template used for building the job that is submitted to the z/OS system for executing a schedule. You can customize the skeleton JCL to include the job accounting information required by your z/OS environment and to tailor the job steps to provide the post-simulation reports needed. This skeleton file is located in the <Rational TestManager install>\WSim Adapters\skeleton directory. For more information about the JCL skeleton, see Appendix B: Skeleton JCL file and custom JCL script.

Working with custom JCL scripts

After installing the WSim Adapters for running custom JCL scripts, you need to register them as a new test script type. You can then use them to run custom JCL scripts and see the pass/fail results and job output of the run.

Notes:

The text in a custom JCL script must be in uppercase. The FTP User Name and a character suffix of either A-Z or 0-9 are generally used for the job name. See Appendix B: Skeleton JCL file and custom JCL script to see a sample custom JCL script.

You need an TSO FTP user name and password to use the WSim Adapters for running custom JCL scripts.

Registering the WSim Adapters for running custom JCL scripts

The first step is to register the WSim Adapters for running custom JCL scripts. You can register the WSim Adapters automatically by using the WSim Registration Tool or you can register them manually.

Automatic registration

1. From the <u>WSim web site</u>, run the WSim registration tool installation program (WSimAdaptersRTMRegInstall.exe).

This places the registration tool, WSimAdaptersRTMRegistrationTool.exe, into the WSim Adapters directory in the <Rational TestManager install path >.

- 2. Register the WSim Adapters by running the WSimAdaptersRTMRegistrationTool.exe program.
- 3. Enter a Rational TestManager user name and, if required, its password.
- 4. Uncheck the box to specify that you would like to register the JCL Script type and select the projects in which you want to run JCL Scripts.

Manual registration

1. In Rational TestManager, click **Tools->Manage->Test Script Types**.

2. In the Manage Test Script Types window, click the New button.

Command Line Java Script		<u>N</u> ew
Manual Script Robot GUI Script		<u>E</u> dit
Robot VU Script VB Script		<u>B</u> ename
WSim TM schedules		Сору
		Delete
		Export
ļ		
	Close	Help

3. On the **General** tab of the **New Test Script Type** window, name the test script type you are creating. For example, you could name the test script type "JCL Scripts".

New Test Script Type	×
General Console Adapter Type Execution Adapter Type Sources Statistics	
Name:	
JCL Scripts	
Description:	
A	
<u>v</u> wner:	
admin	
OK Cancel Help	

4. On the **Console Adapter Type** tab, click **Use a custom console adapter**, and enter the path to the installed adapter libraries: <Rational TestManager install path>\WSim Adapters\ITMJCLCA.dll.

New Test Script Type	×
General Console Adapter Type Execution Adapter Type Source	es Statistics
Console <u>a</u> dapter library:	
RTM install>\WSim Adapters\ITMJCLCA.dll.	
$C U_{\underline{S}}e$ the command line console adapter	
New instance command line:	
	Browse
Edit instance command line:	·
	Br <u>o</u> wse
OK Cancel	Help

5. On the **Execution Adapter Type** tab, click **Use a custom execution adapter**, and enter the name of the execution adapter: ITMJCLEA.

New Test Script Type			×
General Console Adapter Type	Execution Adapter Ty	pe Sources	Statistics
	oter		
Execution <u>a</u> dapter library:			
ITMJCLEA			
C Lise the command line every	tion adapter		
Execution command line:	and and all the set		
			Browse
Test Script Options			
	ОК	Cancel	Help

6. Click OK.

The new test script type appears in the **Manage Test Script Types** window.

lanage Test Script Types		<u>></u>
Command Line		<u>N</u> ew
JCL Scripts		<u>E</u> dit
Robot GUI Script		<u>R</u> ename
VB Script WSim TM schedules		Cogy
		Delete
		E⊻port
1		
	Close	Help

7. In the Manage Test Script Types window, click Close.

This completes the procedure for registering the adapters for running custom JCL scripts.

Creating a new test script source

The next step is to create a local test script source for custom JCL scripts.

- 1. If the **Test Scripts** window is not displayed, click **View->Test Scripts**.
- 2. In the **Test Scripts** window, right-click the test script type you created when registering the adapter (in the example, "JCL Scripts"), and click **New Source**.



3. On the **General** tab of the **New Test Script Source** window, name the source in the **Name** field. For example, you might name it "JCL Scripts Source".

New Test Script Source	×
General Connection Data Configuration Statistics	
Name:	
JCL Scripts Source	
Description:	
	<u> </u>
	-
0wner	
admin	-
Jaanni	
OK Cancel	Help

4. On the **Connection Data** tab, use the **Browse** button to specify the path where your custom JCL scripts are located. If the directory does not exist, you can specify one here to create it. For example, you might create the directory C:\JCL Script Source.

New Test Script Source			×
General Connection Date	a Configuration Statis	stics	
Data path: [C:\JCL Script Source] Computer specific Connection options:		<u>B</u> rowse	
Option name	Option value	Computer specific	-
			-
		Γ	
			-
,			
	OK	Cancel He	lp

Note: This directory must be a unique, local directory that is not used for anything else other than a single source. If the directory is used for anything besides a single source, run time errors can occur.

- 5. Click OK.
- 6. Optional: To create paths to other test script sources, repeat this procedure. Remember that each test script source MUST have its own unique directory.

This completes the procedure for creating a new test script source for custom JCL scripts.

Running a custom JCL file

The next step is to run a custom JCL file.

- 1. If the **Test Scripts** window is not displayed, click **View->Test Scripts**.
- 2. In the **Test Scripts** window, expand the source under the test script type you created (in the example, "JCL Scripts Source") by clicking the + symbol next to the source.



3. Right-click a script under a test script source and click **Run** from the pop-up menu.



- 4. In the Run Test Script window, click OK.
- 5. If there is partial or no login information specified at the script or test script source level, the **Login Information** window is displayed. If the **Login Information** window is not displayed and you need to enter login information, right-click the source and select **Edit Login Information**.

Login Information for br14	job.txt		
Login Information			
Host Name			
TSO FTP User Name			
Password			
Job Monitoring			
Monitor Job Execution	with Rational TestMar	nager	
Job Execution Timeout			
🔽 No timeout			
Hours 0	Minutes 0	 Seconds 	0
🔽 Save Login Information		Attempt to I	ogin to host
	OK	Cancel	Help

- 6. In the **Hostname** field, enter the name of the host where you want to run the job.
- 7. In the **TSO FTP User Name** and **Password** fields, enter your host FTP user ID and password.
- 8. Do one of the following:
 - To display job status while the job is running and to have Rational TestManager wait for the job to finish, check the Monitor job execution with Rational TestManager box. You can set an execution timeout value in the Job Execution Timeout fields. This timeout value specifies how long to monitor the job before it ends. The default is no timeout.

Note: If you specify a job timeout value and the job is cancelled, no host job output will be available for viewing.

- To not have Rational TestManager monitor job status, leave the **Monitor job** execution with Rational TestManager box unchecked. The job will continue to run without monitoring.
- 9. Test your connection to the host by clicking the **Attempt to login to host** button.
- 10. Click the **Save Login Information** box to save the login information. If you do not use this feature, the login information is used for only one run. Note that a custom JCL script uses its own login information, if available; otherwise the login information from the test script source is used.
- 11. Click **OK** to submit the job.

When the run completes, the **Test Log** window is displayed, and host job output is retrieved.

- 12. In the **Test Log** window, expand the events under **Event Type** to display any informational or failure messages that might have been generated by the run. If the job was not monitored, an informational message of "Job *JobId* is left running" is displayed.
- 13. Right-click on any message and click **Properties**.

🔢 Test Log - br14job t	txt							<u>- 🗆 ×</u>
Suite:	Event Type	Result	Dat	te & Time	Failure	Computer	Defects	
Temporary Suite 1	⊡—Suite Start (Temporary Suit	Pass	09/23,	/2004 09:41:		walden1		
Build	User Start (Temporary	Pass	09/23,	/2004 09:41:		walden1		
Duild 1	😑 — Script Start (br14job	Pass	09/23,	/2004 09:41:		walden1		
	Message	Informational	09/22	Expand III		unden1		
Log Folder:	Script End (br14j	Pass	09/2			lden1		
Default	User End	Pass	09/2	Collapse <u>A</u> ll		liden1		
Perduit	Suite End (Temporary	Pass	09/2	Eind	Ctrl +	F Iden1		
Iteration:				Find <u>N</u> ext	, F3			
				Submit Def	ect			
Start Date/Time:				Properties				
09/23/2004 09:41:56 F			_					
Fnd Data /Timo:	Test Case Results Details							

The Log Event window is displayed.

If the job fails, the **Failure Description** field may provide more details on error messages.

Property	Value
ent Type	Message
irt Date/Time	9/23/2004 9:42:00 PM
op Date/Time	9/23/2004 9:42:00 PM
esult	Informational
nilure Reason	
nilure Description	
essage Text	Host Job Output has been saved to C:\JCL Script Source\Logs\br14job_txt_JOB15463_mvs108_0923042141.lo 9-
facte	

- 14. Use the scroll arrows on the right side of the **Log Event** window to view the values for the other properties of the log events. See Appendix E: Troubleshooting for more information about error messages.
- 15. A host job output log may exist after a job completes. In the **Test Script** window, rightclick the script that was run and select the **View Host Job Output** option to view the output.



This completes the procedure for running a custom JCL script and viewing its output.

Note:

In addition to the **Run** menu option, the following options are also available from the menus that appears when you right-click a test script source or custom JCL script:

New Test Script. Available when you right-click a test script source, this option lets you create a new custom JCL script file in the test script source directory. All of the JCL must be in uppercase.

Open Test Script. Available when you right-click a custom JCL script, this option lets you edit the custom JCL script in Notepad. All the JCL must be in uppercase.

Edit Login Information. Available when you right-click a test script source and custom JCL script, this option lets you edit the test script source or custom JCL script's login parameters. If you edit the login information, right-click the source and click **Refresh All** from the popup menu.

Clear Login Information. Available when you right-click a test script source or custom JCL script, this option deletes the login parameters of the script or test script source. Use this option before deleting the test script source itself. Then, delete the source by right-clicking the source and selecting **Delete**. Deletion of the test script source is expected after a **Clear Login Information** action. If you delete a test script source without clearing the login parameters first, and then create a new source in the same directory, the old login parameters will be used by the new source, and a window stating that another user is using the directory as a source repository may appear.

Recover Job Statuses. Available when you right-click a test script source, this option displays the status of running jobs, if job monitoring is not specified in the in the **Edit Information** window. This option returns the status of all jobs and stores the host job output in the Logs directory under the test script source directory.

View Host Job Output. Available when you right-click a test script source or custom JCL script, this option displays the host job output logs resulting from custom JCL script runs. All custom JCL script logs under a test script source are displayed when the test script source is highlighted.

Clear Host Job Output Files. Available when you right-click a test script source or custom JCL script, this option deletes the host job output files from the Logs directory and puts them into the Recycle Bin.

Delete JCL Script. Available when you right-click a custom JCL script, this option lets you delete the JCL script and send it to the Recycle Bin. After deleting a script, right-click its source and choose **Refresh All**.

Rename JCL Script. Available when you right-click a custom JCL script, this option lets you rename the custom JCL script. After renaming a script, right-click it and choose **Refresh All**.

Implement Test Case. Available when you right-click a script, this option lets you run a WSim TM schedule or custom JCL script. In the **Automated Implementation** field, click the **Select** button to select a WSim TM schedule or custom JCL script to associate with a test case.

You cannot view a listing of job logs for schedules by right-clicking a selection for test suites or test plans. Instead, right-click the schedule under the test script source and choose the **View Host Job Output** option. Otherwise, use the **Recover Job Statuses** option by right-clicking the test script source to view the log. If the job was monitored, you can also view the logs by looking in the Logs directory under the test script source directory. See Rational TestManager Help for more information about test suites and creating test plans.

Appendix A: Sample WSim TM schedule

The following is a sample WSim schedule run by the WSim Adapters for Rational TestManager.

* The foll * at 16:16 *	lowing 5:49 or	network definition was 18 Aug 2004	created	by W	Sim/TM			
SCHUSER1	NTWRK	<pre>HEAD='USer 1 schedule', BUFSIZE=2048, COLOR=MULTI, DELAY=F2, DISPLAY=(24,80,32,80), INIT=SEC, ITIME=1, LOGDSPLY=BOTH, LUTYPE=LU2, MLOG=YES, MSGTRACE=YES, OPTIONS=(CORRATE,DEBUG,</pre>	MONCMND)	,				
*		RSTATS=YES, STLTRACE=YES, THKTIME=UNLOCK, UTI=100, SEQ=1	^^^ DO	NOT	CHANGE	THIS	COMMENT ^	**
*	Paths							
WTMEND *	PATH	WTMEND						
* 1 *	TestCa PATH	ase TCLOG1 TCLOG1	^^^ DO	NOT	CHANGE	THIS	COMMENT	~~~
* USER7A01 LU01	Simula VTAMAE LU E	ated Resources PPL PATH=(1,WTMEND)						

Appendix B: Skeleton JCL file and custom JCL script

The shipped skeleton JCL file looks as follows:

```
//!FTPID!!SUFFIX! JOB CLASS=A,MSGCLASS=H,REGION=4M
//* Run IBM Workload Simulator (WSim), Loglist, and
//* Response Time programs from JCL submitted by
//* WSim Adapters for Rational TestManager using
//* FTP ID !FTPID! for WSim TSO ID !TSOID! running
//* WSim Test Manager Project !PROJECT!
//* Schedule !SCHEDULE!.
 //JOBLIB DD DSN=!WSIMLOAD!,DISP=SHR
//* WSim
//WSIM EXEC PGM=ITPENTER,
                     EXEC PGM=ITPENTER,
PARM='NTWRK=!SCHEDULE!,DMAPPL=!DMAPPL!'
  // SYSPRINT DD SYSOUT=*
//INITDD DD DSN=!PROJHLQ!.!INITLLQ!,DISP=SHR
//MSGDD DD DSN=!PROJHLQ!.!MSGLQ!,DISP=SHR
//LOGDD DD DSN=!LOGDS!,DISP=SHR
//LOGDD DD DSN=!LOGDS!,DISP=SHR
//* Loglist
//LOGLIST EXEC PGM=ITPLL
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD DSN=!LOGDS!,DISP=SHR
//LOGLIST.SYSIN DD *
PUN
RUN
END
/*
//* Response Time
// RESPITIME EXEC PGM=ITPRESP
//SYSPRINT DD SYSOUT**
//SYSUT1 DD DSN=!LOGDS!,DISP=SHR
//RESPITME.SYSIN DD *
PROCESS ACTUAL
RIIN
END
```

This job template executes the WSim simulator in the WSIM job step by using the schedule already defined on your z/OS system. After the simulation completes, the LOGLIST job step executes the WSim loglist program to report the WSim console records by the CNSLE, RUN, and END control statements. The RESPTIME job step executes the WSim response time program to report the actual response times the simulated 3270 user(s) experienced, by running the PROCESS ACTUAL, RUN, and END control statements.

There are a number of places in the job template where information from the WSim Adapter's GUI and information retrieved from your z/OS system are plugged in. These are indicated using the !keyword! syntax. For example, the FTP user name being used to submit jobs is substituted for !FTPID! in the job submitted to your z/OS system.

The !keyword! substitution values are defined as follows.

IDMAPPL!	WSim Display Monitor facility VTAM APPL name
IFTPID:	FTP ID being used to submit this job to your z/OS system
INTILQ!	WSim INITDD data set low level qualifier
ILOGDS:	Name of last WSim log data set used
IMLOGDS:	Name of Master log data set used if available (for ITPCOMP Compare Utility)
IMSGLLQ!	WSim MSOD data set low level qualifier
IPROJECT!	WSim TM project name
IPROJEC!	WSim TM projects data sets high level qualifier
ISCHEDULE!	WSim TM schedule name
SUFFIX!	Job name suffix character
!TLOGDS!	Name of Test log data set (for ITPCOMP Compare Utility)
!TSOID!	WSim TSO ID owning the WSim TM schedule
!WSIMLOAD!	WSim load library name

An example of the JCL sent by the WSim Adapters with the substituted values to your z/OS system is as follows:

^{//}USER7R JOB CLASS=A,MSGCLASS=H,REGION=4M

and

^{//*} Run IBM Workload Simulator (WSim), Loglist, //* Response Time programs from JCL submitted by //* WSim Adapters for Rational TestManager using //* FTP ID USER7 for WSim TSO ID USER7 running

```
//* WSim Test Manager Project SAMPLEPRJ
//* Schedule SCHUSER1.
//*
//* WSim
//* UD DSN=WSIM.SITPLOAD,DISP=SHR
//* WSim
//WSIM ELEC PGM=ITPENTER,
// PARM='NTWRK=SCHUSER1,DMAPPL=USER7DM'
//SYSPRINT DD SYSOUT=*
//INTOD DD DSN=USER7.SAMPPRJ.NTWRKS,DISP=SHR
//LOGLIST ELEC PGM=ITPLL
//SYSPRINT DD SYSOUT=*
//LOGLIST.SYSIN DD *
CNSLE
RUN
/*
//* Response Time
//* Response Time
//* Response Time
//SYSUTI DD DSN=USER7.SAMPPRJ.MLOG.SCHUSER1,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSPRINT DD SN=USER7.SAMPPRJ.MLOG.SCHUSER1,DISP=SHR
//ESPTIME ELEC PGM=ITPRESP
//SYSPRINT DD SYSOUT=*
//SYSUTI DD DSN=USER7.SAMPPRJ.MLOG.SCHUSER1,DISP=SHR
//ESPTIME.SYSIN DD *
RUN
END
/*
```

The submitted skeleton JCL, which is saved as the file SentJCL.log in the WSim Adapters directory under the <Rational TestManager install path>\directory for a WSim TM schedule, could also be used as a custom JCL script. For instance, this script could be modified with different control statements for the WSim loglist program and run again.

Another example of a custom JCL script is the following IEFBR14 job to allocate a data set on your z/OS system.

```
//USER1X JOB MSGCLASS=H
//STEP1 EXEC PGM=IEFBR14
//MYNEWDS DD DSN=USER1.MY.NEW.DATASET,
// DISP(NEW,CATLG),UNIT=SYSDA,
// SPACE=(CYL,(1,1))
```

Notes:

- Alternate project schedules need to be run from the actual TSO user name that created the schedule.
- If any WSim TM schedules contain test cases from another WSim TM project (alternate high-level index), add the following line after the //MSGDD DD statement.

// DD DSN=altdsn.proj.msgtxts,DISP=SHR

where altdsn.proj.msgtxt is the message deck data set for the alternate project.

 If you modify the skeleton JCL and get errors as a result of running it, a backup skeleton JCL file is provided in case the original becomes corrupted and needs to be restored.

Appendix C: Host job output example

Host Job Output example:

1 JES2 JOB LOG	SYSTEM M033 NODE MVS108	
17.10.20 JOB14973 WEDNESDAY, 22 SEP 2004 17.10.20 JOB14973 IRR010I USERID USERT IX 17.10.21 JOB14973 ICH70001I USERT LAST ACC 17.10.21 JOB14973 ISHASP373 USER7R STARTED 17.10.21 JOB14973 IFH703I USER7R STARTED 17.10.21 JOB14973 IFH703I USER7R STARTED 17.10.21 JOB14973 IFH703I USER7R STARTED 17.10.22 JOB14973 +ITP003I WSIM INITIALIZATION COI 17.10.22 JOB14973 +ITP006I NETWORK SCHUSERI 17.10.22 JOB14973 +ITP006I NETWORK SCHUSERI 17.10.22 JOB14973 +ITP137I SCHUSERI LU01 17.10.22 JOB14973 +ITP137I SCHUSERI LU01 17.10.49 JOB14973 +ITP002I SCHUSERI LU01 17.10.49 JOB14973 +ITP002I SCHUSERI LU01 17.10.49 JOB14973 +ITP021I DISPLAY MONITOR FI 17.10.49 JOB14973 +ITP021 SCHUSERI LU01 17.10.49 JOB14973 +ITP0291 WSIM IS CLOSED DOI 17.10.50 JOB14973 USER7R KSIM 17.10.50 JOB14	<pre>i is ASSIGNED TO THIS JOB. is ASSIGNED TO THIS JOB. ccESS AT 17:10:20 ON WEDNESDAY, SEPTEMBER 22, 2004 - INIT 1 - CLASS A - SYS M033 - TIME=17.10.21 pr (WSim) Version 1 Release 1.0.1, Sept. 3 2004 12:34 ION COMPLETE FACILITY ACTIVE USING APPL USER7DM MMPLETE FOR NETWORK SCHUSER1 STARTED im USER7R -00001 - WTMEND: 1 out of 1 finished00001 - WTMEND: All scripts run. Issuing ZEND00001 - ZEND FACILITY IS CLOSED DOWN MM ITPENTER 0000 ITPL 0000 ITPRESP 0000</pre>	
17.10.50 JOB14973 IEF404I USER7R - ENDED - T. 17.10.50 JOB14973 \$HASP395 USER7R ENDED 0 JES2 JOB STATISTICS 22 SEP 2004 JOB EXECUTION DATE - 35 CARDS READ - 212 SYSOUT PRINT RECORDS - 0 SYSOUT PUNCH RECORDS - 15 SYSOUT SPOOL KBYTES - 0.48 MINUTES EXECUTION TIME !! END OF JES SPOOL FILE !! 1 //USER7R JOB CLASS=A.MSGCLASS=H.REGI	IIME=17.10.50	
//* //* Run IBM Workload Simulator (WSim	m) Loglist and	
<pre>//* Run IBM Workload Simulator (WSim //* Response Time programs from JCL ; //* WSim Adapters for Rational TestMa //* FTP ID USER7 for WSim TSO ID USE! //* WSim Test Manager Project SAMPLE! //* Schedule SCHUSER1. //*</pre>	n), Loglist, and submitted by Manager using 3R7 running 3PRJ	
2 //JOBLIB DD DSN=WSIM.SITPLOAD,DIS	3P=SHR	
3 //WSIM EXEC PGM=ITPENTER,	ואת?חקונאם	
4 //SYSPRINT DD SYSOUT=*	DIRE TO UD	
6 //MSGDD DD DSN=USER'. SAMPPRJ.MSG 7 //LOGDD DD DSN=USER'. SAMPPRJ.MSG	NKS, JUSP-SHR JYXTS, JUSP-SHR JG. SCHUSER1, JUSP-SHR	
//* Loglist 8 //LOGLIST EXEC PGM=ITPLL		
9 //SYSPRINT DD SYSOUT=* 10 //SYSUT1 DD DSN=USER7.SAMPPRJ.MLOO	DG.SCHUSER1,DISP=SHR	
11 //LOGLIST.SYSIN DD * //* Response Time		
12 //RESPTIME EXEC PGM=ITPRESP 13 //SYSPRINT DD SYSOUT=*		
14 //SYSUT1 DD DSN=USER7.SAMPPRJ.MLO 15 //RESPTIME.SYSIN DD *)G.SCHUSER1,DISP=SHR	
<pre>!! END OF JES SPOOL FILE !! ICH700011 USER7 LAST ACCESS AT 17:10:20 ON</pre>	N WEDNESDAY, SEPTEMBER 22, 2004	
IEF236I ALLOC. FOR USER7R WSIM IEF237I 3396 ALLOCATED TO JOBLIB		
IEF237I JES2 ALLOCATED TO SYSPRINT IEF237I 04FD ALLOCATED TO INITDD		
IEF237I 04FD ALLOCATED TO MSGDD IEF237I 04FF ALLOCATED TO LOGDD		
IEF142I USER7R WSIM - STEP WAS EXECUTED - CON IEF285I WSIM.SITPLOAD	ND CODE 0000 PASSED	
IEF285I VOL SER NOS= LSSWK7. IEF285I USER7.USER7R.JOB14973.D0000103.?	SYSOUT	
IEF285I USER7.SAMPPRJ.NTWRKS IEF285I VOL SER NOS= CPDLB2.	KEPT	
IEF285I USER7.SAMPPRJ.MSGTXTS IEF285I VOL SER NOS= CPDLB2.	KEPT	
IEF285I USER7.SAMPPRJ.MLOG.SCHUSER1 IEF285I VOL SER NOS= CPDLB0.	KEPT	
IEF373I STEP/WSIM /START 2004266.1710 IEF374I STEP/WSIM /STOP 2004266.1710 CPU	0MIN 00.05SEC SRB 0MIN 00.02SEC VIRT 1412K SYS 308K EXT 344K	C SYS
11684K IEF236I ALLOC. FOR USER7R LOGLIST		
IEF237I 3396 ALLOCATED TO JOBLIB IEF237I JES2 ALLOCATED TO SYSPRINT		
IEF237I 04FF ALLOCATED TO SYSUT1 IEF237I JES2 ALLOCATED TO SYSIN		
IEF142I USER7R LOGLIST - STEP WAS EXECUTED - (IEF285I WSIM.SITPLOAD	COND CODE 0000 PASSED	
IEF285I VOL SER NOS= LSSWK7. IEF285I USER7.USER7R.JOB14973.D0000104.?	SYSOUT	
IEF285I USER7.SAMPPRJ.MLOG.SCHUSER1 IEF285I VOL SER NOS= CPDLB0.	KEPT	
IEF285I USER7.USER7R.JOB14973.D0000101.? IEF373I STEP/LOGLIST /START 2004266.1710	SYSIN	
IEF374I STEP/LOGLIST /STOP 2004266.1710 CPU 11548K	0MIN 00.01SEC SRB 0MIN 00.00SEC VIRT 224K SYS 264K EXT 4K	C SYS
IEF236I ALLOC. FOR USER7R RESPTIME IEF237I 3396 ALLOCATED TO JOBLIB		

IEF237I JES2 ALLOCATED TO SYSPRINT IEF237I 04FF ALLOCATED TO SYSUT1 IEF237I JES2 ALLOCATED TO SYSUT1 IEF1237I USER7R.RSPTIME - STEP WAS EXECUTED - COND CODE 0000 IEF285I USER7.USER7R.JOB14973.D0000105.? SYSOUT IEF285I USER7.SAMPPRJ.MLOG.SCHUSER1 KEPT IEF285I VOL SER NOS= CPDLB0. IEF285I USER7.USER7R.JOB14973.D0000102.? SYSIN IEF2232I CERP.UFE0TUME(CFDMIN) 2004062 1210 SYSOUT IEF373I STEP/RESPTIME/START 2004266.1710 IEF374I STEP/RESPTIME/STOP 2004266.1710 CPU 11552K OMIN 00.01SEC SRB OMIN 00.00SEC VIRT 152K SYS 264K EXT 8K SYS TEF285T WSIM.SITPLOAD KEPT IEF2851 WOLM.SITPLOAD IEF2851 VOL SER NOS= LSSWK7. IEF3751 JOB/USER7R /START 2004266.1710 IEF3761 JOB/USER7R /STOP 2004266.1710 CPU !! END OF JES SPOL FILE !! IWSim 1.1.0.1 PRINTER OUTPUT OMIN 00.07SEC SRB OMIN 00.02SEC TIME 17.10.49, SEPTEMBER 22, 2004 PAGE 1 000 END OF RUN REPORT NETWORK SCHUSER1 100 User 1 schedule NTWRKUTI 0 STATUS MESSAGES RESPONSES RECEIVED RECEIVED SENT SENT DEF EXC DEF EXC OVTAMAPPL USER7A01 LU LU01-1 0 VTAMAPPL TOTALS 11 1 0 22 0 27 27 1 22 11 0 0 CUMULATIVE TOTALS 27 1 22 11 0 0 !! END OF JES SPOOL FILE !!
1WSim LOGLIST OUTPUT TIME 17.10.50, SEPTEMBER 22, 2004 PAGE 1 0CNSLE RUN 2 1WSim LOGLIST OUTPUT TIME 17.10.50, SEPTEMBER 22, 2004 PAGE RUN TIME 17.10.22, SEPTEMBER 22, 2004 VERSION 1 RELEASE 1.0.1 NETWORK APPCLU/TCPIP/VTAMAPPL DEV/LU/TP START STOP READY RECORD HEADER DATA TYPE MESSAGE USER SEQUENCE NAME NAME NAME TIME TIME TIME TYPE FLAGS LENG DECK DATA NUMBER 17102227 0104266 11010000 CNSL 0800 000000 69 0 Workload Simulator (WSim) Version 1 Release 1.0.1, Sept. 3 2004 12:34 0. 0 17102244 0104266 11010000 CNSL 0800 000000 0 TTP029T INITIALIZATION COMPLETE FOR NETWORK SCHUSER1 0 - -0 17102244 0104266 11010000 CNSL 0800 000000 32 Λ TTP006T NETWORK SCHUSER1 STARTED 0 17104990 0104266 11010000 CNSL 0800 000000 54 -00001 - WTM: TCLOG1 Finished TTP137T SCHUSER1 LU01 17104990 0104266 11010000 CNSL 0800 000000 0 TTP1371 SCHUSER1 LU01 -00001 - WTMEND: 1 out of 1 finished. 0 17104990 0104266 11010000 CNSL 0800 000000 73 ITP137I SCHUSER1 LU01 -00001 - WTMEND: All scripts run. Issuing ZEND. _ _ _ _ 0 17104990 0104266 11010000 CNSL 0800 008000 38 -00001 - ZEND ITP002I SCHUSER1 LU01 ---------0 17104990 0104266 11010000 CNSL 0800 000000 47 ITP2011 DISPLAY MONITOR FACILITY IS CLOSED DOWN TIME 17.10.50, SEPTEMBER 22, 2004 PAGE 3 1WSim LOGLIST OUTPUT 0 end !! END OF JES SPOOL FILE !! 1WSim RESPONSE TIME ANALYSIS TIME 17.10.50, SEPTEMBER 22, 2004 PAGE 1 OPROCESS ACTUAL RUN WSim RESPONSE TIME ANALYSIS RUN TIME 17.10.22, SEPTEMBER 22, 2004 VERSION 1 RELEASE 1.0.1 0------TIME 17.10.50, SEPTEMBER 22, 2004 PAGE 2 NETWORK ALL NETWORKS VTAMAPPL USER7A01 TIME LIMITS ALL START TIME 171024 END TIME 171047 TERMINAL REPORT PROCESS ACTUAL EXIT TERMTYPE LU2 TERMINAL LU01-1 RESPONSE TIME COUNT RESPONSE TIME 0.01 1 0.02 0.86 1 1.15 COUNT COUNT RESPONSE TIME 2 0.08 1 2.00 -RESPONSE TIME 0 0.00 COUNT RESPONSE TIME 0.09 COUNT COUNT 2 1 0.19 NUMBER OF RESPONSES -MEAN RESPONSE 0.40 MESSAGES SENT 11 11 MEDIAN RESPONSE MEDIAN RESPONSE MODE RESPONSE LOW RESPONSE AVERAGE LENGTH 0.08 36 RESPONSES DISCARDED 0.00 MESSAGES RECEIVED 24 0.4337 VARTANCE AVERAGE LENGTH 95 PERCENT CI HIGH RESPONSE 2.00 445 AVERAGE QUEUE TIME -PERCENTILE RESPONSE TIME 0.00 AVERAGE 0.24 90 1.15 TIME 17.10.50, SEPTEMBER 22, 2004 PAGE 3 _____ TIME LIMITS ALL START TIME 171024 END TIME 171047 TERMTYPE _____
 RESPONSE TIME
 COUNT
 RESPONSE TIME

 0.01
 1
 0.02

 0.86
 1
 1.15
 COUNT RESPONSE TIME 2 0.08 1 2.00 -RESPONSE TIME COUNT COUNT RESPONSE TIME COUNT 0.00 2 0.09 0 1 1 MESSAGES SENT 2.00 0.40 -MEAN RESPONSE 11 NUMBER OF RESPONSES 11 MEDIAN RESPONSE MODE RESPONSE AVERAGE LENGTH 0.08 36 RESPONSES DISCARDED MODE 0.00 MESSAGES RECEIVED 24 0.4337 LOW RESPONSE VARIANCE HIGH RESPONSE 2.00 AVERAGE LENGTH 445 95 PERCENT CI

AVERAGE	QUEUE TIN	ME	0.00											
-PERCENT	ILE RES	SPONSE	TIME	AVERA	.GE									
0 90			1.15	0.	24									
1WSim RE	SPONSE TIN	ME ANA	LYSIS						TI	ME 17.10.50	, SEPTEMBER	22, 2004	PAGE	4
RUN TI	ME 17.10.2	22, SE	PTEMBER 22	, 2004	VERSION	1 RELEAS	E 1.0.1							
0														
SUMMARY	REPORT	NET	WORK ALL	NETWORKS	PRC	CESS ACT	UAL	TIME LI	MITS	S ALL				
					EXI	T		START I	TME	171024				
					TEF	MTYPE		END TIM	1E	171047				
-RESPONSI	E TIME	COUNT	RESPONS	E TIME	COUNT	RESPONSE	TIME	COUNT	RES	SPONSE TIME	COUNT	RESPONSE	: TIME	COUNT
0	0.00	2		0.01	1		0.02	2		0.08	1		0.09	T
	0.19	Ţ		0.86	1		1.15	T		2.00	1			
-MEAN I	RESPONSE		0.40	MESS	AGES SENI		11	NUMBER	OF I	RESPONSES	11			
MEDIAN 1	RESPONSE		0.08	A	VERAGE LE	INGTH	36							
MODE 1	RESPONSE							RESPONS	SES I	DISCARDED	0			
LOW 1	RESPONSE		0.00	MESS	AGES RECE	IVED	24	VARIANC	CΕ		0.4337			
HIGH 1	RESPONSE		2.00	A	VERAGE LE	INGTH	445	95 PERC	CENT	CI				
AVERAGE	QUEUE TIN	ME	0.00											
-PERCENT	ILE RES	SPONSE	TIME	AVERA	GE									
0 90			1.15	0.	24									
1WSim RE	SPONSE TIN	ME ANA	LYSIS						TI	ME 17.10.50	, SEPTEMBER	22, 2004	PAGE	5
RUN TI	ME 17.10.2	22, SE	PTEMBER 22	, 2004	VERSION	1 RELEAS	E 1.0.1							
0 END														

!! END OF JES SPOOL FILE !!

Appendix D: Debugging

The following files can be used for debugging:

The most recently-sent JCL file for the WSim TM schedule is saved in the file <Rational TestManager install path>\WSim Adapters\SentJCL.log.

The following logs exist for both the WSim schedules and custom JCL scripts and are in the Logs directory under the <test source script> directory.

FTP.log contains the information from sending the information for the WSim TM schedule or custom JCL run.

MSG.log contains the information displayed in the window from the job run.

hjorecover.log contains information from the retrieval of the host job output file.

The following log is only for WSim TM schedules and exists in the HOST_DATA directory under the <test script source> directory.

psretrieve.log contains information from retrieval of the WSim TM project and schedule.

Appendix E: Troubleshooting

This appendix lists some of the possible errors you may encounter when running WSim TM schedules and custom JCL scripts. Job return codes are checked. For a WSim TM schedule run, there is a search for the string "WTMEND: All scripts run" to indicate a successful run. User actions follow the error descriptions.

Message: Explanation: Action:	The FTP username or password is incorrect You have bad login information. Correct the login information.
Message: Explanation: Action:	Invalid hostname The given hostname is not a valid hostname. Correct the hostname.
Message: Explanation: Action:	Unable to connect to the requested host Hostname is unknown. Check and correct the hostname.
Message: Explanation: Action:	There is no FTP server running on the host The host is not accepting FTP connections. Check and correct the hostname or install/start the appropriate FTP server with JES on the host due to timeout.
Message: Explanation: Action:	The ftp command has been canceled due to a timeout. The ftp communication has timed out. If the job was started on the host machine, Host Job Output can still be downloaded using the Recover Job Statuses selection. Otherwise, run the test again. If problem persists, run tests serially instead of in parallel.
Message: Explanation: Action:	FTP communication has timed out The ftp communication has timed out. If the job was started on the host machine, the Host Job Output can still be downloaded by using the Recover Job Statuses option. Otherwise, try running the test again. If the problem persists, run the tests serially instead of in parallel.
Message: Explanation: Action:	JES is not implemented on the host machine JES is not installed. Install JES.
Message: Explanation: Action:	Unable to open file <i>filename</i> for reading. The WSim Adapter could not read from <i>filename</i> . Make sure <i>filename</i> exists and that you have read access.
Message: Explanation: Action:	File <i>filename</i> is an empty file The file <i>filename</i> is an empty file. Check the submitted JCL or skeleton file. It should not be blank.
Message:	An unknown error number num has occurred in procedure

Explanation:	An unexpected system error number <i>num</i> occurred during <i>procedure</i> . A system provided error message (if one exists) is also displayed. If the problem persists, contact your system
	administrator.
Message:	Could not locate job <i>JobId</i> . FTP user might not have access to job.
Explanation:	Job <i>JobId</i> was started by JES, but the job cannot be found on the host. Either the FTP user who submitted the job does not have access to view the job, or the job was canceled.
Action:	If submitting a custom JCL script, make sure the JOBNAME is the FTP user ID with an additional character of 0-9 or A-Z. Otherwise, check with the system administrator to make sure you have permission to view submitted JES jobs, and that they were not canceled.
Message: Explanation:	Unable to open file <i>filename</i> for writing The WSim Adapter tried to write to <i>filename</i> but could not.
Action:	Make sure the directory containing <i>filename</i> and filename are not read only. If you have permission to write to <i>filename</i> , reboot to remove any locks other processes might have on <i>filename</i> .
Message:	<i>num</i> of <i>total</i> job steps returned non-zero condition codes
Explanation:	Some job steps returned non-zero condition codes, indicating an error during execution on the host machine.
Action:	Look at the Host Job Output for more details.
Message:	"WTMEND: All scripts run" not found in schedule
Explanation:	The WSim Adapter expects to find this message to indicate the successful execution of the WSim TM schedule.
Action:	Look at the Host Job Output for more details.
Message: Explanation:	Job step ended abnormally. A job step ended abnormally (with an ABEND), indicating an error during execution on the host machine.
Action:	Look at the Host Job Output for more details.

Below is a list of informational messages given through Rational TestManager:

Message: Explanation: Action:	Job JobId left running The job, JobId, was left running on the host machine. The Host Job Output should be downloaded later with the Recover Job Statuses selection.
Message: Explanation:	Host Job Output has been saved to <i>filename</i> The Host Job Output is saved on the local computer at the specified location.

Action: View the Host Job Output in the location specified, if needed.

The WSim Adapters have limited control over the testing environment provided by the Rational TestManager. The following warnings/errors may be presented by Rational TestManager but should not impact the operation of the WSim Adapters.

General restrictions:

- Remote Rational TestManagers are not supported.
- Projects being shared from a database through multiple Rational TestManagers are not supported.

Test script source restrictions and errors:

- Do not use the same directory for two or more test scripts. This could cause possible run time errors.
- The following message may appear when one user is using the same local directory for a script source as another Rational TestManager user.

"Another user is using <RTM test cases> as a source repository. It is highly recommended that a directory only be used as one source repository. Unexpected behavior with login information can occur if multiple users access the same repository."

You can disable the check for this by deleting registry value HKEY_LOCAL_MACHINE\SOFTWARE\Rational Software\Rational Test\WSim Adapters_SAMEUSRMSG_ or by changing its value to "0".

Test suite restrictions and errors:

• You could get the following error message when selecting a new test script by using the Function Suite Wizard.

"Application Error: An unknown error was encountered selecting a type from the AutoSchedWizard2 property page."

You can ignore this message. This is a known problem with Rational TestManager.

- You could get the datastore error #203 when right-clicking **Properties** on a test script because of a test case not being selected for the implementation.
- Choosing to monitor resources under Resource Monitoring may cause a hang. If there is a
 hang, select File -> Run Test Suite again for the same suite. Uncheck the Monitor
 resources box. The test suite should run.
- If you are running a test case in a test suite or plan that does not have a schedule selected in the **Automatic Implementation** section under the **Implementation** tab, the following message may occur:

ERROR! Test script source not configured properly

Bring up the **Properties** window and select the **Implementation** tab. Click the **Select** button, select a project, and then select a schedule based on the test script source.

• If you try to set a test script as the implementation for a test case but you have not successfully loaded a project list for the source, the following message appears:

No files found for the given source. Please try reloading the projects and schedules from the source in the test script view.

• If the login information for a WSim TM schedule has changed and this schedule is being set as the implementation for a test case, the following message appears:

You have changed your account information for this source since the last refresh and/or reload of the projects and schedules. You must refresh your test script view and reload the project and schedule information before running a schedule.

Would you like to reload the schedules?

Choose Yes or No.

• If you change the login information for a WSim TM schedule and then try to run it, the following error message appears:

You have changed your account information for this source since the last refresh and/or reload of the projects and schedules. You must refresh your test script view and reload the project and schedule information before running or selecting a schedule.

FTP errors and situations:

• If there is a hang in when retrieving projects or schedules, check the log to see where the hang occurred. There is a timeout value of 50 seconds for FTP connection and two minutes for retrieval.

If there is a timeout, you must issue a **Refresh All** and expand the test script source to get the latest projects and schedules.

• If there is a hang in the **Recover Job Statuses** action, check the log to see locate the hang. There are three timeouts of two minutes each for a total of six minutes.

If there is a timeout, reissue the **Recover Job Statuses** action.

- The error message *"Host directory structure is not set up correctly"* appears when there is no VARSINFO member found for the user ID. Check to make sure a WSim TM project and schedules have been created.
- The Windows error message "*PROJLIST member doesn't exist, can't FTP the member*" could be caused by a member in use, even though the error message is not correct.
- If PROJLIST does not contain the projects, the following message appears:

No projects exist in account

Ensure that a WSim TM project and schedules have been created.

- A right-click on a project does not return any information.
- Submitting a job may cause a hang. There is a timeout value of 50 seconds.

Login Information errors:

- Before running a test script, provide all the login information needed for a run. Otherwise, users who submit multiple test scripts within a suite may have the login window waiting for information. This causes a delay in the execution of the test script.
- Running a schedule after changing the login information without a refresh may cause the following message: *"Fatal compile error, run terminated"* to appear in the **Messages from running suite** window. The user must refresh the projects and schedules.

Schedule run errors and restrictions:

- The log data set may be missing from a schedule and cause the submitted job to have a JCL error. This could occur for WSim TM schedules created prior to WSim Version 1 Release 1.0.1 that were never run. This could also occur for schedules that were created outside WSim TM and placed into the schedules data set.
- If RTM 6.00 is installed on Windows 2000, the Monitor->Stop Test Run selection actions do not work. If Rational TestManager 6.12 is installed on Windows 2000 or XP, the abort action of the Monitor->Stop Test Run cancels the job.
- If a job is terminated because of a stop run action or because a timeout is reached, check the status of the LUs in the WSim schedule to ensure they are not in a logged on state or any other state.
- If the job does not start or complete, check the job on MVS. The job may need to be ended or cancelled.
- If the job is still in active state and Rational TestManager is closed, the job status window may still be active. Either end the job on MVS or kill the rtstsee.exe process.
- Various error situations could occur that would leave the job running. Check the job on the host system if the job appears to be running too long.
- Do not run a test plan after a test case or test suite has been started. An abend occurs. This is a known RTM problem.

Migration issues:

- If no loglist data set has yet been created , a submitted job will have a JCL error due to an invalid loglist data set of null. The assumption is that the schedule has been run already. Otherwise, run the schedule from WSim TM and then refresh the projects and schedules from the WSim Adapters and run the schedule again.
- The WSim Adapters use the accent mark (`) for parsing strings. WSim project names should not contain this mark.