

**IBM® Support Assistant Lite Tool for
WebSphere Application Server**

Quick Start Guide

Version 1 Release 3.0

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Introduction

The IBM® Support Assistant Lite for WebSphere® Application Server tool is provided as an aid for troubleshooting IBM WebSphere Application Server and other IBM software products. The tool focuses on automatic collection of problem data; it also provides symptom analysis support for the various categories of problems encountered by IBM software products. Information pertinent to a type of problem is collected and analyzed to help identify the origin of the problem under investigation. The tool assists customers by reducing the amount of time it takes to reproduce a problem with the proper RAS tracing levels set (trace levels are set automatically by the tool), as well as by reducing the effort required to send the appropriate log information into IBM Support. In addition, the tool performs symptom analysis to help streamline the problem determination process. In this quick start guide, we tell you how to get up and running with the IBM Support Assistant Lite for WebSphere Application Server tool.

Step-by-Step

In most cases, the following sequence of steps will get you up and running with the tool. If you run into problems, or if you would like more information on any of these steps, you can refer to the sections below that follow this one.

1. Install the tool by extracting the files from the archive file that you downloaded.
 - Extract the tool to any directory you choose.
 - If WebSphere Application Server has been installed successfully, we recommend that you extract the tool to the WebSphere Application Server *install_root* directory.
 - Otherwise, extract the tool to any directory you choose.
 - See the sections below for details of how to perform the extractions.
2. Run the tool in either the Swing GUI mode or the command-line console mode.
 - If you extracted the tool to the WebSphere Application Server *install_root* directory, you simply execute the appropriate launch script from the tool's */ISALite* directory.
 - If you extracted the tool to a different directory, you must first follow the procedure described below for setting the *JAVA_HOME* environment variable. Once you have done this, you can then execute the launch script.
 - Once you have started the tool, follow the instructions below for interacting with it as it performs a collection.

You will need to run the IBM Support Assistant Lite tool with the user ID for which you have configured your WebSphere Server instance. In case you are not able to provide root/Admin access to the user to run the collection scripts, please make sure that the user ID has administrator privileges for your WebSphere Server - for example, *startServer*, *stopServer*, *wsadmin* commands.

Tool Installation

Installing the Tool

In all cases, installation of the IBM Support Assistant Lite tool is simply a matter of extracting the files from the archive that you downloaded. The files can be extracted to any file system location you choose on the system where you will be running the tool. However, if you choose to extract the files to the WebSphere Application Server *install_root* directory, you will be able to save a step when the time comes to invoke the tool.

Extraction on Windows®

Once you have downloaded the ISALiteForWAS_Win.zip archive, you can use any zip utility to unzip it to your chosen target directory. The operation will create a subdirectory `\ISALite` in this target directory.

Extraction on Linux®, AIX®, HP-UX®, and Solaris®

Once you have chosen the target directory where you want to install the tool, you can use the following procedure to install it.

1. Download the ISALiteForWAS_Unix.tar.gz file to the target directory you chose.
2. Navigate to this directory and issue the command `gzip -d ISALiteForWAS_Unix.tar.gz` to extract the .tar file from the .gz archive.
3. Then issue the command `tar -xvf ISALiteForWAS_Unix.tar`. This will create a subdirectory `/ ISALite` under your target directory.

Keeping a Backup Copy of the Tool

Since by default you are installing a copy of the IBM Support Assistant Lite for WebSphere Application Server tool into the directory in which the WebSphere Application Server has been installed, you should keep a backup copy of the tool's zip or tar file in another location, in case you need to uninstall and reinstall WebSphere Application Server.

Tool Usage

Setting the JAVA_HOME Environment Variable

Regardless of whether you will be using the IBM Support Assistant Lite tool in Swing GUI mode or in command-line console mode, you use the same procedure to start it: you invoke the appropriate *launch script* from a command line. In the case of a Windows system, these launch scripts are batch files. For the other environments, they are shell scripts.

Since the tool is implemented as a Java application, it is necessary to set the JAVA_HOME environment variable before the tool can start. This is the step that you can avoid by extracting the tool to the *install_root* directory for WebSphere Application Server. If you choose this location as your target directory, then the JAVA_HOME variable has already been set when the IBM Support Assistant Lite launch script reaches the point where it actually starts the IBM Support Assistant Lite tool.

If you choose to install the tool to a target directory other than the product *install_root*, you have two options for setting the JAVA_HOME variable manually.

1. You can invoke the WebSphere Application Server `setupCmdLine` script, and let it set the JAVA_HOME variable. On a Windows system, this script is available in the directory location `%WAS_HOME%\bin\setupCmdLine.bat`. You invoke it by typing "**setupCmdLine**" or "**setupCmdLine.bat**" from this directory. On Linux, AIX, HP-UX, and Solaris systems, it is available in the directory location `$WAS_HOME/bin/setupCmdLine.sh`. You invoke it by typing "**./setupCmdLine.sh**" from this directory.
2. You can set the JAVA_HOME variable explicitly. Since the IBM Support Assistant Lite tool requires a JRE at the level 1.4.2 or higher, you must first make sure that a suitable JRE is installed on the system where the tool will be running. If it is, then you will need to issue an operating-system-specific command to set the JAVA_HOME variable to point to this JRE. For example, if you have `jdk1.4.2` installed at `c:\jre1.4.2` on a Windows platform, you would set JAVA_HOME using the following command:

SET JAVA_HOME=c:\jre1.4.2

On a Linux, AIX, HP-UX, or Solaris platform, the exact command syntax to set JAVA_HOME varies depending on which shell you are using. For example, if you are using bash shell and you have the JDK installed in /opt/jre142, you would set JAVA_HOME using the following command:

export JAVA_HOME=/opt/jre142

After installing the tool into one of the default locations, you may find that it fails to start with the error message "ERROR: This tool requires JRE 1.4.2 or greater to run." This message indicates that the JRE included with WebSphere Application Server, which the tool automatically uses when it has been installed into one of the default locations, is at a level lower than 1.4.2. In this case you should install the tool into a different location and then follow the instructions in this section to set the JAVA_HOME variable manually to point to a JRE of the proper level.

Starting the Tool in Swing GUI Mode

Once you have insured that the JAVA_HOME variable will point to a JVM at the correct level, all that remains is to issue the correct launch script. For the Swing GUI mode, this script will be the following:

- For the Windows environment, it will be the **runISALite.bat** script in the tool's \ISALite directory.
- For the Linux, AIX, HP-UX, and Solaris environments, it will be the **runISALite.sh** script in the tool's /ISALite directory.

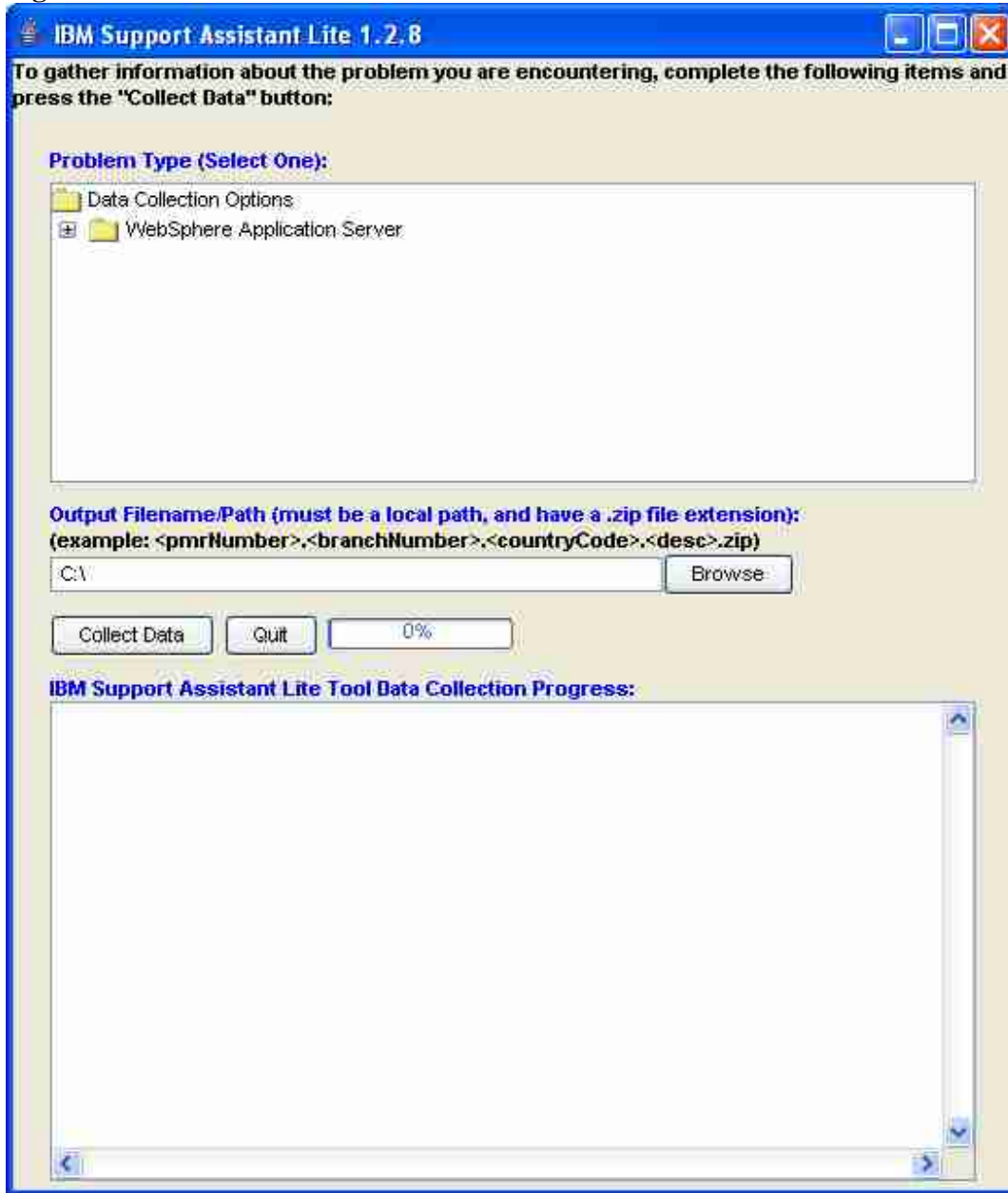
Starting the Tool in Command-Line Console Mode

Once you have insured that the JAVA_HOME variable will point to a JVM at the correct level, all that remains is to issue the correct launch script. For the command-line console mode, this script will be the following:

- For the Windows environment, it will be the **runISALiteConsole.bat** script in the tool's \ISALite directory.
- For the Linux, AIX, HP-UX, and Solaris environments, it will be the **runISALiteConsole.sh** script in the tool's /ISALite directory.

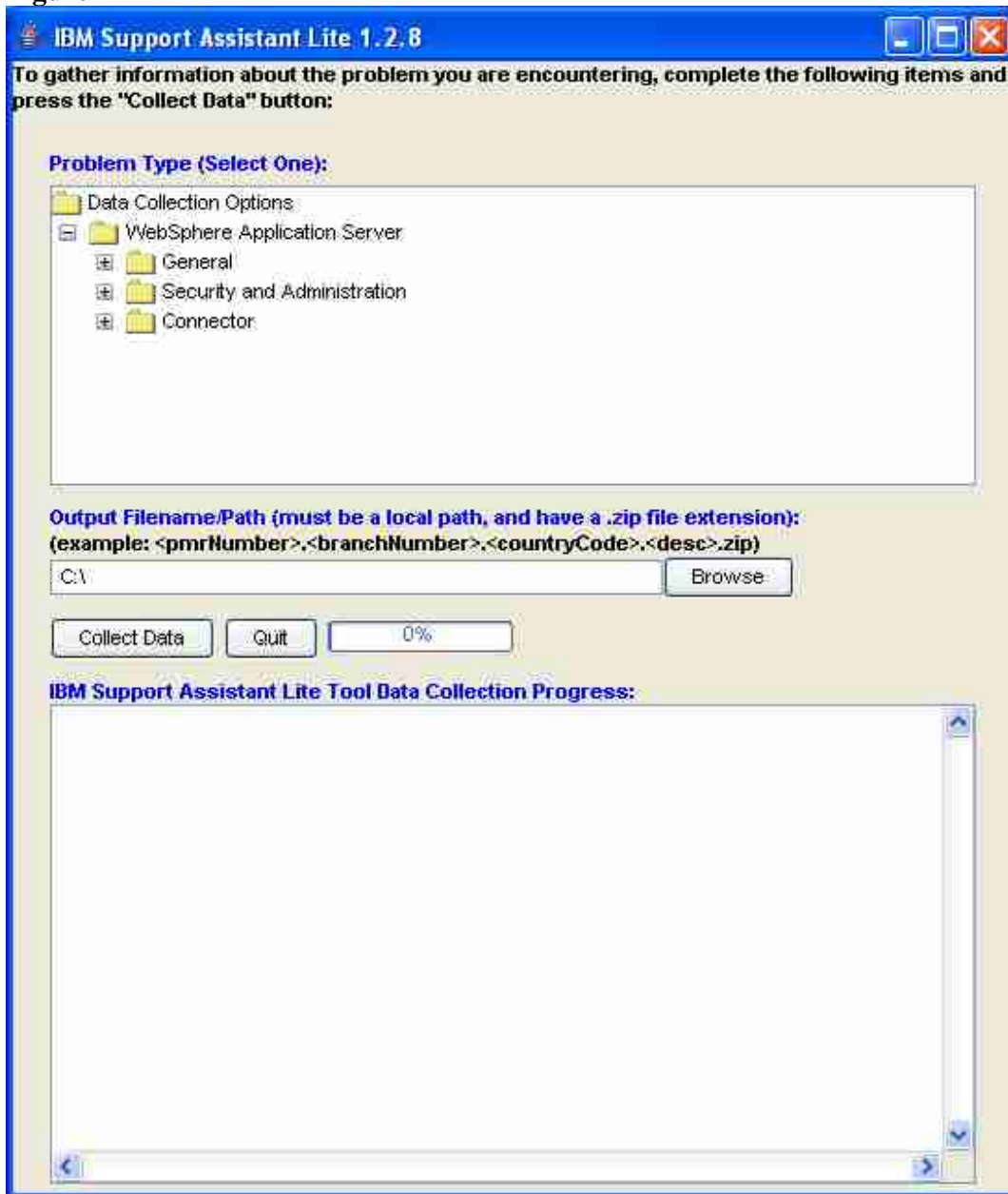
Interacting with the Tool in Swing GUI Mode

Figure 1



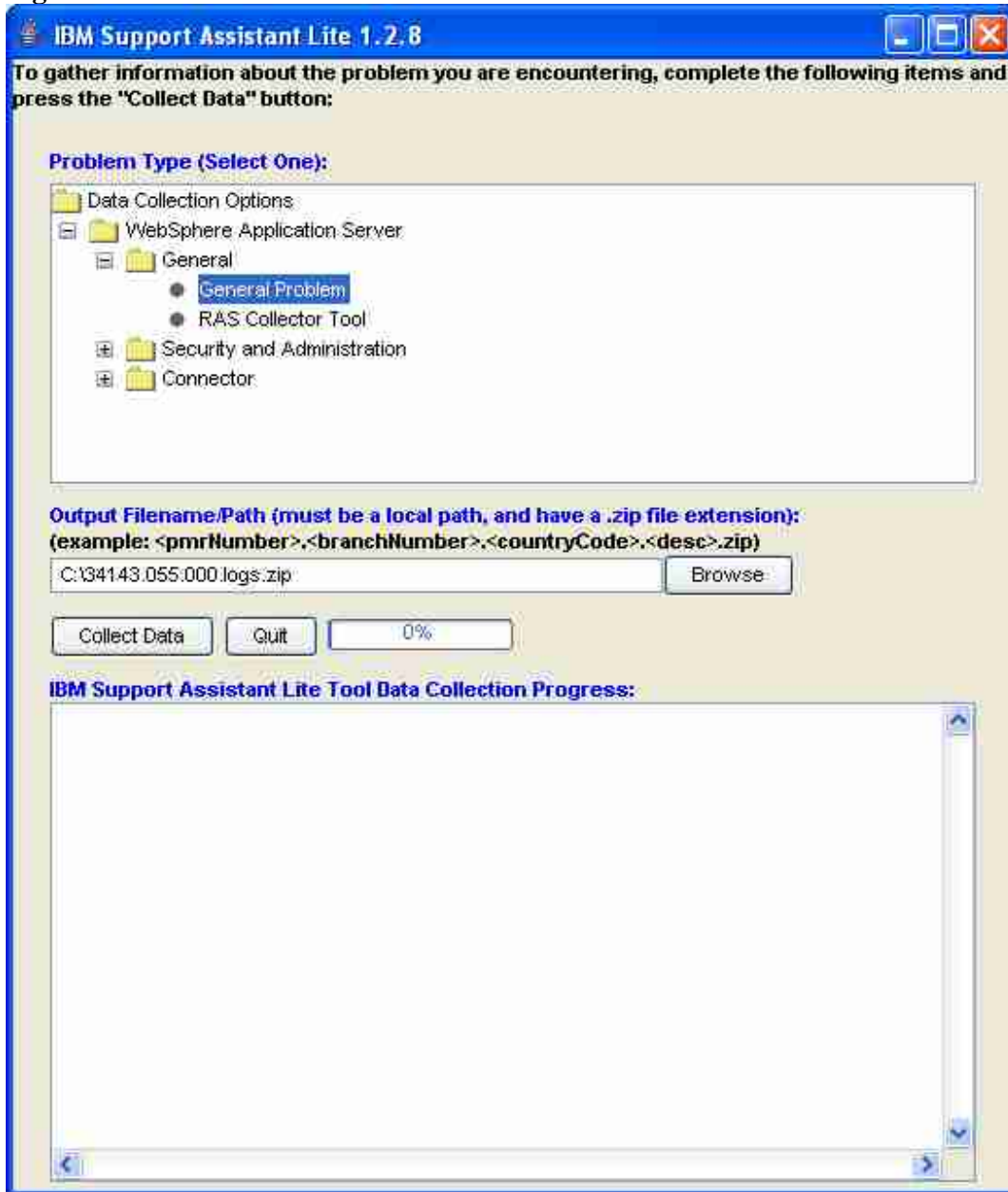
Once the IBM Support Assistant Lite for WebSphere Application Server tool has been started in Swing GUI mode, the graphical interface shown in Figure 1 will be displayed. Before the tool can be used to perform data collection and analysis, you must first select a problem type in the Problem Type window. In the initial view, the tree is collapsed to show only its top-level folders. You can expand the top-level folders to reveal the folders nested below them (Figure 2).

Figure 2



Continue expanding folders until the problem type you want is revealed, then highlight it (Figure 3).

Figure 3



Other than Problem Type, the only input field value that you must supply on the main GUI is a filename for the data collection zip file. At this point, the filename can be anything you want: you might, for example, use the filename *Install_failed_2007_01_03*. If you do not supply it, the tool will automatically append the “zip” extension to it. If you have a PMR open for the problem you're performing the collection for, however, and if you'll be letting the tool FTP the collection results in to IBM Support automatically, then at the FTP step the tool will enforce a specific file-naming convention required by IBM Support: the file name must begin with three specific fields: **<pmrnumber>.<branchnumber>.<countrycode>.<short description>.zip**. An example of a filename of this type would be *34143.055.000.logs.zip*. For compatibility with a previous format, commas are also accepted in place of the first three periods (but not in place of the fourth one prior to the “zip” extension). However, periods are the preferred delimiter. Figure 3 shows the tool with the Problem Type highlighted and the Output Filename/Path field filled in.

With these values filled in the next step is to press the Collect Data button. As it proceeds, the collection script will ask you for any additional information it needs to complete its collection activities. Most WebSphere Application Server scripts ask for the WebSphere Application Server root directory. A script may also ask you for additional configuration information, for information about the sequence of events leading up to the problem you are dealing with, or for your preferences regarding how it should complete the collection. Once it has all the information it needs, the script will proceed with the remainder of the collection.

When the tool completes the data collection and analysis operations, you can FTP the results to IBM Support. The name of the zip file the tool sends to IBM Support via FTP will be the filename entered in the Output Filename/Path box, with the server hostname and current timestamp appended to it.

Example: if the Output Filename/Path filename used was **34143.055.000.logs.zip**, the name of the zip file sent to IBM would be **34143.055.000.logs.zip-<hostname>-<currentTimestamp>.zip**.

Collection details for each WebSphere Application Server problem type can be found in their corresponding MustGather documents:

Problem type	MustGather
General – read first for all WebSphere Application Server products	http://www.ibm.com/support/docview.wss?rs=203&context=SW000&q1=1145599&uid=swg21145599
Administrative Console Problem	http://www.ibm.com/support/docview.wss?uid=swg21199337
Global Security Problem	http://www.ibm.com/support/docview.wss?rs=180&uid=swg21140669
Database Connection Pooling Problem	http://www.ibm.com/support/docview.wss?rs=180&uid=swg21254645
Java Message Service (JMS) Problem	http://www.ibm.com/support/docview.wss?rs=180&uid=swg21153217
Object Request Broker (ORB) Problem	http://www.ibm.com/support/docview.wss?rs=180&uid=swg21157005

Web Services engine and tooling problems	http://www.ibm.com/support/docview.wss?rs=180&context=SSCR4XC&q1=MustGatherDocument&uid=swg21198363
Web services security (WS-Security) problems	http://www.ibm.com/support/docview.wss?uid=swg21199335
WebSphere Application Server start and stop problems	http://www.ibm.com/support/docview.wss?uid=swg21141075 http://www.ibm.com/support/docview.wss?uid=swg21201014
WebSphere System Management Problems	http://www.ibm.com/support/docview.wss?uid=swg21199596
WebSphere Deployment Problems	http://www.ibm.com/support/docview.wss?uid=swg21199344
WSAdmin Problems	http://www.ibm.com/support/docview.wss?uid=swg21140940
WASService Problem	http://www.ibm.com/support/docview.wss?uid=swg21195440
Java Management Extensions (JMX) problem	http://www.ibm.com/support/docview.wss?uid=swg21196218
Java Secure Socket Extension (JSSE) Problem	http://www.ibm.com/support/docview.wss?uid=swg21162961
Federated Repository Problem	http://www.ibm.com/support/docview.wss?uid=swg21246404

Problem running as non-root	http://www.ibm.com/support/docview.wss?uid=swg21176003
Java 2 Security Problem	http://www.ibm.com/support/docview.wss?uid=swg21199333
Cluster Ripple Start Problem	http://www.ibm.com/support/docview.wss?uid=swg21193417
Profile Wizard Problem	http://www.ibm.com/support/docview.wss?uid=swg21196228
JNDI Naming Problem	http://www.ibm.com/support/docview.wss?uid=swg21143296
EJB Container Problem	http://www.ibm.com/support/docview.wss?uid=swg21244478
Scheduler Problem	http://www.ibm.com/support/docview.wss?uid=swg21220349
Java Transaction Services (JTS) Problem	http://www.ibm.com/support/docview.wss?uid=swg21153216
Workload Management Problem	http://www.ibm.com/support/docview.wss?uid=swg21052165

Validation of the Collection Zip File Name

The automation at the IBM Support FTP site <ftp.emea.ibm.com> is entirely dependent on the file-naming convention described on the IBM Support Assistant Lite tool's main GUI. If it receives a file with a name that doesn't follow this convention, then that file is never seen by IBM Support. Consequently, before the tool invokes an FTP operation to send a collection zip file to <ftp.emea.ibm.com>, it validates the collection zip file's name against the convention. If the file name isn't in the correct form, you will be presented with a pop-up window so that you can correct the file name. The current file naming convention for the FTP site is the one documented here, where the individual fields in the composite file name are separated by periods. Previously, however, the

convention was to use commas as the separators. Since the FTP site still handles files named according to the previous convention, the IBM Support Assistant Lite tool's validation logic accepts both periods and commas as delimiters.

Interacting with the Tool in Command-Line Console Mode

The console mode provides you with command-line control of the IBM Support Assistant Lite tool's collection scripts. The tool includes several features to assist you when you interact with it in console mode, including one that lets you record your responses from a console-mode session in a file and then use the file to drive subsequent executions of the same collection script.

To achieve this, you first create a "response file" that contains the answers to all the questions for a certain run through the data collector. The next time the same data collection needs to be executed, you simply provide the response file when starting the tool and the answers that were previously provided will be used to answer all the questions. Response files can be tweaked and modified to vary the answers to perform different data collections too.

To create a response file, you simply invoke the tool with the `-record` option, followed by the name of the response file. For example, in a Linux environment, you would run:

```
./runISALiteConsole.sh -record was61-response.txt
```

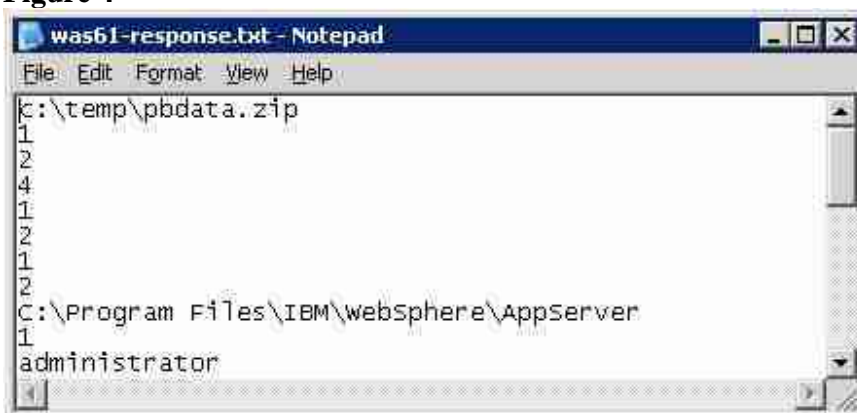
When running in this mode, you will be taken to an ordinary interactive session, where you supply the responses to the script's prompts. In addition to influencing the current collection, however, your responses are also saved in the file that you named. Once the interactive session has completed, you can use this response file to execute the same script in the future without the need for explicit user input.

For example, to run the tool in silent mode in a UNIX environment using the response file that you recorded, run:

```
./runISALiteConsole.sh was61-response.txt
```

Figure 4 shows a sample input script file for a WebSphere Application Server security problem. The first line specifies the collection ZIP file name for the collection. The next "1" indicates that this file should be used for this script execution. The sequence of numbers following it navigates down through the menu tree, to reach the point where it can invoke the WebSphere Application Server security collection script. Next are the input fields where you supply the WebSphere Application Server installation directory. The final numbers and text represent your responses to various dialogues within the WebSphere Application Server Security collection script.

Figure 4



The response file is a plain text file, so you can edit it to change the user's responses as needed. For example, if you want to run the tool on a different system than the one on which the response file was recorded, you might need to adjust some of the values in the response file. Assuming a WebSphere Application Server security, you might need to update the response file with the WebSphere Application Server installation directory, administrator user name, and password for the new system. When using response files, remember that sensitive information, such as user names and passwords, might be stored in these files, so it is important that you manage these files in a manner that prevents unauthorized access to sensitive information. Also, not all data collections are suitable for the silent collection option. Some data collections always require some interaction with the user. For example, you might be asked to reproduce the problem during the data collection so the appropriate log and trace files are collected. In this case, silent collection is not capable to record and reproduce this step.

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