IBM® Support Assistant Lite for IBM InfoSphere Information Server

User's Guide

Release 11.7.1.1

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Note:
Before using this information and the product that it supports, read the general information under Notices and trademarks.

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Introduction

The IBM® Support Assistant (ISA) Lite for InfoSphere® Information Server tool helps you troubleshoot IBM InfoSphere Information Server problems. The tool focuses on automatic collection of problem data and provides diagnostic verifications of an InfoSphere Information Server installation. Information that is pertinent to a problem is collected and analyzed to identify the origin of the problem.

This reference describes the data collection details that the IBM Support Assistant Lite for InfoSphere Information Server tool provides for solving problems with the InfoSphere Information Server software products.

Data collection guidelines

You can use the IBM Support Assistant Lite for InfoSphere Information Server tool to collect data, files, and artifacts from the local installation of InfoSphere Information Server. The tool performs nondestructive tests and passive collections of data to report the system health and verify the correct configuration of the installation. The tool adheres to the following guidelines:

- All collection and diagnostic tools perform functions that are nondestructive. The tools perform operations that do not modify, change, or delete data from the InfoSphere Information Server installation. However, the Detect, view, and fix issues with invalid InfoSphere DataStage projects utility options modify data in the InfoSphere Information Server installation. Also, the Metadata Repository (XMeta and Staging) Diagnostic test may apply fixes to the repository database. These operations can be triggered and requested only by the user. The operations are not part of an automatic collection or automated task.

- All collection tools collect files and data from the InfoSphere Information Server local installation. The tools do not gather personal data nor include data in the customer databases or other sensitive information.

- Passwords that are prompted by the tool to perform and verify connection operations are not included in the collection data nor stored or saved in files. The passwords are also not logged in log files.

- If sensitive information such as passwords is contained in the collected files or reports, it is detected and hidden. In some instances, files that contain other types of sensitive data are removed from the collection .zip file.

- No data, file, or information is sent automatically or without your knowledge to IBM Support. Collection .zip files that are created by the tool remain local to your disk until you use FTP to send the files to IBM Support.

- The user interface, messages, and HTML reports are only in English. The tool can run on platforms that have a non-English locale, but the user interface remains in English. Dates and times that are displayed in reports and messages also use a standardized international format and do not adhere to the locale of the machine where the tool is running.

Getting started

The ISALite for InfoSphere Information Server tool is installed automatically by the InfoSphere Information Server installer. However, a newer version of the tool may be available from the Download the IBM Support Assistant Lite for InfoSphere Information Server tool download site.
Also, you may want to download the tool on a clean system that does not have the InfoSphere Information Server product installed, in order to invoke the prerequisite checker or the Install Log Analyzer tool.

If the tool is installed under the home installation folder of InfoSphere Information Server, in the `%IS_HOME%\ISALite` folder, see Tool usage for instructions on how to interact with the tool as it collects data.

To install the tool or upgrade a previous installation of the tool, follow these instructions:

1. Download the tool, and then install the tool by extracting the files from the archive file that you downloaded.

    - See Tool installation for details on extracting the files.

2. If needed, set the JAVA_HOME environment variable. See Setting the JAVA_HOME Environment Variable for details on whether this step is required. Once you have done this, you can run the tool.

3. Run the tool in the GUI mode or the command-line console mode.

    - See Tool usage for instructions on how to interact with the tool as it collects data.

Tool installation

Getting the latest version of the tool

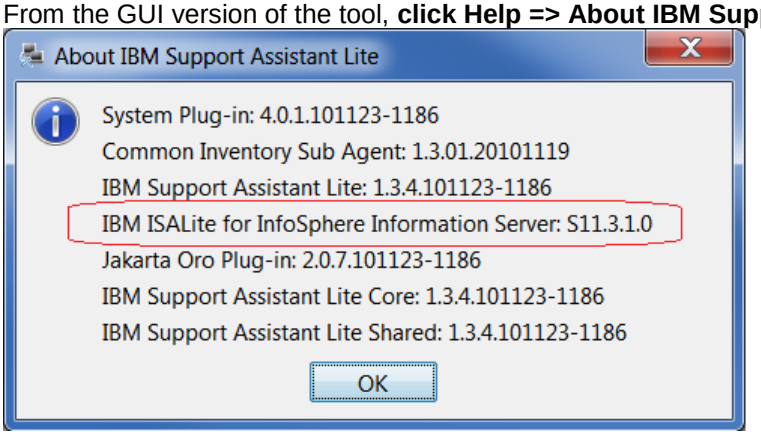
The IBM Support Assistant Lite for InfoSphere Information Server tool is in the `%IS_HOME%\ISALite` directory of InfoSphere Information Server.

As the tool gets updated periodically, Download the IBM Support Assistant Lite for InfoSphere Information Server tool to get the latest version of the tool.

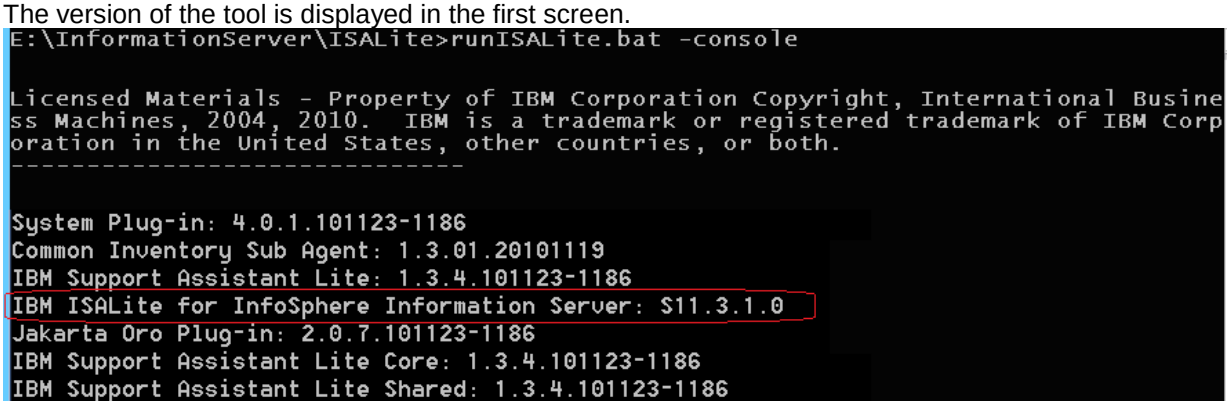
Verifying the version of the tool that is installed

A newer version of the tool might be available at the download site. Verify the version of the tool that is installed by using one of the following methods:

- Open the `ISALite\buildinfo.txt` file and review the `BUILD_VERSION` property.
- From the GUI version of the tool, **click Help => About IBM Support Assistant Lite**.



- From a command prompt, issue the following command: `runISALite.bat[|.sh] -console`
  The version of the tool is displayed in the first screen.



Downloading the latest version of the tool

A more recent version of the tool may be available as an archive file at the Download the IBM Support Assistant Lite for InfoSphere Information Server tool site. The following files are available:

- `ISALiteInformationServer_S11.7.<nnn>.zip` archive file for Windows®
- `ISALiteInformationServer_S11.7.<nnn>.tar.gz` archive file for the other supported environments

where <*nnn*> in the package file name is the current version number of the package.
The documentation is also available to download.

Installing the tool

Where to install

The ISALite tool performs tests, verifications, and collections that are local to the computer where ISALite is installed and started. Therefore, to get a complete analysis of the InfoSphere Information Server installation, the tool needs to be installed and run on every computer where InfoSphere Information Server tiers are installed. For immediate benefit and a valuable summary of debugging information, run the tool on the services tier and engine tier, at minimum.

Installing the first time

If the tool is not installed in the `%IS_HOME%\ISALite` folder of the InfoSphere Information Server installation, extract the files from the archive file that you downloaded into the home installation directory of InfoSphere Information Server. For example, extract the files into the `C:\IBM\InformationServer` folder in Windows systems or the `/opt/IBM/InformationServer` folder in UNIX, AIX, and Linux. The extraction process creates an `ISALite` directory in that folder.
If InfoSphere Information Server is not installed, and you want to use the ISALite for InfoSphere Information Server tool to run the prerequisite checker, extract the archive file that you downloaded in any folder. The path name of this installation folder cannot contain a space or a period.

Upgrading a previous installation

If you are upgrading to a newer version of the tool, remove or rename the `ISALite` folder of the previous installation in the home installation directory of InfoSphere Information Server, before you install the upgrade.
Extract the files from the archive file that you downloaded in the home installation folder of InfoSphere Information Server. The extraction process creates an `ISALite` directory in that folder.

Extracting files on Windows® systems

1. Navigate to the home installation directory of InfoSphere Information Server, for example `C:\IBM\InformationServer`.

2. Use any extraction utility to extract the files from the archive file that you downloaded to the home installation folder of InfoSphere Information Server. The operation creates the subdirectory `\ISALite` in the target directory.

Extracting files on Linux®, AIX®, and Solaris® systems

Navigate to the home installation directory of InfoSphere Information Server, for example `/opt/IBM/InformationServer`.

1. To extract the .tar file from the .gz archive, enter the following command:
   ```
   gzip -d ISALiteInformationServer_S11.7.<nnn>.tar.gz
   ```
   where <*nnn*> in the package file name is the current version number of the package.

2. To create the `/ISALite` subdirectory under your target directory and extract the files for the tool, enter the following command:
   ```
   tar -xvf ISALiteInformationServer_S11.7.<nnn>.tar
   ```
   where <*nnn*> in the package file name is the current version number of the package

Disk space for the tool and collection artifacts

The IBM Support Assistant Lite for InfoSphere Information Server tool's file and documentation takes approximately 32 MB of disk space. Additionally, when the tool is run, log files and .zip files that contain collected data are also generated. Given the amount of data and files collected, and the size of log files (which might be as large as several megabytes), the collection .zip files can take a large amount of disk space. To ensure that enough disk space is available for a collection task, complete the following steps:

- When prompted by the tool, select a file location for the collection .zip file with plenty of disk space. Do not use the same disk location where the Information Server installation is located.
- After you send collection .zip files to IBM Support, delete the files if they are no longer needed.
- Check chapter IBM Support Assistant Lite temporary folder for additional information about temporary disk space area.

The tool cannot determine the disk space requirements for the collection .zip file, nor can it ensure that enough disk space is available once the task starts. Therefore, the tool cannot prevent an out of disk space situation. Ensure that enough disk space is available at the location where you create the collection .zip file and in the temporary folders.

Tool usage

Setting the JAVA_HOME environment variable

Because the tool is implemented as a Java™ application, the tool needs to find an IBM Java Runtime Environment (JRE) before the tool can start.

If the tool is installed under the home installation folder of InfoSphere Information Server, in the `%IS_HOME%\ISALite` folder, the tool recognizes the installation and uses the IBM JRE that is included in the installation.
If the **JAVA_HOME** environment variable is already set, clear it, and let the tool use the value that is included with the installation of InfoSphere Information Server.
You can skip these instructions and start using the tool immediately.

Use these instructions only if you have installed the tool outside of the home installation folder of InfoSphere Information Server, or you do not have an installation of InfoSphere Information Server and you plan to run the prerequisite checker or the Install Log Analyzer.

If you installed the tool outside of an installation of InfoSphere Information Server or outside of the `%IS_HOME%\ISALite` folder, you must set the **JAVA_HOME** environment variable to point to an IBM JRE.

To set the **JAVA_HOME** environment variable:

- **If InfoSphere Information Server is installed on your computer**:
  - For **Windows**, point to the JRE in the `%IS_HOME%\jdk` folder.
    The default folder is `C:\IBM\InformationServer\jdk`.
  - For **Linux, AIX, or Solaris**, point to the JRE in the `%IS_HOME%/jdk` folder.
    The default folder is `/opt/IBM/InformationServer/jdk`.

- **If IBM WebSphere Application Server is installed on your computer:**
  - Point the **JAVA_HOME** variable to the `%WAS_HOME%\java\jre` folder.
    For **Windows**, the default folder is `C:\IBM\WebSphere\AppServer\java\jre`.
    For **Linux, AIX, or Solaris** the default folder is
    `/opt/IBM/WebSphere/AppServer/java/jre`.

- **If you want to set the JAVA_HOME variable explicitly**:
  - Ensure that an IBM JRE at level 1.7, also known as version 7.0, is installed.
  - From a console view, you can invoke **java –version** to verify the version of the java JRE that is installed.
  - If you do not have an IBM JRE installed, you can download one from https://www.ibm.com/developerworks/java/jdk/.

    The Solaris JRE, Windows JRE, and JRE for machines that are not IBM machines can be found at www.java.com/en/download/manual.jsp.

- If you have the installation media for InfoSphere Information Server Version 11.5.x, the JRE can be found under `<IS_MEDIA_DIR>/_jvm` (for example `/is_suite/_jvm`).

- Issue an operating system-specific command to set the **JAVA_HOME** variable to point to the JRE root folder. The Java executable file is found in the [JAVA_HOME]`\bin` folder.

  - For **Windows**, if IBM jdk1.7 is installed, for example at `C:\jre 1.7`, and the `java.exe` file is under `C:\jre 1.7\bin`, set the **JAVA_HOME** variable by using the following command:

    SET JAVA_HOME=C:\jre 1.7

  - For **Linux, AIX, or Solaris**, the command syntax to set the **JAVA_HOME** variable varies depending on the shell that you use. For example, if you use bash shell and IBM JRE Version 1.7 is installed in `/opt/jre17` with the java executable in `/opt/jre17/bin`, set the **JAVA_HOME** variable by using the following command:

    export JAVA_HOME=/opt/jre17

Starting the tool as system administrator

Before you run the IBM Support Assistant Lite for InfoSphere Information Server tool, log in to the system as Administrator on a Windows system or as 'root' (or `sudo` root) on an AIX or Linux system. Some operations require this administration role to access certain files or data and to create topology graphs. You can start the tool as another user, but some tasks might not provide the full functionality. The following menu tasks require Administrator access:

- DB2 Database Collector
- Create a Topology Export File from the Deployment Manager
- InfoSphere Information Server Prerequisite checker
- Starting with InfoSphere Information Server version 11.7, also the Metadata (XMeta) and Staging Repository Diagnostic test

To properly collect all data from the DB2 collection, the user who invokes the collection must also have the SYSADM access role to the database.

On a Windows system, right-click the `runISALite.bat` script file and select the 'Run as Administrator' option to invoke the tool. Use the `runas.exe` command in console mode.

Starting the tool in GUI mode

Start the tool by issuing the launch script. For the GUI mode, invoke one of the following scripts in the `\ISALite` directory:

- For **Windows** systems, invoke the following script:
  - **`runISALite.bat`**
- For **Linux, AIX, or Solaris** systems, invoke the following script:
  - **`./runISALite.sh`**

You need an X-Windows installation in order to run the GUI windows mode in AIX or Linux system. Make sure the `DISPLAY` variable is set properly in the system environment.

Starting the tool in console mode

Start the tool by invoking the launch script. For the console mode, invoke one of the following scripts in the `\ISALite` directory:

- For **Windows** systems, invoke the runISALite batch script with the –console option:
  - **`runISALite.bat -console`**
- For **Linux, AIX, or Solaris** systems, invoke the following script with the –console option:
  - **`./runISALite.sh -console`**

The same tasks and functions are available in the GUI mode and the console mode version of the tool.

Starting multiple concurrent instances of the tool

Due to the sharing of the same temporary storage between concurrent sessions, multiple concurrent invocations of the IBM Support Assistant Lite for InfoSphere Information Server tool are not supported.

Interacting with the tool in GUI mode

After the IBM Support Assistant Lite for InfoSphere Information Server tool is started in GUI mode, the graphical interface shown in Figure 1 displays:

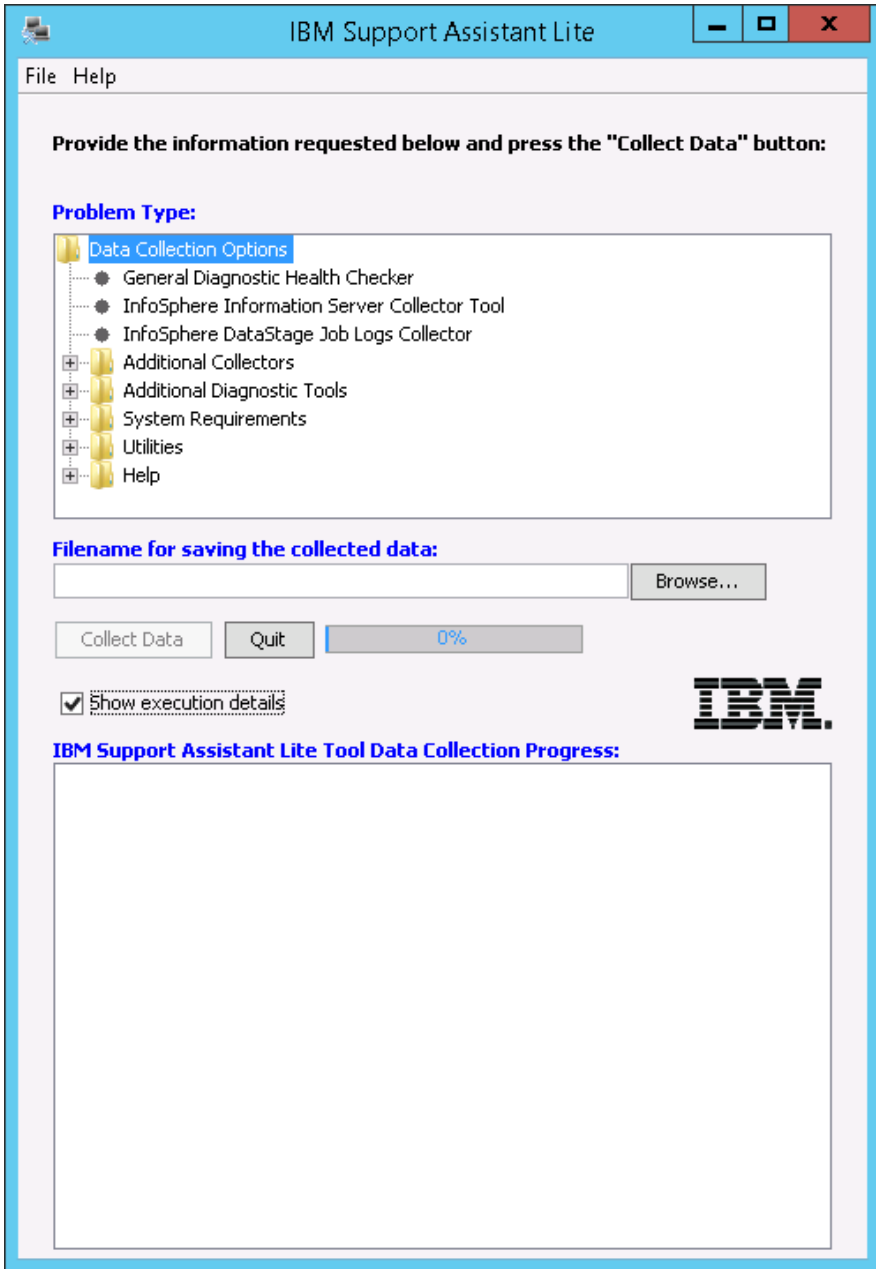


Figure 1: The tool in GUI mode under Windows

Before the tool can perform data collection and analysis, you must select a problem type in the **Problem Type** window. This window shows different groups of collection (problem) types:

Data Collection menu	Description
Data Collection Options	These tasks are useful when reporting the initial data and information that is related to a PMR to IBM Support., Tasks include the Information Server Collector, the General Diagnostic Health Checker, and the InfoSphere DataStage Job Log collector.
Additional Collectors	These tasks collect data, logs, and artifacts from the system. The tasks collect data even when the InfoSphere Information Server installation is not functioning or is in a stopped state. Also, these tools do not depend on or expect specific InfoSphere Information Server components to be installed. The InfoSphere Information Server collector also gathers logs and artifacts from WebSphere Application Server if it is installed. A separate collector task can be invoked for the IBM DB2 database. The Basic System Summary report contains details about the InfoSphere Information Server installation and system and hardware information. This report is also automatically generated by almost all the ISALite for InfoSphere Information Server tool's tasks and is included in those collections. Additional tasks can create a collection of log records from the InfoSphere Information Server repository database, and a collection of artifacts from the SAP Packs component. When running the tool on an InfoSphere Information Server, clustered installation, you can use separate options to collect artifacts on remote cluster nodes.
Additional Diagnostic Tools	This set of tools performs configuration and operational checks to validate the runtime environment of InfoSphere Information Server components and reports possible issues. These tools do not modify the system, unless specifically requested. To run these tools, some InfoSphere Information Server components must be installed and functioning properly. For example, to run the Information Server Client Remote Connectivity Test, the InfoSphere Information Server Client tier must be installed. Other tools require that other InfoSphere Information Server tiers be installed, such as the metadata repository, service, engine, and client tiers. The Install Log Analyzer tool is also included in this group of tasks but does not need an installation of InfoSphere Information Server in order to run.
System Requirements	This tool performs configuration and operational checks to validate that the computer meets the requirements for an installation of Information Server, Version 11.3.x – 11.7. Use this tool before installing InfoSphere Information Server to ensure that your computer meets the system requirements. You can also run this tool after a failed installation to help diagnose issues. An additional task can be invoked to verify the requirements of an installation of InfoSphere Information Server Pack for SAP Applications.
Utilities	This set of utilities lets you view issues and attempts to repair a corrupt InfoSphere DataStage project. When requested, the utilities may modify the system.
Help	This option provides information about the tool's tasks and a summary of runtime variables and version information.

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 and the tasks within them. To run a task, follow these steps:

1. Select a task from the available options as shown in Figure 2.

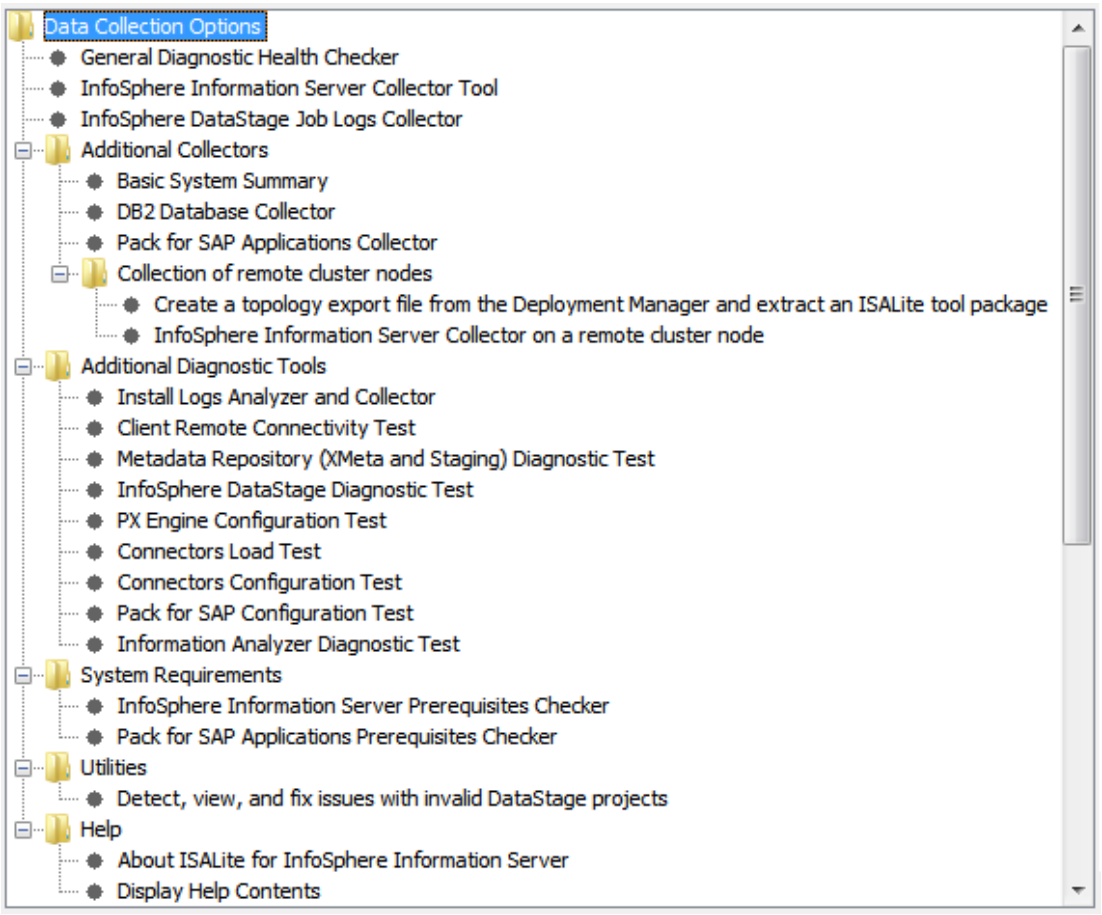


Figure 2

Refer to The ISALite tasks for a description of the collection options that the tool supports.

2. Provide a file name for the data collection .zip file. For example, use the PMR number in the file name or a short description of the content of the .zip file. A short description might indicate a collection or the results from the health checker run. Do not use spaces in the file name. Append the “zip” extension to the file name. In the file name, you might also include the timestamp or date of the collection, in cases where several .zip files were uploaded to IBM Support at different times. Because an appropriate .zip file name helps IBM Support find and sort the data that is used to debug a problem, at the end of the collection the tool provides a way to rename the file using information from the completed task.

3. Select **Collect Data**. The collection script prompts you for any additional information that is required to complete its collection activities, such as details on the InfoSphere Information Server installation, the PMR associated with the collection, and a brief description of the problem encountered, as shown in Figure 3. Although the input is optional, this information helps IBM Support to debug the problem.

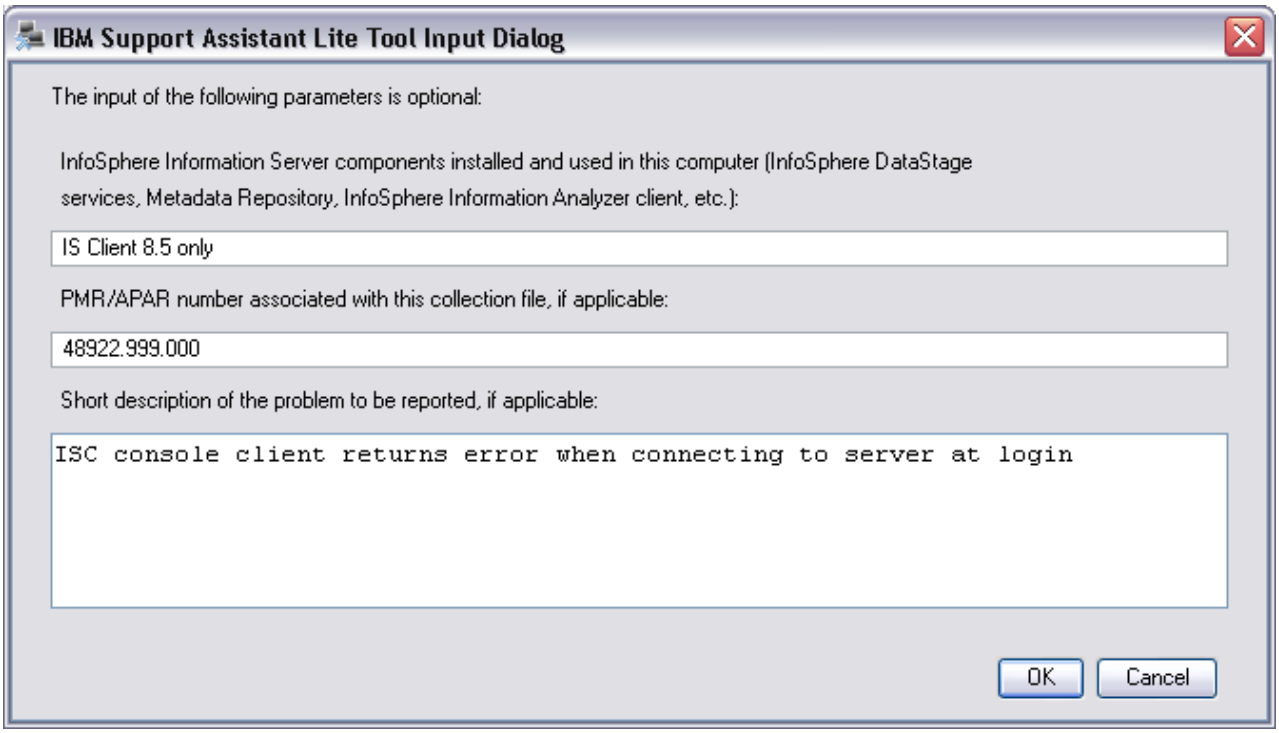


Figure 3: Optional data input

4. Most Information Server collection tasks prompt for the Information Server root directory, as shown in Figure 4.

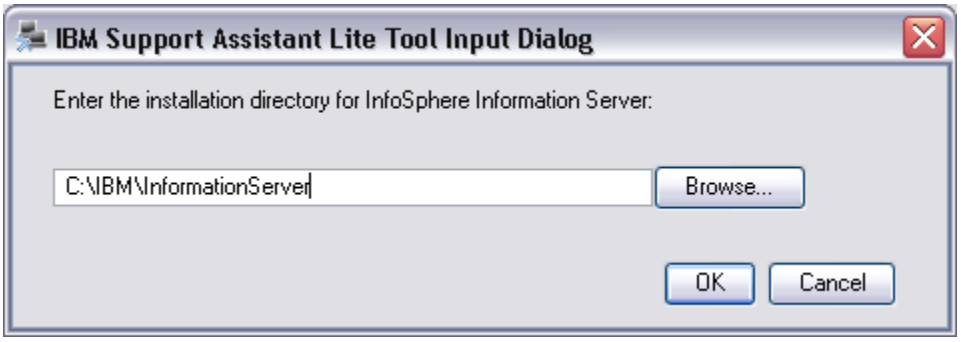


Figure 4

5. Some collection tasks also require additional configuration information or InfoSphere Information Server login credentials to perform validation test cases against an InfoSphere Information Server installation. After the script has the required information, the script completes the collection and analysis operations. The results of the operations, such as the data collected and log files, are stored in the data collection .zip file, as specified in Figure 2.

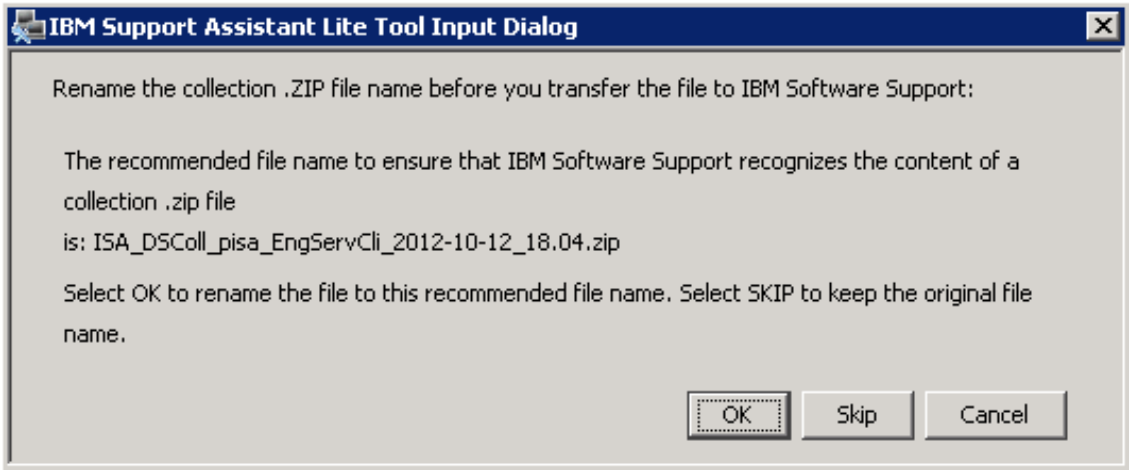
6. When the collection completes, the tool provides a way to rename the collection .zip file to a standard convention, using information gathered during the collection task. The recommended file name follows the format:

   `ISA + <ISALiteTask> + <hostname> + <Client/Eng/Serv tier> + <datestamp> .zip`

   where:

   ISALiteTask = short acronym of the task that created the ZIP file (GenHC, Prereq etc)
   hostname = host of the machine where the collection/diagnostic was run
   Cli/Eng/Serv tier = InfoSphere Information Server tiers found on the machine
   Timestamp = creation time of the file, in format YYYY-MM-DD_hh.mm

The renaming step is optional.



7. When the collection completes, use the automatic FTP feature to transfer the .zip file to IBM Support, as shown in Figure 5. Because the ISA tool provides an HTTPS Secure Transfer option only when the .zip file is less than 20 MB in size, you can also email or upload the file manually by using the IBM Enhanced Customer Data Repository Service. Follow instructions at the ECuRep web site. The FTP step is optional.

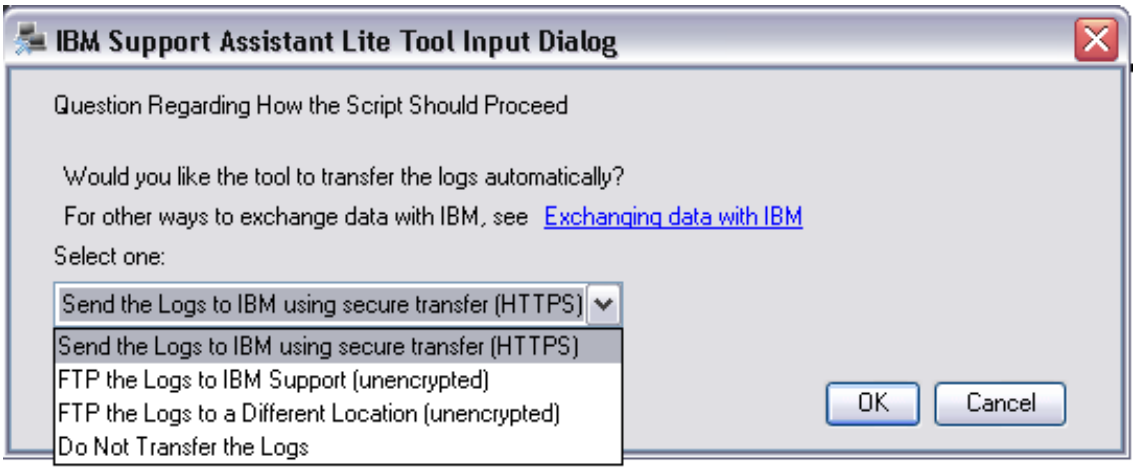


Figure 5

The .zip file that is created by the tool might contain embedded .zip files and files stored in subfolders. When you extract a file with a long path into a location with a long path, the combined path length might exceed the capability of some extraction utilities, such as the Windows Extraction Wizard, and you might get a warning or an error. As a workaround, extract the files to the root of a drive or to a subfolder with a shorter path.

Feedback regarding task progress

After a collection task starts, the tool provides you with progress feedback in the progress window. As shown in Figure 6, the IBM Support Assistant Tool Data Collection Progress pane shows the step number of the collection in progress. In some cases, such as when you invoke the WebSphere Collector tool, the tool might pause for several minutes, and the progress bar does not update. This result is normal. The last step of any collection or diagnostic health checker provides the option to use FTP to send the collection .zip file to IBM. After this last step, the progress window indicates that the task completed and the **Collect Data** button is enabled.

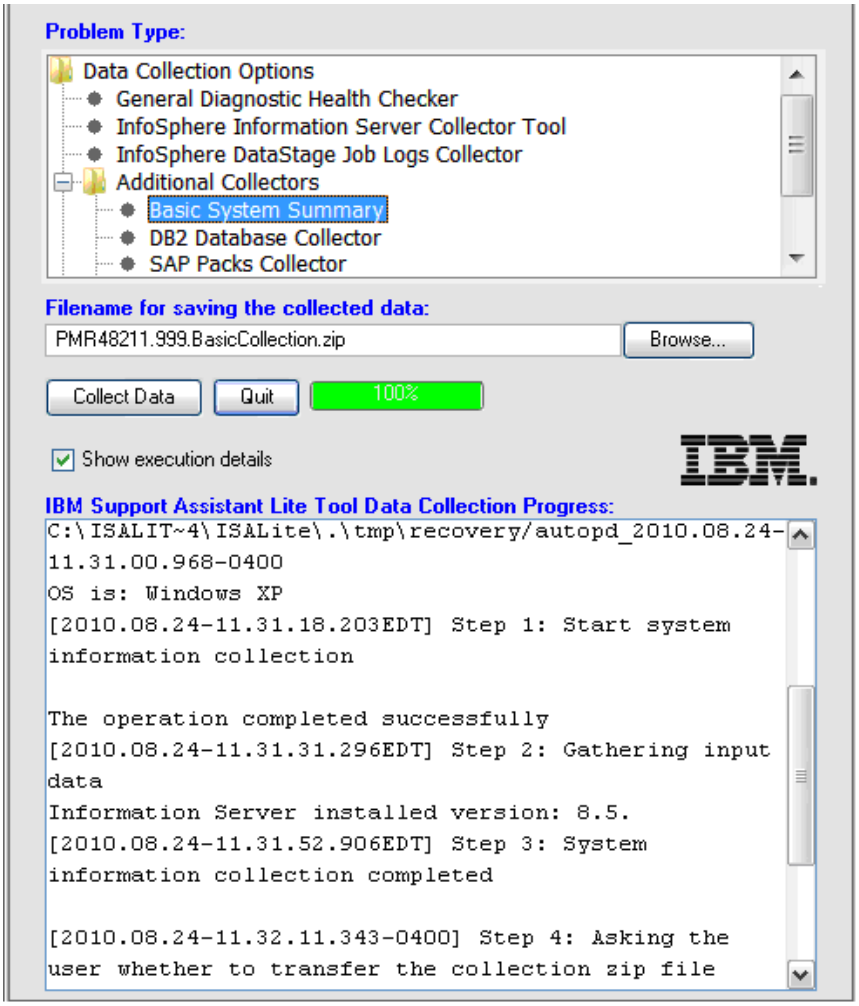


Figure 6

If a collection task fails due to an unexpected error or because you stop the collection process manually, the Progress window shows a message, as shown in Figure 7. If a collection task stopped due to an error, some data might have been collected in the .zip file that you specified. However, this data is likely to be incomplete, and you should correct the problem, if possible, and invoke the collection task again.

The final message "`The collection has completed successfully`" does not indicate that all the steps of the collection were successful and that all the necessary data was collected. Verify the ISA Lite logs for more details on the completion of the collection steps. For more information, see IBM Support Assistant Lite Log and Property Files.

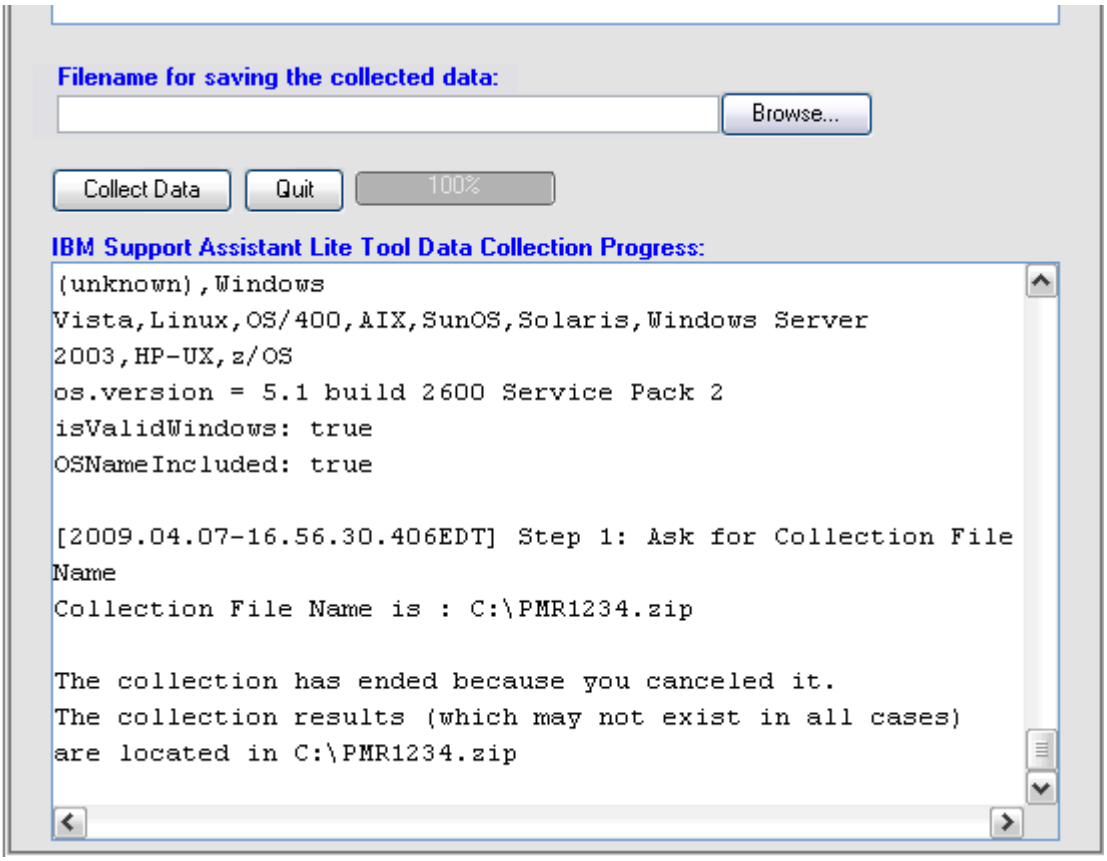
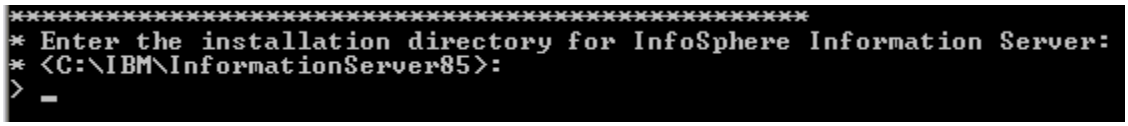

Filename for saving the collected data:
Browse...
Collect Data
Quit
100%
IBM Support Assistant Lite Tool Data Collection Progress:
(unknown),Windows
Vista,Linux,OS/400,AIX,SunOS,Solaris,Windows Server
2003,HP-UX,z/OS
os.version = 5.1 build 2600 Service Pack 2
isValidWindows: true
OSNameIncluded: true
[2009.04.07-16.56.30.406EDT] Step 1: Ask for Collection File
Name
Collection File Name is : C:\PMR1234.zip
The collection has ended because you canceled it.
The collection results (which may not exist in all cases)
are located in C:\PMR1234.zip

Figure 7

Reduced typing

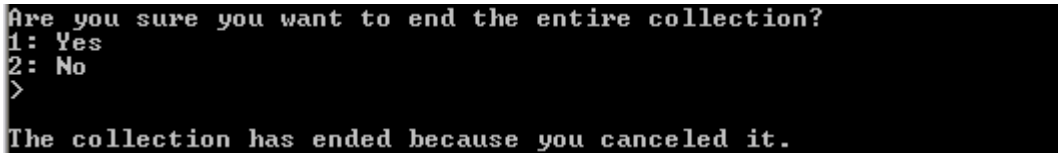
When you use the tool in console mode, you can use the following features to reduce the amount of repetitive typing that is required:

1. **Default values**
   When you must supply a value such as a product's root directory, the tool might already have a value assigned to it. In this case, the tool presents the value to you on the console interface between angle brackets. For example:

   To accept the value that is provided by the tool, press Enter.

2. **Yes/No and OK/Cancel/Skip choices**
   When the tool provides you with a series of actions, such as whether to proceed with a collection or cancel it, each of the choices is associated with a number. For example:

   Type the number at the command prompt, and then press Enter. In addition, you can select the first choice, which is typically the most common one and the default one, by pressing Enter.

   Pressing Enter does not work in the initial tool menu where you choose which collection task to run or when a choice is needed from a list of data items. These lists do not have a default selection, and therefore a selection needs to be specified before continuing. An error is shown if no selection is made.

Support of input dialogues

When you use the IBM Support Assistant Lite for InfoSphere Information Server tool in GUI mode, collection scripts often solicit input by using elements such as text fields and text boxes. In console mode, these input requests are handled through a command-line display and input. To maintain the same interaction patterns that the GUI mode achieves with the buttons **OK** and **Cancel**, which are used to close the window, the console mode provides additional delimiters that bracket an input sequence. These delimiters give you the same opportunity to accept or cancel the results as the buttons in the GUI mode. For example, the Input Dialog in GUI mode is shown in Figure 8:

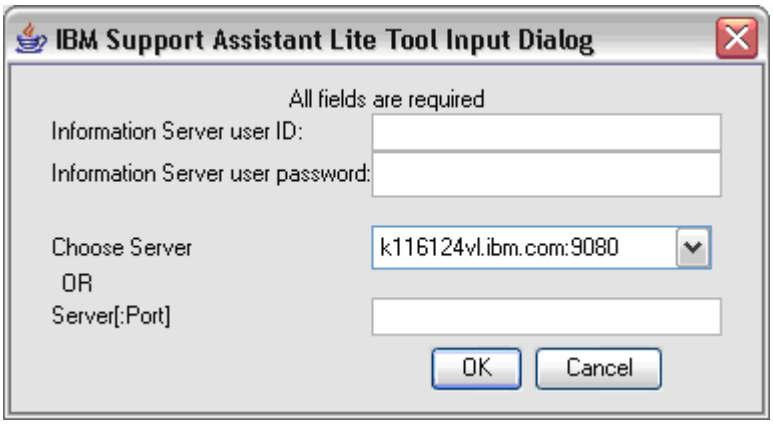


Figure 8

This window is replicated in console mode as shown in Figure 9:

```
*******************************************************
* All fields are required
* Information Server user ID:
> admin

* Information Server user password::
*
>######

*

* Choose Server:
* 1: k116124vl.ibm.com:9080
* 2: ferrari.ibm.com:9080
> 2

* OR
* Server[:Port]
>

*******************************************************
OPTIONS FOR COMPLETING THE INPUT DIALOG
1: OK<Continue the collection using the values you set during the INPUT DIALOG>
2: Cancel<Stop the collection>
>
```

Figure 9

The input dialogue is bracketed with lines of asterisks that indicate the end of a set of data inputs, followed by the text `OPTIONS FOR COMPLETING THE INPUT DIALOG`. You can use the "reduced typing" capability that was described in the previous section by pressing Enter and accepting the default action.
Note that the **Choose Server** list in Figure 9 has no default because you must choose a server from the list, and the "reduced typing" capability will not work.

Record and playback of an ISALite session

You can run the IBM Support Assistant Lite tool in recording mode. In this mode, the input commands and data that you enter during a collection task are recorded and saved in a response text file. You can then play back the session that you recorded by providing the response file in place of the manual input.

Creating a response file

To save the input commands in a response file, invoke the tool in console mode with the `-record` option. For example, you can run the following command:

```
runISALite.bat -console -record CollectionResponse.txt
```

When you invoke the tool in this way, a console opens, and you specify options for the current collection process, like during a non-recorded tool's invocation. However, your responses are also saved in the file that you named in the command. After the interactive session completes, you can use this response file to run the same script in the future without the need for explicit user input.

When recording a console session, consider the following points:

- Some inputs show a variable list of options, such as a list of InfoSphere DataStage projects. This list can dynamically change from one run to the other, as the projects list might vary over time. A selection of a specific project cannot be assured across several runs of the tool or across platforms. During the recording, select a low index number for the project to work with.
- The FTP screen has four available choices. The first choice is the HTTPS FTP, which is a secure FTP method. This option is available only when the size of the .zip file to send is less than 20 MB. In other cases, the option is removed. Therefore, the four choices may not be available at all times in the same order.
- Some tasks require you to specify passwords. When recording, these passwords are generally not encrypted or hidden in the response file. However, the General Health Checker task allows to provide the passwords in encrypted form, so that they will be saved encrypted in the recorded response file. You can encrypt the passwords using the `<IS_HOME>\ASBNode\bin\encrypt.sh [bat]` tool.
- Under the **Utilities** menu, the "Detect, view, and fix with invalid InfoSphere DataStage projects" task, as well as the options available on the **Help** menu, are not intended to be recorded and played back using a response file. The playback of these tasks will fail.
- A recorded response file may only be played back by the same version of the ISALite tool that recorded it. Because of new input screens and changes in the prompts that characterize new versions of the ISALite tool, a recorded response file may not be safely used across different versions of the tool.

Playback of an ISALite session

The automated playback of a recorded session can be invoked from the console mode version of the tool. To invoke automatic playback, enter the name of the response file that contains the recorded commands as an argument to the console batch file or shell script that is used to start the tool. For example, suppose that you run the following command:

```
runISALite.bat -console CollectionResponse.txt
```

This command starts the tool in console mode and reads its command line input from the `CollectionResponse.txt` file. The `runISALite.sh` shell script for AIX and Linux systems can be used in a similar fashion.

Figure 10 provides a sample input script file. The first line specifies the collection .zip file name for the collection. The following values and sequence of numbers navigate down through the menu tree. The sequence is the same as if the user had entered the values at the console manually.

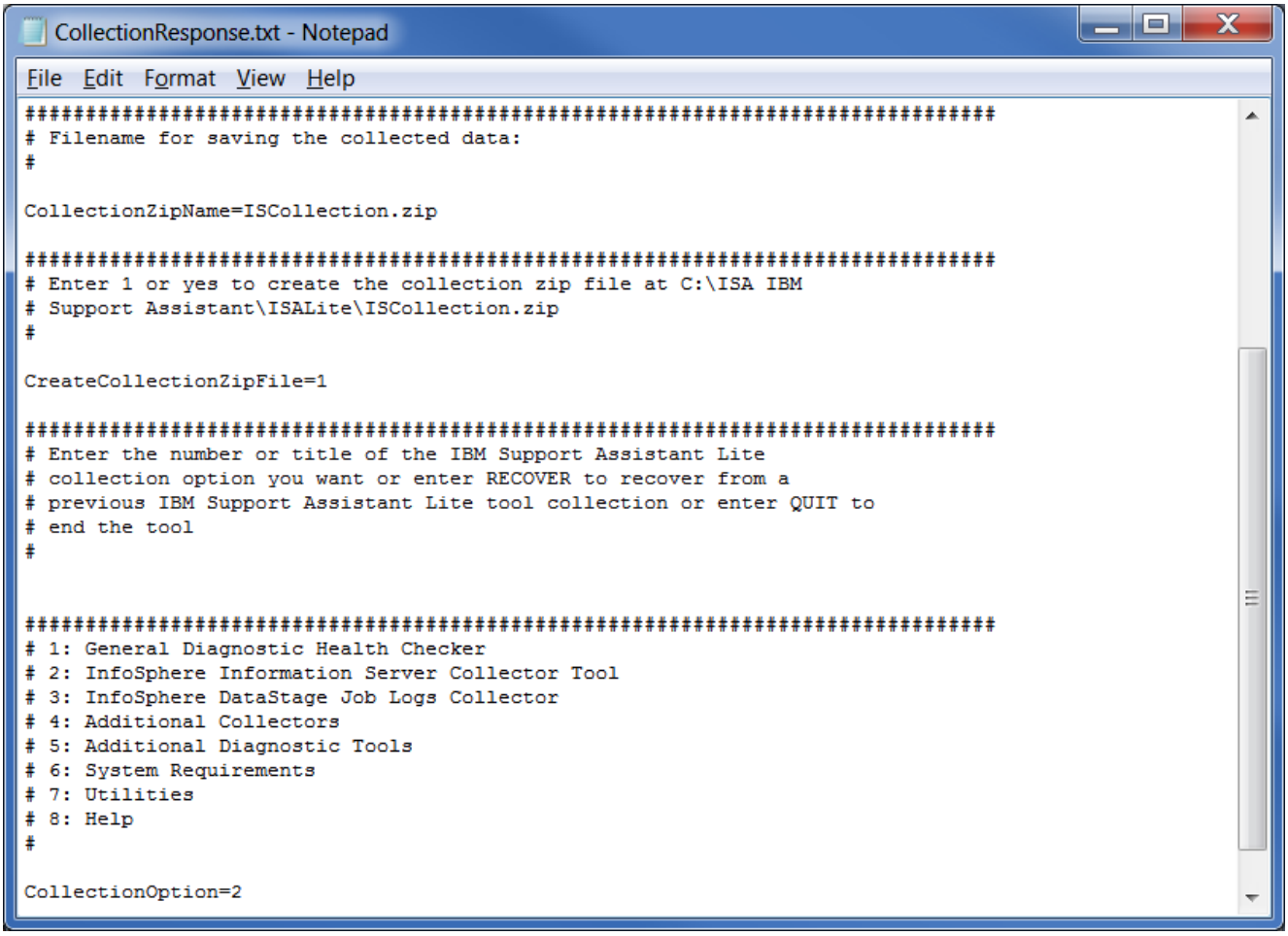


Figure 10: Sample of a recorded response file

IBM Support Assistant Lite log and property files

The IBM Support Assistant Lite tool generates log and property files that are included in the data collection .zip file that is sent to IBM Support. These files address the following requirements:

- Provide a record of how the tool diagnosed an InfoSphere Information Server problem. The log contains the same information that appears in the scrolling progress window when the tool is executed in GUI mode and additional debug and trace information.
- Provide detailed information for diagnosing problems with the tool itself.
- Record the values of the input data that the user provided during a collection task. Passwords are omitted.

By default, each time that you run the ISALite tool, a trace file and an error log file are created in the <USER_HOME>`\.ISALite\log` folder, as shown in Figure 11. The instance #0 of the logs is the most recent. If a log reaches the size of 2 MB or you start a new invocation of the ISALite tool, a new instance of log #0 is created, and the old log files are renamed to instance #1, #2, and so on. By default, three instances of a log file are kept. The two most recent error and trace log files are included in the data collection .zip file that is sent to IBM Support.

- The "`isalite-trace<#>`" captures the text that was displayed in the progress window during one execution of a collection script and any additional trace messages that come from the tool itself.
- The "`isalite-error<#>`" log file provides only the error messages that come from the tool itself. These messages are also included in the trace log file.

The `logger.properties` file, which is in the `ISALite\properties` folder, contains the properties that control the log file name, size, and trace level that are used by the logging system.

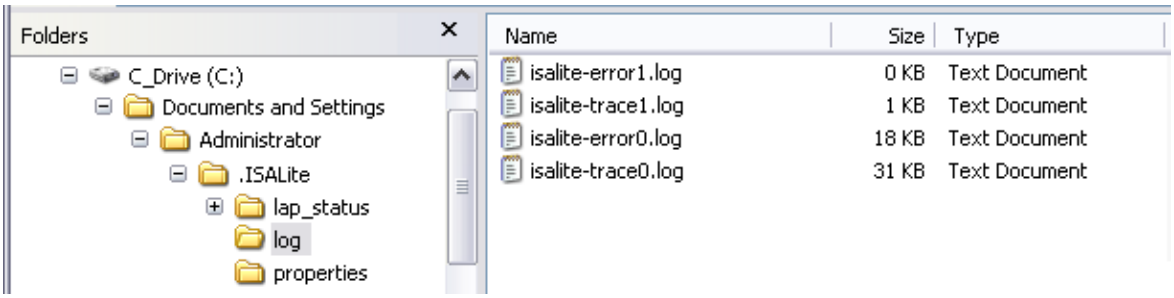


Figure 11: The log folder in Windows

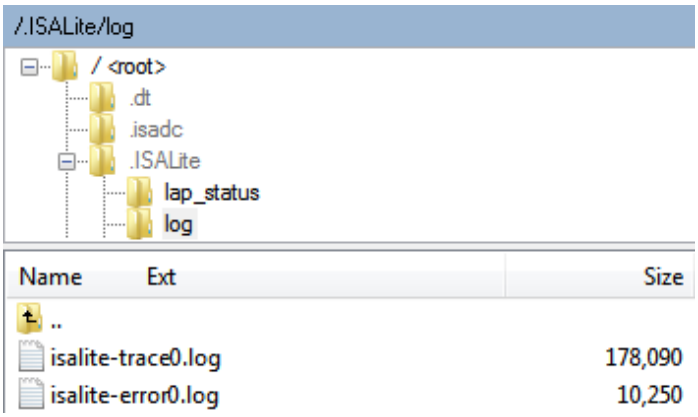


Figure 12: The log folder in UNIX

IBM Support Assistant Lite temporary folder

The IBM Support Assistant Lite tool uses a temporary folder for its operations and to store intermediate results. A new temporary folder is created automatically when the ISALite tool is started, and it is automatically removed when you exit the ISALite tool.

Depending on the user running the ISALite tool, you may find the temporary folder in different locations. For example, under Windows, if the user is a System Administrator, the folder may be created at:

```
C:\Users\IBM_ADMIN\AppData\Local\Temp\.ISALite_<user_name>_22392
```

Under UNIX, when running as a 'root' user, you may find it under the `/tmp` folder, for example:

```
/tmp/.ISALite_8745570348829940498root
```

You can change the location of the temporary folder by setting the environment variable

```
TMPDIR=/path/newtmpdir
```

in the console where you are running the ISALite tool.

For example, in a UNIX console, before you run the ISALite tool, give command

```
export TMPDIR=/tmp2
```

and then start the ISALite tool (runISALite.sh) from that console. The ISALite tool uses the `/tmp2` folder and creates in there temporary '`.ISALite`' folders for its run time storage.

The temporary folder may need a large amount of space, particularly during collections. Make sure to have several GBs of free disk space in the temporary area.
If you manually interrupt and breakout (Ctrl-C) from a tool run, before its normal completion, the temporary folder may still exist and may never be deleted. To free unnecessary disk space, review the temporary locations and remove old `.ISALite` folders that are not in use any more.

The ISALite tasks

The following sections provide details of each of the tasks and functions that the tool supports. Each section contains information that falls into four categories:

- The usage scenario for the task
- Data inputs needed for the tool to run
- The list of files that are collected by the tool and included in the collection .zip file for that task
- Diagnostic and troubleshooting information and tips how to solve selected problems

You can invoke the following collection tools and diagnostic utilities, also known as problem types, from the IBM Support Assistant Lite for InfoSphere Information Server tool menu:

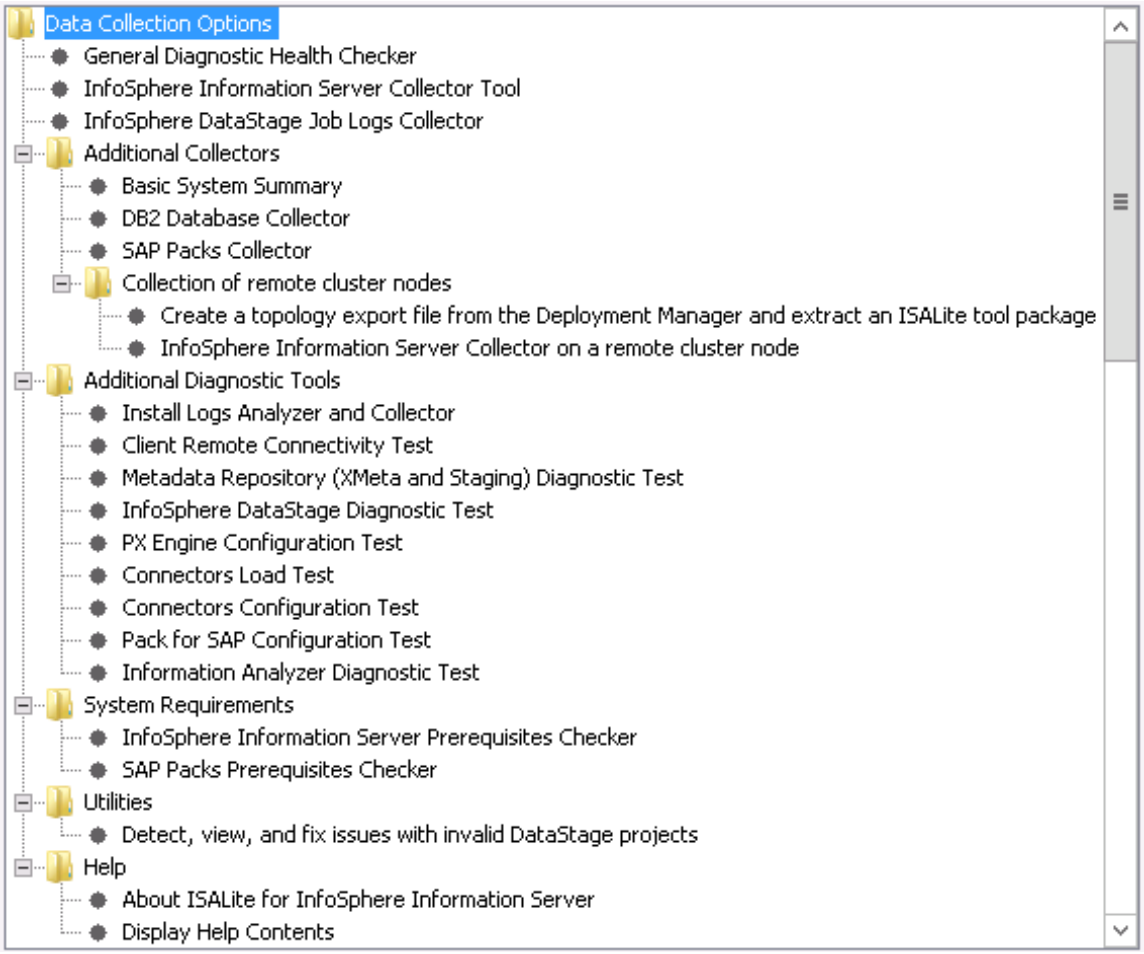


Figure 13

IBM Support recommended tasks

These tasks are the collector and diagnostic tasks that are usually required by IBM Support for the documentation of a customer problem. The tasks are listed under the main tasks menu. This menu serves as a bookmark for three tasks:

- General Diagnostic Health Checker
- InfoSphere Information Server Collector
- InfoSphere DataStage Job Log Collector

For more information about these tasks, see the sections later in this document.

InfoSphere Information Server collectors

The collector tools gather and collect files, data, and artifacts from InfoSphere Information Server components and assemble a .zip file. The collector tools perform the following functions:

- Collect files and artifacts from the local installation of InfoSphere Information Server. If the required file is found, it is collected, but no error is given if a file is missing.
  For a complete list of the files that are collected, see the MustGather Document for IBM InfoSphere Information Server.
- Collect files, server logs, and artifacts from the local installation of IBM WebSphere Application Server.
- Perform passive collections. For example, they do not modify or change any data in the user system or in the InfoSphere Information Server installation.
- Collect files and data that are available on the local file system only. Collectors do not require the input of user credentials.
- Gather files even when the system is not functioning, is partly installed, or is not running. However, all collectors prompt for the folder name where an installation of InfoSphere Information Server components is present, as shown in Figure 14. Collectors do not require all InfoSphere Information Server components or modules to be installed, active, or running.

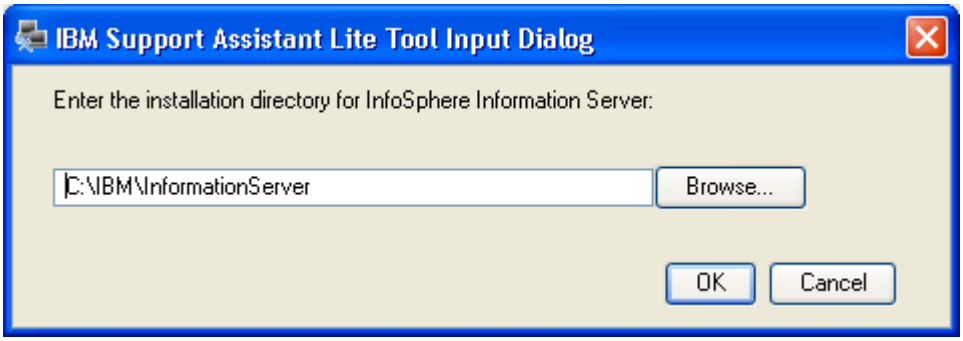


Figure 14

The lists of files that are shown for the various collector tools represent the maximum set of files that can be gathered for each problem type. In some instances, only a subset of the indicated files exists. In all cases, the IBM Support Assistant Lite for InfoSphere Information Server log files are also included in the .zip file.

InfoSphere Information Server Collector

This collection gathers files and data from the local installation of InfoSphere Information Server and WebSphere Application Server. It collects files from all InfoSphere Information Server modules and components, but no error is given if a file is not found. The collector produces a .zip file that contains the following files:

- `IS-Collection.zip`: the InfoSphere Information Server collection .zip file
- `Heapdumps_JavaCore.zip`: contains heap dump, core, and java core files
- `SYSTEM-SUMMARY.html`: contains system and hardware information, environment, registry, and network information

The `IS-Collection.zip` file contains the files that are described in the InfoSphere Information Server Must-Gather document. For more information, see the MustGather Document for IBM InfoSphere Information Server.

In addition, the following four files listings are included in the `IS-Collection.zip`:

- File listing of all the heap dumps, core, and java core files found in the InfoSphere Information Server installation
- File listing of the InfoSphere Information Server home folder and subfolders
- File listing of the system temporary folders
- File listing of the WebSphere Application Server profile folders (if present)

Name	Type	Size
FileList.HeapDumpFiles.txt	Text Document	340
FileList.InformationServer.txt	Text Document	2,018,181
FileList.TempFiles.txt	Text Document	22,614
FileList.WASProfile.txt	Text Document	9,868

To reduce the size of the collection .zip file, especially in a clustered environment, the tool implements the following logic:

- The tool uses a filter to exclude log files that are older than a certain threshold that is specified by the user. This filter is applied only to types of log files that might have several dated instances, such as the `SystemErr.log, SystemOut.log, orbtrc*.txt, and orbmsg*.txt,` IBM WebSphere Application Server log files, the InfoSphere DataStage log files, and others.

SystemErr.log	51 KB	Text Document	07/19/2010 11:39 AM
SystemOut.log	273 KB	Text Document	07/03/2010 4:03 PM
SystemOut_10.06.29_16.47.59.log	1,024 KB	Text Document	06/29/2010 4:48 PM
SystemOut_10.07.01_14.39.46.log	1,024 KB	Text Document	07/01/2010 2:39 PM
SystemOut_10.07.01_16.01.49.log	1,024 KB	Text Document	07/01/2010 4:01 PM
SystemOut_10.07.01_17.14.54.log	1,024 KB	Text Document	07/01/2010 5:14 PM

Figure 15

- When the InfoSphere Information Server collector is run, you enter the maximum age of the log files to collect, as in the following Figure 16:

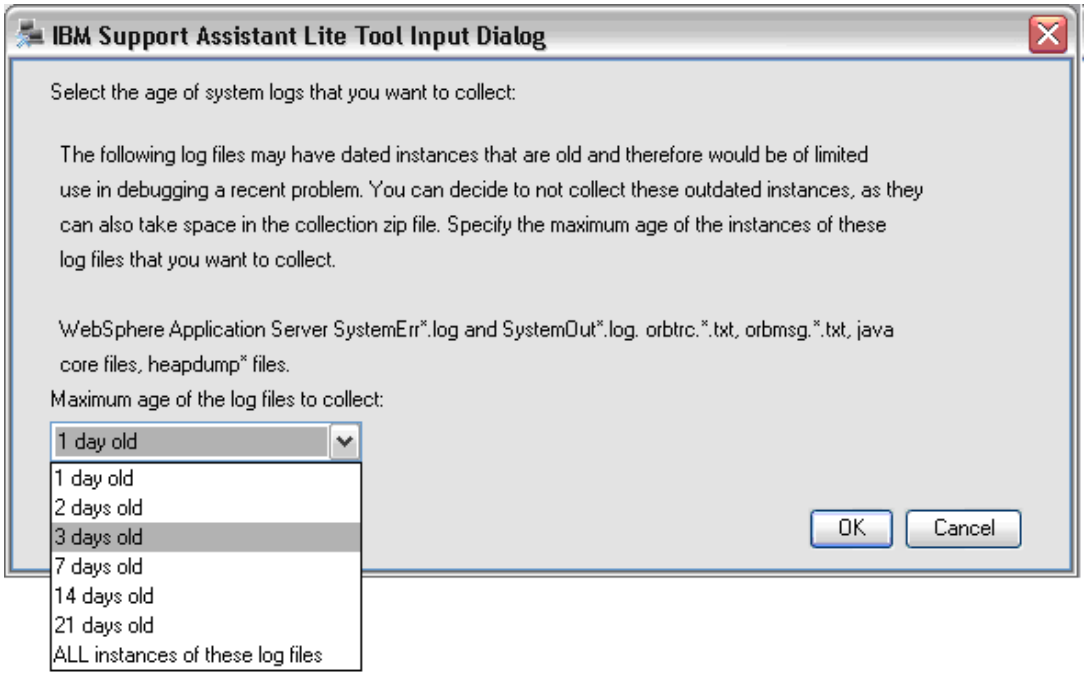


Figure 16

- The date filter to exclude files that are older than <N> days, specified in Figure 16, is also used to gather debugging files like java heap dump, core, javacore, and snap files, which are collected in a separate `Heapdumps_JavaCore.zip`. These debugging files, if present, are gathered from the following InfoSphere Information Server folders:
  - `<InformationServerRoot>/ASBNode`
  - `<InformationServerRoot>/ASBNode/bin`
  - `<InformationServerRoot>/Clients/Classic`
  - `<InformationServerRoot>/Clients/ISC`
  - `<InformationServerRoot>/Server/DSEngine`
  - `<InformationServerRoot>/Server/Projects/<AllProjects>`

- To facilitate the handling of large collection files, if the size of the `Heapdumps_JavaCore.zip` at the end of the collection is larger than 500 MB, an option is given to the user to not include the large file in the main collection .zip, otherwise the file is automatically included.

Basic System Summary

The Basic System Summary report contains details about the InfoSphere Information Server installation and system and hardware information. This report is also automatically generated by any of the ISALite for InfoSphere Information Server tool's tasks, and is included in those collections.

Report file `SYSTEM_SUMMARY.html` is generated and contains the following content:

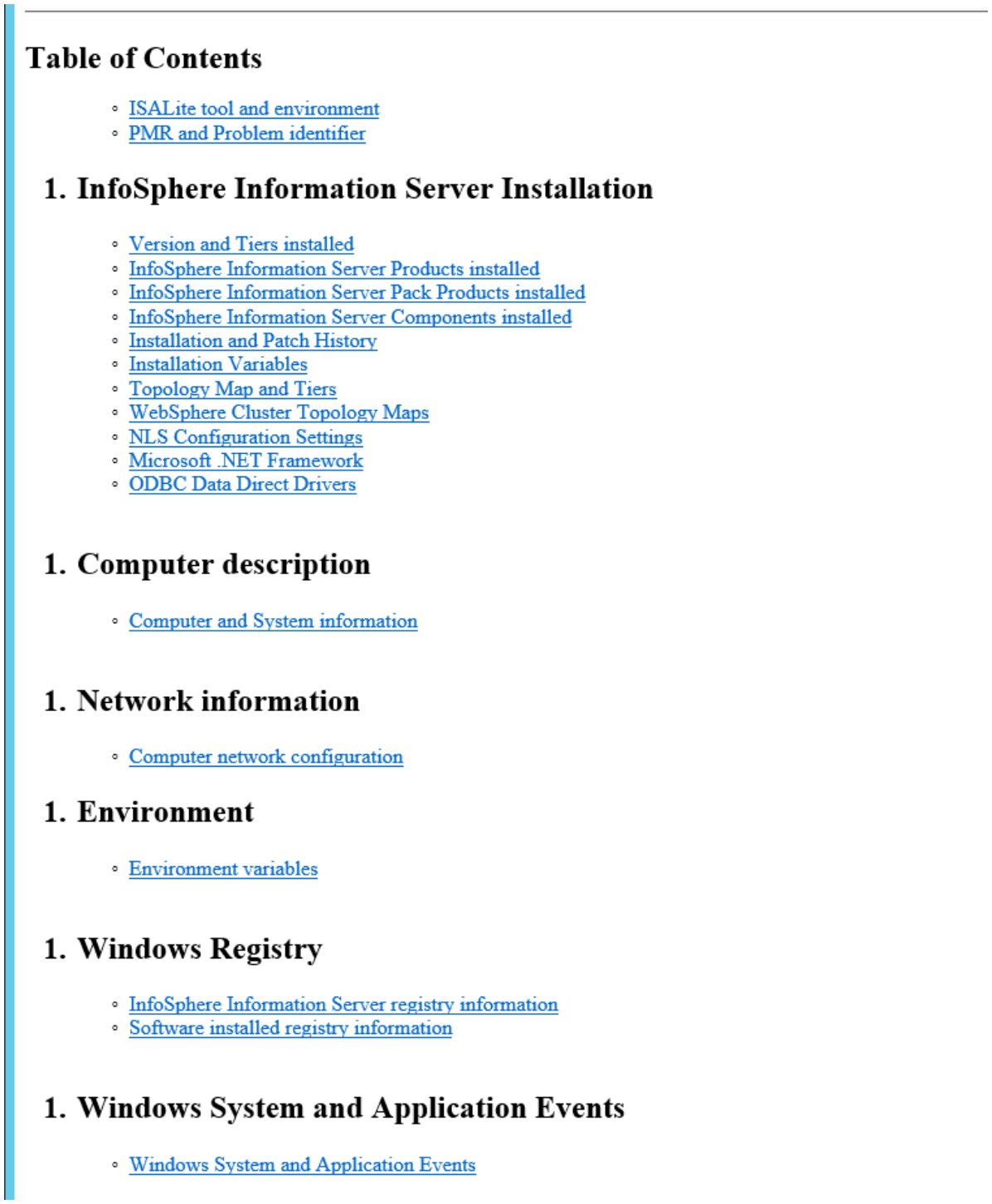


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Figure 17: A SYSTEM_SUMMARY report from a Windows system

A sample of the InfoSphere Information Server summary page is shown in figure 18.

InfoSphere Information Server Version and Tiers Installed

Table of Contents

Current Version: 11.3.0.0			
Tiers installed			
Services	Engine	Repository	Client
true	true	true	true

InfoSphere Information Server Products installed

Table of Contents

NOTE:
The InfoSphere DataStage and QualityStage products, if present in the table below, may have been installed as part of other products' installation. See the InfoSphere DataStage and QualityStage enabled options table in the General Diagnostic Health Checker Reference report to verify the options enabled for these products.

Products installed

Name
IBM InfoSphere DataStage (* This product may not be enabled. See DataStage and QualityStage enabled options)
IBM InfoSphere Data Quality Console
IBM InfoSphere Information Analyzer
IBM InfoSphere QualityStage (* This product may not be enabled. See DataStage and QualityStage enabled options)
IBM InfoSphere FastTrack
IBM InfoSphere Information Governance Dashboard
Metadata interchange agent and bridges
IBM InfoSphere Data Click
IBM InfoSphere Information Services Director
IBM InfoSphere Information Governance Catalog
ISPackForSAP

InfoSphere Information Server Pack Products installed

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```
Client:
   IBM InfoSphere Information Server Pack for SAP Applications: Client  [Version: 7.1.0.0]
```

Figure 18

InfoSphere Information Server collection of remote cluster nodes

IBM InfoSphere Information Server server components can be installed on a WebSphere Application Server Network Deployment (ND) clustered environment. A typical clustered environment comprises a Deployment Manager component and one or more cluster nodes, which can be configured either locally, in the same computer as the Deployment Manager, or remotely, on a separate computer with a WebSphere Application Server installation. A remote WebSphere Application Server cluster node computer does not have a normal installation of InfoSphere Information Server, but the computer is used by the clustered WebSphere Application Server environment as a remote server. Therefore, WebSphere Application Server log files and other InfoSphere Information Server artifacts are found at this location and might need to be collected for troubleshooting purposes.

Presently, artifacts can be collected only by running the ISA Lite collection locally on each computer where the files to be collected reside. Therefore, the ISA Lite for InfoSphere Information Server tool needs to be installed and run on the Deployment Manager computer and on any of the remote cluster nodes where a collection is required, as shown in Figure 19.

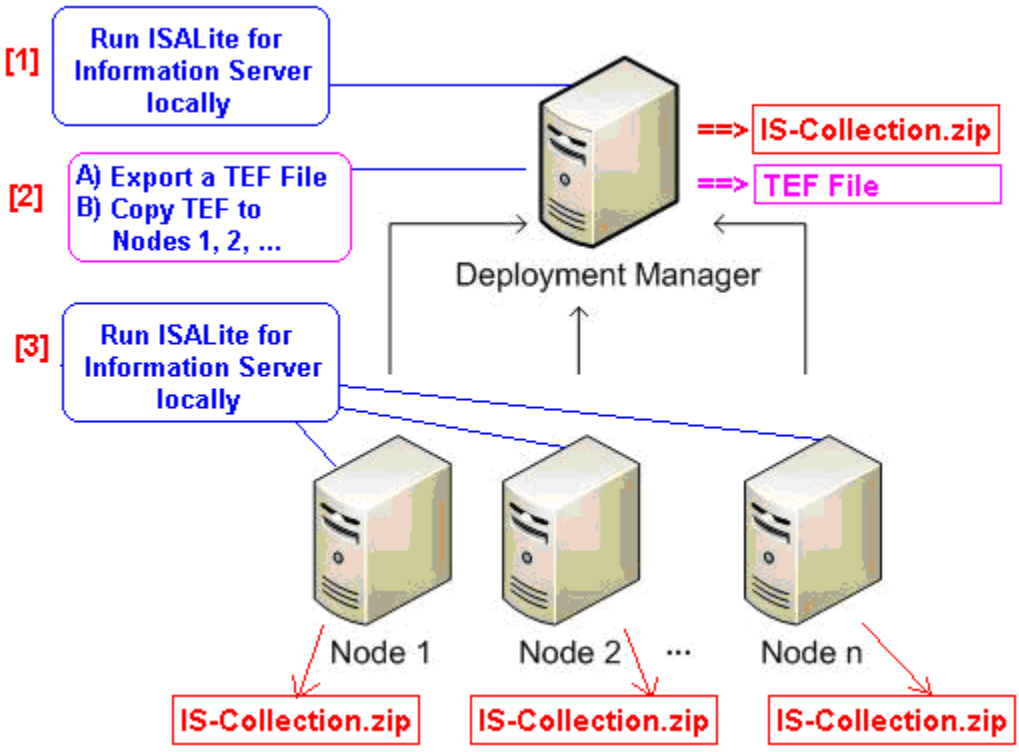


Figure 19: Steps to collect artifacts from all remote cluster nodes

Under the All Collector menu, the tool provides a remote cluster nodes collection menu with two options:

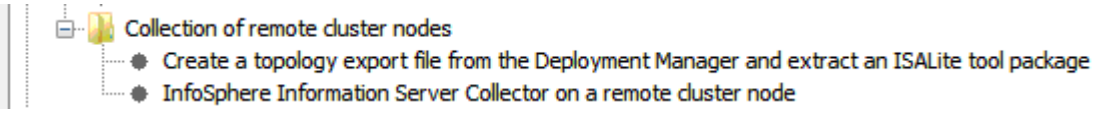


Figure 20

Create a topology export file and extract an ISALite tool package

A topology export file (.TEF) is a text file that contains WebSphere Application Server ND information about the clustered topology that is used by the installation of InfoSphere Information Server. The file can be generated by invoking this option in the ISALite tool that runs on the WebSphere Application Server Deployment Manager computer. The tool prompts for the name of the topology export file to create, as shown in Figure 21.

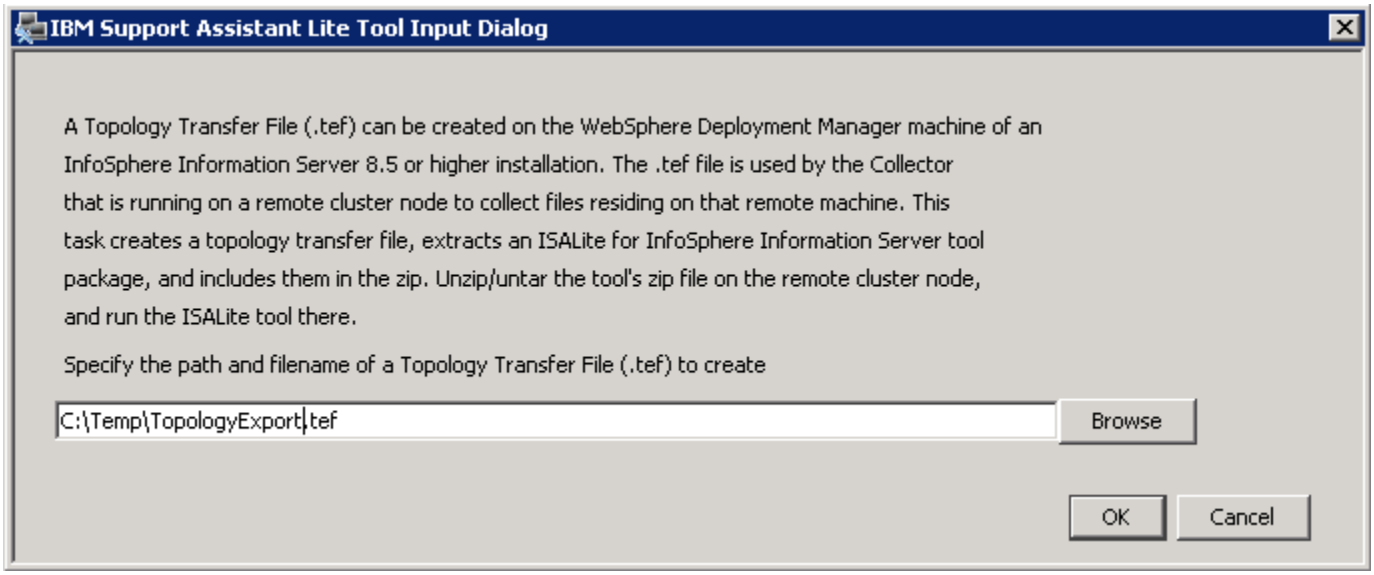
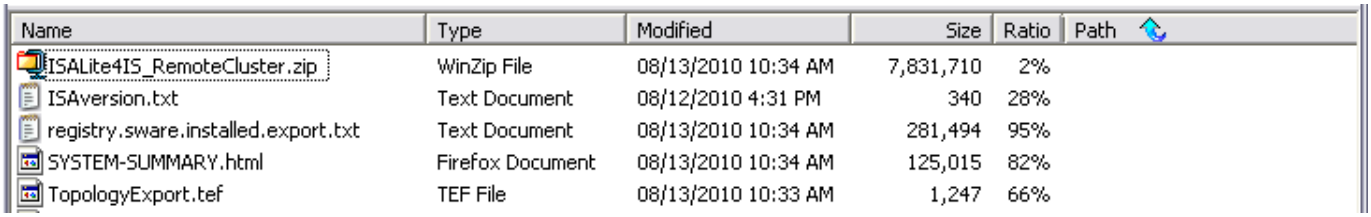


Figure 21

This option also generates and exports an ISALite tool package in .zip or .gz format. Both generated artifacts are included in the collection .zip file, as shown in Figure 22. These files can be used on the cluster remote node computer to collect files and data.



Name	Type	Modified	Size	Ratio	Path
ISALite4IS_RemoteCluster.zip	WinZip File	08/13/2010 10:34 AM	7,831,710	2%	
ISAversion.txt	Text Document	08/12/2010 4:31 PM	340	28%	
registry.sware.installed.export.txt	Text Document	08/13/2010 10:34 AM	281,494	95%	
SYSTEM-SUMMARY.html	Firefox Document	08/13/2010 10:34 AM	125,015	82%	
TopologyExport.tef	TEF File	08/13/2010 10:33 AM	1,247	66%	

Figure 22

Copy the collection .zip file to each of the remote cluster node computer. Extract the collection file and install the ISALite tool that is in the collection file (`ISALite4IS_RemoteCluster.zip/.gz`).

Even though the `ISALite4IS_RemoteCluster.zip/.gz` package contains only a subset of the entire ISALite tool functionality, install the tool by using this .zip or .gz file. Follow the installation instructions that are described in the *Tool installation* chapter. Run the ISALite tool on the remote cluster node computer and select **InfoSphere Information Server Collector on a remote cluster node** from the menu options to collect logs and artifacts, as described in the following section.

InfoSphere Information Server Collector on a remote cluster node

This option can be invoked on a WebSphere Application Server ND remote cluster node of an InfoSphere Information Server installation. The option collects logs and artifacts on the remote cluster node.

Because InfoSphere Information Server is not installed on the remote cluster computer, the collector gathers log files as indicated by the topology export file that is exported from the Deployment Manager computer.

Provide the name of the topology export file, as shown in Figure 23. If you do not have a topology export file, you can provide the location of the local WebSphere Application Server installation folder,

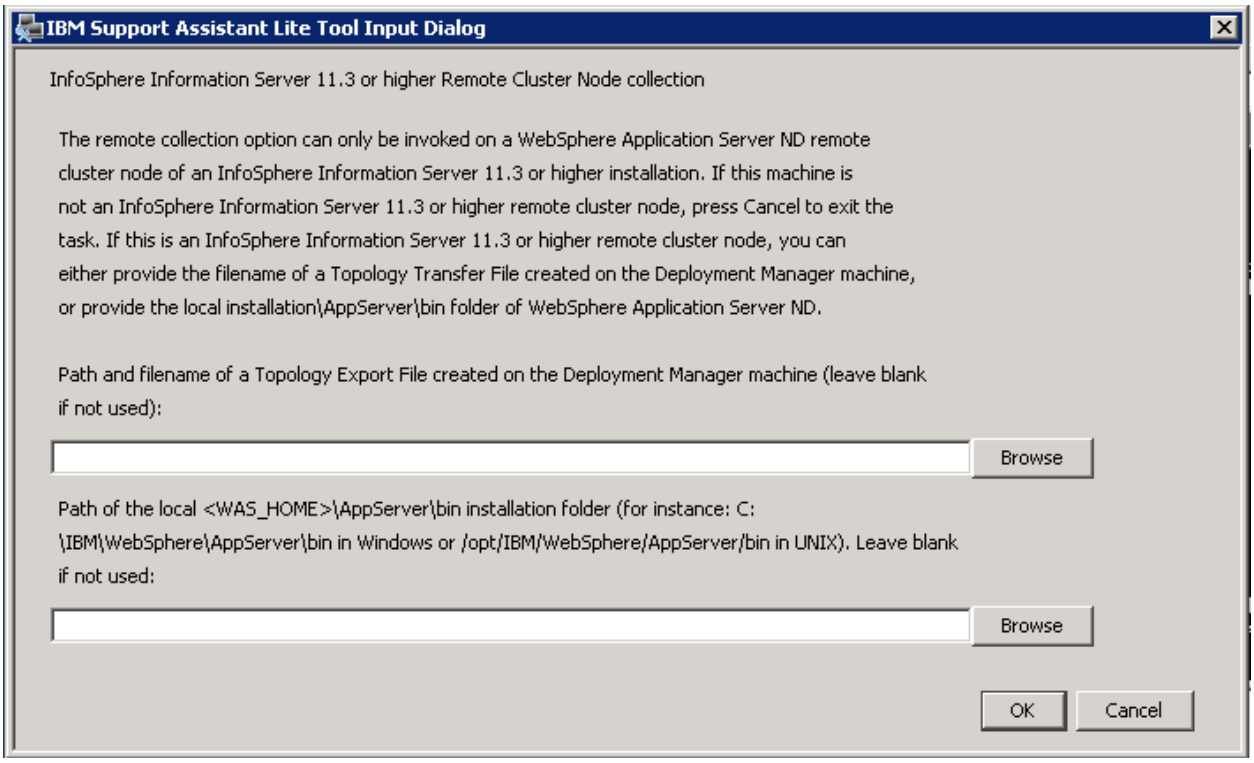


Figure 23

The collector gathers logs and data artifacts from the WebSphere Application Server installation and stores them in the collection .zip file that you specified. The collector gathers only logs and files from the WebSphere Application Server profiles that are used by the InfoSphere Information Server deployment.

DB2 Collector

This option is the standard and formal collection from the IBM DB2 product. The collector gathers configuration files, logs, and data from the local DB2 installation. The collector requires the path location of the local installation of InfoSphere Information Server. Aside from standard DB2 installation and log files, the collector gathers statistical data from the metadata repository database and a listing of the tables and table sizes. No user data is extracted from the database tables, and no personal information is made available to IBM Support that could compromise the security of the data. The collection produces a .zip file that contains the following files:

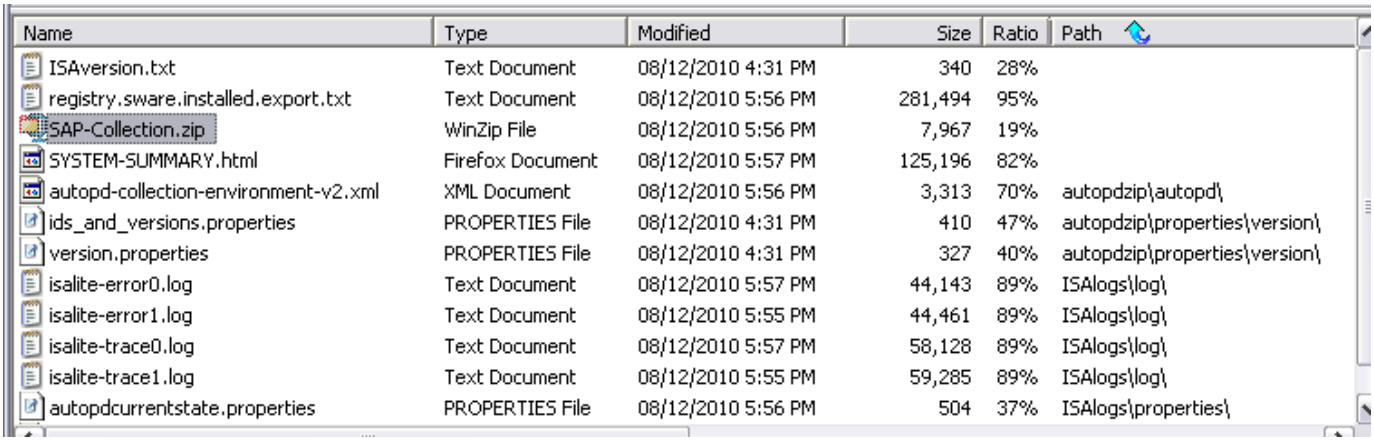
- `DB2-Collection.zip`: The DB2 collection .zip file
- `DB2-Collection-SUMMARY.html`: A summary of DB2 configuration information
- `SYSTEM-SUMMARY.html`: The system and hardware information, environment, registry, and network information

If DB2 was installed before InfoSphere Information Server and the metadata repository database was configured manually with InfoSphere Information Server, the IBM Support Assistant Lite for InfoSphere Information Server tool cannot detect a current installation of DB2 and invoke the DB2 Collector tool.

InfoSphere Information Pack for SAP Applications Collector

This collector gathers files and artifacts from the Pack for SAP installation. If no Pack for SAP installation is found, only the system and hardware information, environment, registry, and network information are collected. The collection produces a .zip file as shown in Figure 24, containing the following files:

- `SAP-Collection.zip`: The SAP Packs collection .zip file
- `SYSTEM-SUMMARY.html`: The system and hardware information, environment, registry, and network information



Name	Type	Modified	Size	Ratio	Path
ISAversion.txt	Text Document	08/12/2010 4:31 PM	340	28%	
registry.sware.installed.export.txt	Text Document	08/12/2010 5:56 PM	281,494	95%	
SAP-Collection.zip	WinZip File	08/12/2010 5:56 PM	7,967	19%	
SYSTEM-SUMMARY.html	Firefox Document	08/12/2010 5:57 PM	125,196	82%	
autopd-collection-environment-v2.xml	XML Document	08/12/2010 5:56 PM	3,313	70%	autopdzip\autopd\
ids_and_versions.properties	PROPERTIES File	08/12/2010 4:31 PM	410	47%	autopdzip\properties\version\
version.properties	PROPERTIES File	08/12/2010 4:31 PM	327	40%	autopdzip\properties\version\
isalite-error0.log	Text Document	08/12/2010 5:57 PM	44,143	89%	ISAlogs\log\
isalite-error1.log	Text Document	08/12/2010 5:55 PM	44,461	89%	ISAlogs\log\
isalite-trace0.log	Text Document	08/12/2010 5:57 PM	58,128	89%	ISAlogs\log\
isalite-trace1.log	Text Document	08/12/2010 5:55 PM	59,285	89%	ISAlogs\log\
autopdcurrentstate.properties	PROPERTIES File	08/12/2010 5:56 PM	504	37%	ISAlogs\properties\

Figure 24

InfoSphere DataStage job logs Collector

This collector gathers log files and debugging information from an InfoSphere DataStage project and job that ran. This collector can be invoked from the client and engine tiers. After you specify your InfoSphere DataStage credentials, you choose the project to collect information for and the type of information to collect, as shown in Figure 25.

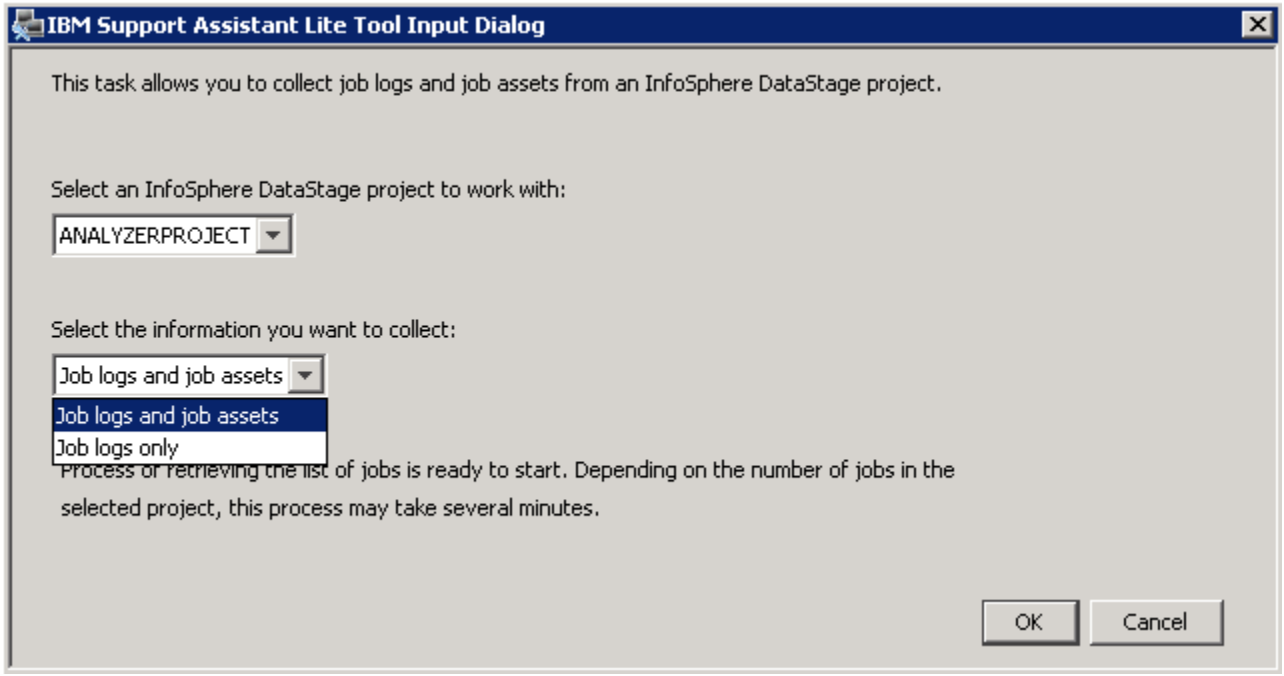


Figure 25

Select the InfoSphere DataStage job and the number of job runs from which to collect logs.

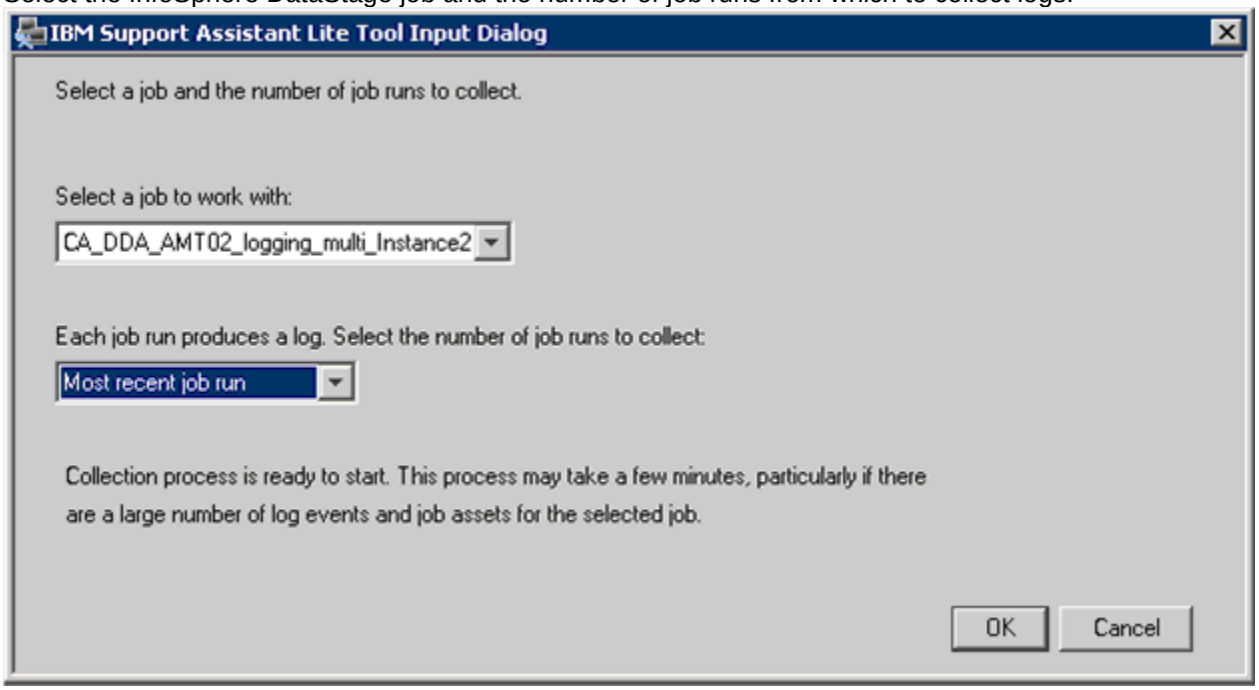


Figure 26

If multiple invocations of the job are detected, select a job invocation, as shown in Figure 27.

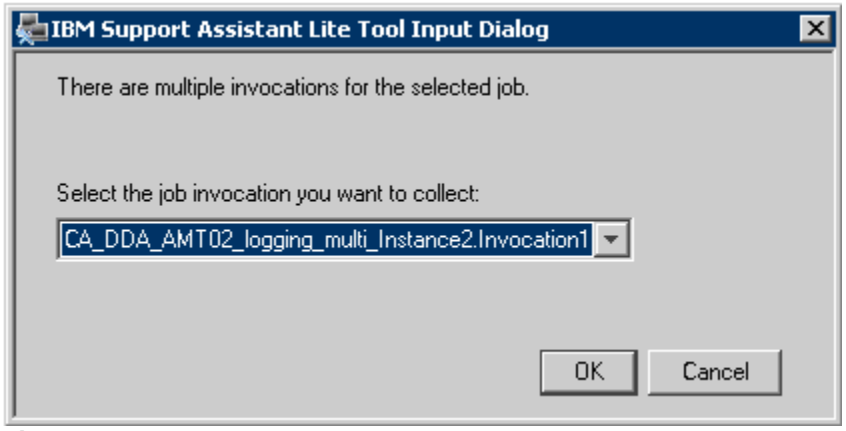


Figure 27

The tool exports the job run log file and, if selected, an .isx file that contains the job archive assets. Files are stored in the collection .zip file, as in the example in Figure 26. The format of the log file name is `dsjob-<hostname>-<project>-<job>-<#>.log` where `<#>` is the number of the job run. If logs from multiple job runs are collected, job run 0 is the most recent run, and 1, 2, and so on are older runs.

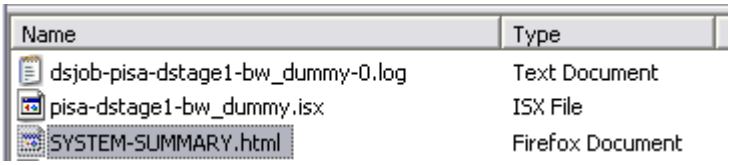


Figure 28

The InfoSphere DataStage Job Log Collector creates an output report file with debugging information and data about the InfoSphere DataStage project and job that was selected. The report is included in the collection .zip file:

- HTML report `DS-Collector.html`.

InfoSphere Information Server Diagnostic Tools

The diagnostic tools perform a comprehensive set of configuration and operational checks to validate the runtime environment of InfoSphere Information Server components and report possible issues. You can invoke any of these diagnostic tools on systems where any of the InfoSphere Information Server components or modules are installed. However, some tools test specific InfoSphere Information Server tiers and therefore require the installation of that tier. The diagnostic tools do not require the component to be running or correctly configured; however, some diagnostics might fail.

The diagnostic tools are listed in the following subsections:

InfoSphere Information Server General Health Checker tool

This tool runs on InfoSphere Information Server configurations that have the services, client, or engine tiers installed.

Before you start the tests, you must specify the following credential information:

- If the Services tier is installed, the tool asks for the InfoSphere Information Server metadata repository user ID and password, as created during the installation of InfoSphere Information Server
- InfoSphere Information Server Administrator user ID and password
- If you prefer, you can encrypt the passwords using the `<IS_HOME>\ASBNode\bin\encrypt.sh [.bat]` tool and then provide the encrypted passwords at the prompts. This allows passwords to be saved encrypted inside the response file if you are recording a session.

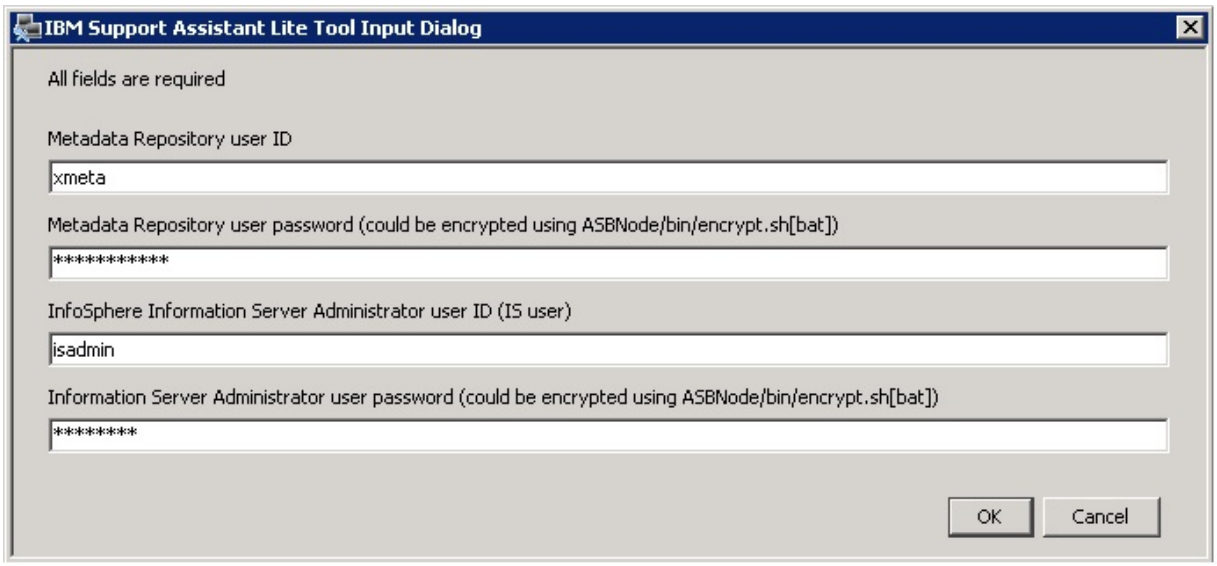


Figure 29

The following groups of health checks are performed, comprising over 100 different tests:

- Health Checker Runtime Environment
- Database Health Check
- WebSphere Server Health Check
- Information Server Health Check
- Client Health Check
- Information Server Agent Health Check
- Connector Access Service Health Check
- Information Services Director Health Check
- DataStage Health Check
- Information Analyzer Health Check
- Information Governance Catalog Health Check
- Metadata Asset Manager Health Check
- Shared Open Source components (Kafka/Sorl/Zookeeper), if installed

Some of the tests are available only on certain InfoSphere Information Server tiers. When a tier is not installed, the tier-specific test is skipped.

The health checker tool produces two .html reports:

- `SuiteHealthChecker.html` – contains all results from all tests, divided by test group.
- `SuiteHealthChecker-Failures.html` – contains only the failed diagnostic tests.

Figures 30 and 31 show extracts from a sample output.

Test Group	Group Result	Total Tests Run	Successful	Failed	Warning	Skipped
Health Checker Runtime Environment	PASSED	1	1	0	0	0
Database Health Check	PASSED	8	8	0	0	0
WebSphere Server Health Check	WARNING	6	5	0	1	0
Information Server Health Check	PASSED	10	10	0	0	0
Client Health Check	PASSED	2	2	0	0	0
Information Server Agent Health Check	PASSED	4	4	0	0	0
Connector Access Service Health Check	PASSED	2	2	0	0	0
Information Services Director Health Check	PASSED	4	4	0	0	0
DataStage Health Check	WARNING	11	9	0	2	0
Information Analyzer Health Check	FAILED	4	3	1	0	0
Information Governance Catalog Health Check	PASSED	4	4	0	0	0
Metadata Asset Manager Health Check	PASSED	7	7	0	0	0

Figure 30: Summary of results

Summary of Results by Component and Test Group

NOTE:
The Component Status map shows status of the Information Server components visible only from this machine. Components that are not installed or are not available for testing are shown with no results.

INFORMATION SERVER SERVICES

Information Governance Catalog	PASSED
Information Services Director	PASSED
Connector Access Service (CAS)	PASSED
Information Analyzer	FAILED

Repository Services:	
Repository Management	PASSED
Model Management	PASSED
Metadata Asset Manager	PASSED

ISF Core Services:	
Agent Service	PASSED
Registration Service	-

ISF Common Services:	
Session Service	PASSED
Reporting Service	PASSED
Licensing Service	PASSED
Security Service	PASSED
Directory Service	-

INFORMATION SERVER ENGINE

Information Server Agent	PASSED
DataStage Server	WARNING

INFORMATION SERVER REPOSITORY

Metadata Repository	PASSED
Information Analyzer Repository	PASSED

INFORMATION SERVER CLIENTS

Clients	PASSED

Test group: DataStage Health Check

Result	Description	Result Details
PASSED	CDIHC1080I Get the DataStage credentials configuration	Authenticate to IS host isa6:9443 (ip=9.188.115.71) with user "isuser1" using password "********". Authentication to IS host isa6:9443 was successful. Result from "hostname" command: isa6 --------------- DataStage High Availability ------------ DataStage High Availability was *not* initially configured by the InfoSphere Information Server installer. Environment variable "DS_HOSTNAME_ALIAS" is not set. It appears that DataStage High Availability is not configured. ---------- DataStage server host: isa6 DataStage server port: 31538 DataStage credentials is not configured to use a shared user registry. Default DataStage credentials found: User ID: dsadm
PASSED	CDIHC1055I Verify DataStage credentials	DataStage server host: isa6 DataStage server port: 31538 ---------- The mapped (OS) credentials for Information Server user "isuser1" are: User ID: dsadm Password: ****** ---------- Found 3 DataStage projects accessible by user "dsadm": ANALYZERPROJECT in folder E:\InformationServer\Server\Projects\ANALYZERPROJECT DataClick in folder E:\InformationServer\Server\Projects\DataClick dstage1 in folder E:\InformationServer\Server\Projects\dstage1
PASSED	CDIHC1056I Verify the DataStage server registration settings	DataStage server host: isa6 DataStage server port: 31538 - verified property "stageDetails". - verified property "dsrpcPort".
PASSED	CDIHC1078I Verify the DataStage system user trusted login	Authenticate to IS host isa6:9443 (ip=9.188.115.71). Authentication to IS host isa6:9443 was successful.

Figure 31: Summary of results by component and a sample of test results

As part of the General Health Checker results, Figure 32 shows the topology map with details of communication channels between InfoSphere Information Server components. The example shows a two-engine configuration; however, in this case, only the engine on the local machine is verified.

When the tool is run on a computer where only the client tier is installed, some of the component information is not available. Some components, such as the metadata repository or logging agent, cannot be detected from a client-only tier.

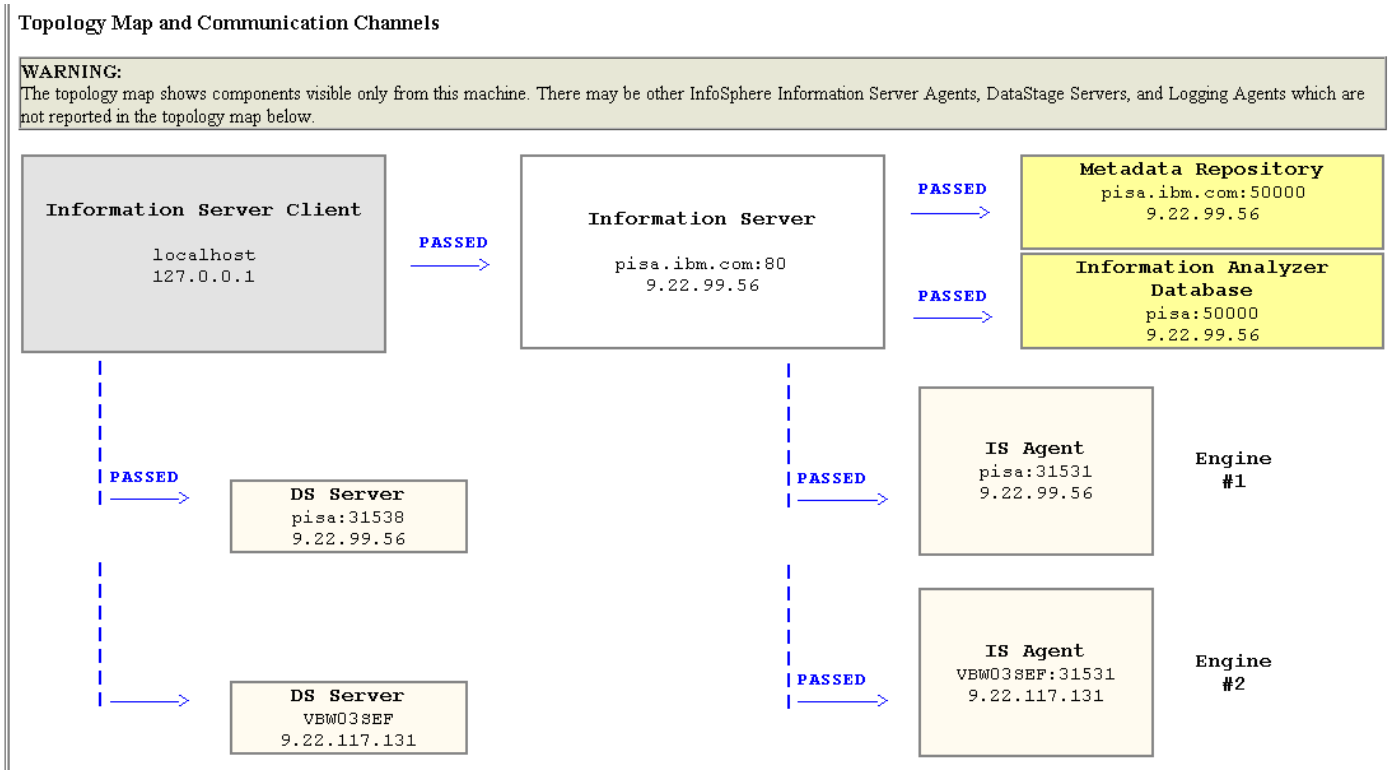


Figure 32

If you installed WebSphere Application Server ND, the `SuiteHealthChecker.html` report also contains two WebSphere Application Server cluster topology maps:

- **Physical Topology Map:** Describes the host computers that comprise the WebSphere Application Server cluster and the deployment manager and servers running on each computer.
- **Logical Topology Map**: Describes the logical topology, which includes a deployment manager and a number of cluster nodes. One or more servers can run on each node.

Figures 33 and 34 show examples of the two maps:

WebSphere Cluster: Physical Topology Map

HOST	pisa.ibm.com (9.22.99.56)	
DEPLOYMENT MANAGER	DMgr Node Name:	pisaCellManager01
	Bootstrap Port: Server Name: Profile Location: SystemOut Log file:	9809 dmgr C:\IBM\WebSphere\AppServer\profiles\Dmgr01 C:\IBM\WebSphere\AppServer\profiles\Dmgr01/logs/dmgr/SystemOut.log
	Server started and connected:	true
SERVER	Node Name:	pisaNode01
	Bootstrap Port: Server Name: Profile Location: SystemOut Log file:	9810 server1 C:\IBM\WebSphere\AppServer\profiles\Custom01 C:\IBM\WebSphere\AppServer\profiles\Custom01/logs/server1/SystemOut.log
	Server started and connected:	true
SERVER	Node Name:	pisaNode01
	Bootstrap Port: Server Name: Profile Location: SystemOut Log file:	9812 server5 C:\IBM\WebSphere\AppServer\profiles\Custom01 C:\IBM\WebSphere\AppServer\profiles\Custom01/logs/server5/SystemOut.log
	Server started and connected:	FALSE

HOST	torrino.ibm.com (9.22.99.57)	
SERVER	Node Name:	torrinoNode01
	Bootstrap Port: Server Name: Profile Location: SystemOut Log file:	9811 server2 C:\IBM\WebSphere\AppServer\profiles\Custom02 C:\IBM\WebSphere\AppServer\profiles\Custom02/logs/server2/SystemOut.log
	Server started and connected:	FALSE
SERVER	Node Name:	torrinoNode01
	Bootstrap Port: Server Name: Profile Location: SystemOut Log file:	9812 server3 C:\IBM\WebSphere\AppServer\profiles\Custom02 C:\IBM\WebSphere\AppServer\profiles\Custom02/logs/server3/SystemOut.log
	Server started and connected:	FALSE

Figure 33: WebSphere Cluster: Physical Topology Map

WebSphere Cluster: Logical Topology Map

TOPOLOGY:	CLUSTERED Cluster Name: Cluster01 ERROR: 2 WebSphere clusters were detected. The multiple cluster configuration is not supported by the InfoSphere Information Server product. Contact IBM Support.
# of Nodes:	2
# of Servers:	4

DEPLOYMENT MANAGER	DMgr Node Name: pisaCellManager01
Host:	pisa.ibm.com
IP Address:	9.22.99.56
Bootstrap Port:	9809
Server Name:	dmgr
Profile Location:	C:\IBM\WebSphere\AppServer\profiles\Dmgr01
SystemOut Log file:	C:\IBM\WebSphere\AppServer\profiles\Dmgr01/logs/dmgr/SystemOut.log
Server started and connected:	true

NODE	Node Name: pisaNode01 Node Agent started: true	
SERVER	Server Name:	server1
	Profile Location:	C:\IBM\WebSphere\AppServer\profiles\Custom01
	SystemOut Log File:	C:\IBM\WebSphere\AppServer\profiles\Custom01/logs/server1/SystemOut.log
	Host:	pisa.ibm.com
	IP Address:	9.22.99.56
	Bootstrap Port:	9810
	Server started and connected:	true
SERVER	Server Name:	server5
	Profile Location:	C:\IBM\WebSphere\AppServer\profiles\Custom01
	SystemOut Log File:	C:\IBM\WebSphere\AppServer\profiles\Custom01/logs/server5/SystemOut.log
	Host:	pisa.ibm.com
	IP Address:	9.22.99.56
	Bootstrap Port:	9812
	Server started and connected:	FALSE

NODE	Node Name: torrinoNode01 Node Agent started: FALSE	
SERVER	Server Name:	server2
	Profile Location:	C:\IBM\WebSphere\AppServer\profiles\Custom02
	SystemOut Log File:	C:\IBM\WebSphere\AppServer\profiles\Custom02/logs/server2/SystemOut.log
	Host:	torrino.ibm.com
	IP Address:	9.22.99.57
	Bootstrap Port:	9811
	Server started and connected:	FALSE
SERVER	Server Name:	server3
	Profile Location:	C:\IBM\WebSphere\AppServer\profiles\Custom02
	SystemOut Log File:	C:\IBM\WebSphere\AppServer\profiles\Custom02/logs/server3/SystemOut.log
	Host:	torrino.ibm.com
	IP Address:	9.22.99.57
	Bootstrap Port:	9812
	Server started and connected:	FALSE

Figure 34: WebSphere Cluster: Logical Topology Map

Install Logs Analyzer and collector

The Install Logs analyzer tool provides an analysis and summary of an installation event, as logged in one InfoSphere Information Server install log. It reports the installation steps and highlights errors and warnings that were encountered during the installation event.

You do not need to have a local installation of InfoSphere Information Server in order to run the analysis, as the tool only requires an install log file that could have been generated outside of the current system.

Select an install log from default Installer-logs location or you can browse and select any log file from any location. The default location of the Installer is `<java.io.tmp>/ibm_is_logs`, which in AIX and Linux could be the `/tmp/ibm_is_logs` or `/var/tmp/ibm_is_logs` folder. In Windows it defaults to the location of the `TMP` environment variable, for example `C:\Users\<Administrator>\AppData\Local\Temp\ibm_is_logs`.
Once an installation is completed, its log file is also found in the `%IS_HOME%\log` folder.

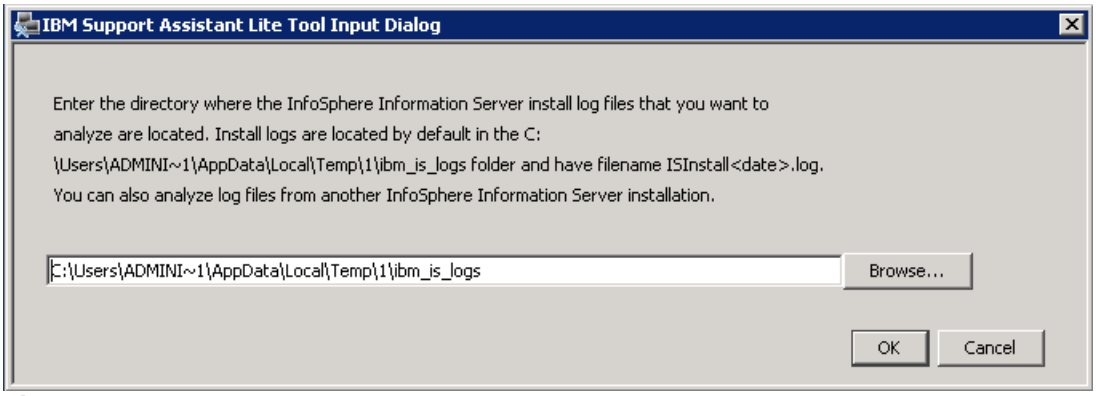


Figure 35

Confirm the selection of the log files to analyze:

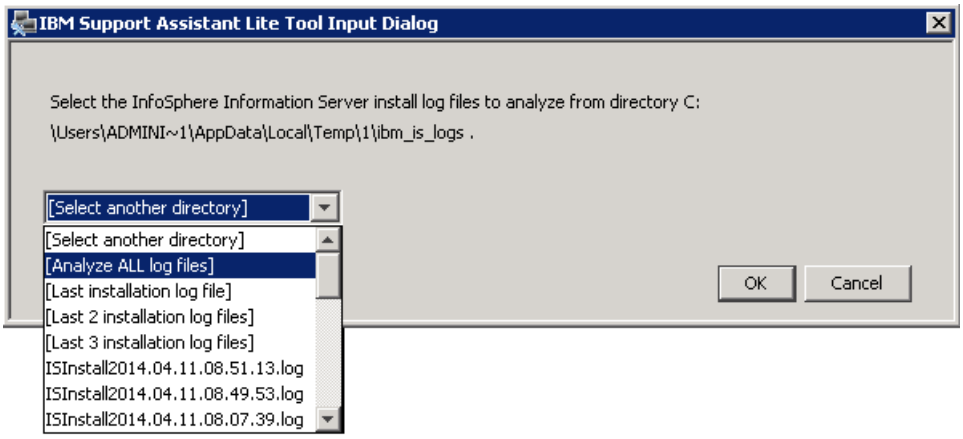
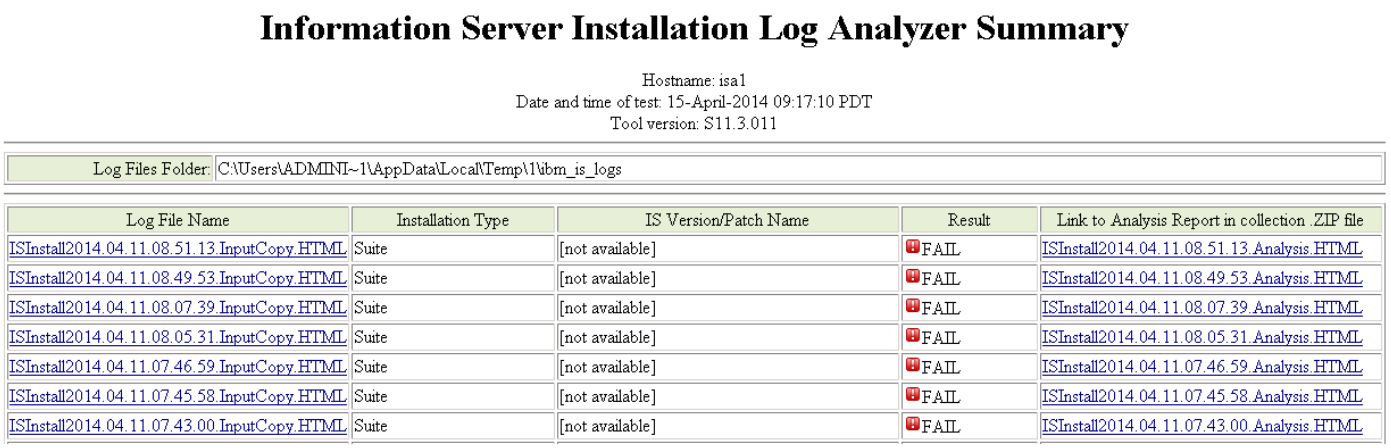


Figure 36

Due to the nature of the installation log file that contains messages and information in the locale of the machine where the log file was created, the analysis of log files generated by non English systems may contain incomplete or incorrect results.

A summary of all the logs analyzed is produced in file `ILA.Summary.<N>.HTML` included in the collection .zip file, as shown in Figure 37



Information Server Installation Log Analyzer Summary

Hostname: isa1
Date and time of test: 15-April-2014 09:17:10 PDT
Tool version: S11.3.011

Log Files Folder:	C:\Users\ADMINI~1\AppData\Local\Temp\1\ibm_is_logs

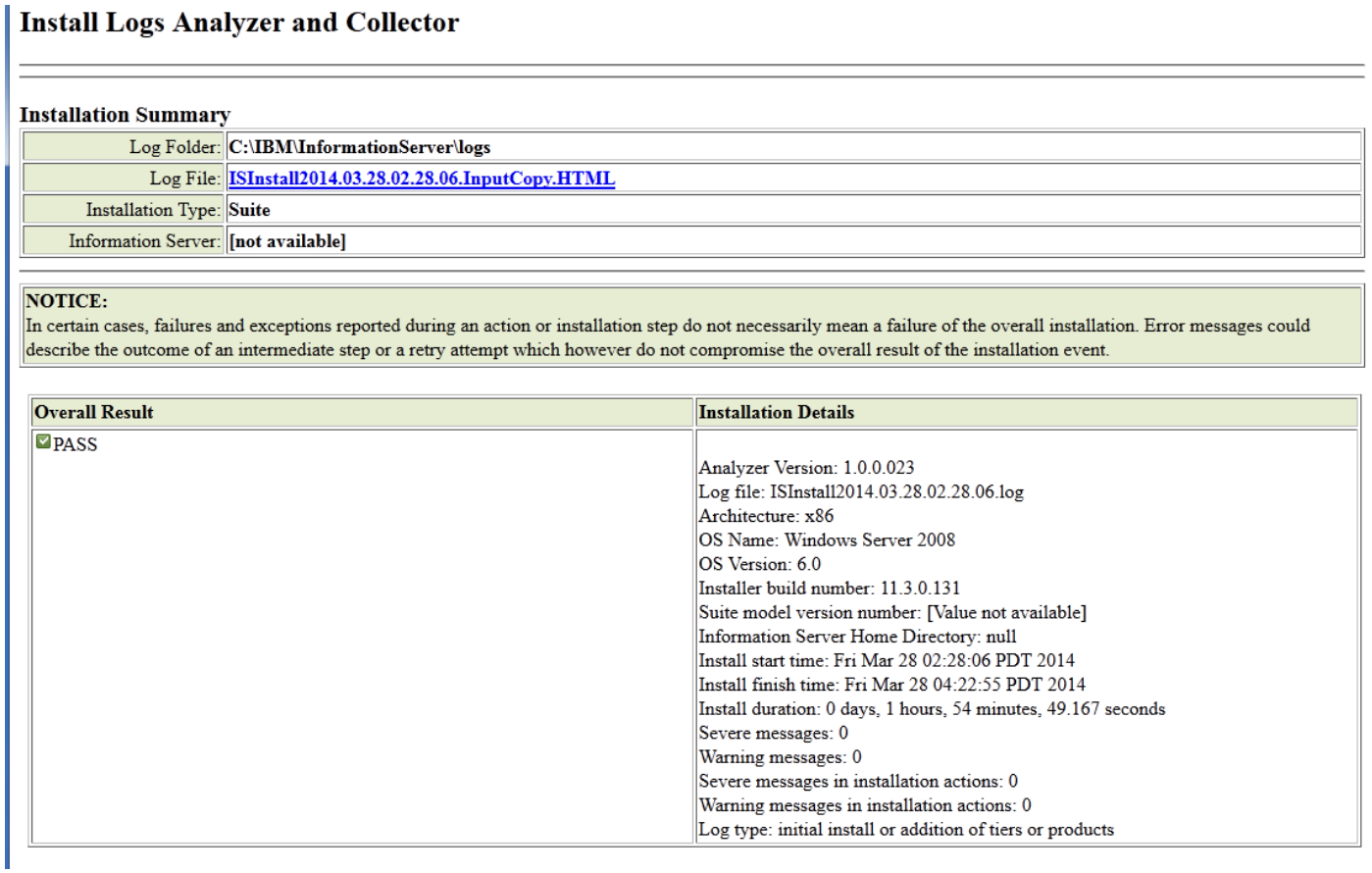
Log File Name	Installation Type	IS Version/Patch Name	Result	Link to Analysis Report in collection .ZIP file
ISInstall2014.04.11.08.51.13.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.08.51.13.Analysis.HTML
ISInstall2014.04.11.08.49.53.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.08.49.53.Analysis.HTML
ISInstall2014.04.11.08.07.39.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.08.07.39.Analysis.HTML
ISInstall2014.04.11.08.05.31.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.08.05.31.Analysis.HTML
ISInstall2014.04.11.07.46.59.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.07.46.59.Analysis.HTML
ISInstall2014.04.11.07.45.58.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.07.45.58.Analysis.HTML
ISInstall2014.04.11.07.43.00.InputCopy.HTML	Suite	[not available]	FAIL	ISInstall2014.04.11.07.43.00.Analysis.HTML

Figure 37: Summary of all the logs analyzed

Each log analyzed produces an HTML report including the analysis and summary of the installation steps. The original install log file and the analysis HTML report are included in the collection .zip file. For example:

- `ISInstall2014.03.28.02.28.06.log`
- `ISInstall2014.03.28.02.28.06.Analysis.HTML`

A sample of the output from the analysis of a log from a Suite installation is shown in Figures 38 and 39.



Install Logs Analyzer and Collector

Installation Summary

Log Folder:	**C:\IBM\InformationServer\logs**
Log File:	**ISInstall2014.03.28.02.28.06.InputCopy.HTML**
Installation Type:	**Suite**
Information Server:	**[not available]**

NOTICE:
In certain cases, failures and exceptions reported during an action or installation step do not necessarily mean a failure of the overall installation. Error messages could describe the outcome of an intermediate step or a retry attempt which however do not compromise the overall result of the installation event.

Overall Result	Installation Details
PASS	Analyzer Version: 1.0.0.023 Log file: ISInstall2014.03.28.02.28.06.log Architecture: x86 OS Name: Windows Server 2008 OS Version: 6.0 Installer build number: 11.3.0.131 Suite model version number: [Value not available] Information Server Home Directory: null Install start time: Fri Mar 28 02:28:06 PDT 2014 Install finish time: Fri Mar 28 04:22:55 PDT 2014 Install duration: 0 days, 1 hours, 54 minutes, 49.167 seconds Severe messages: 0 Warning messages: 0 Severe messages in installation actions: 0 Warning messages in installation actions: 0 Log type: initial install or addition of tiers or products

Figure 38: The <log>.Analysis.HTML: Analysis of a Suite installation log

Installation Actions

Result	Unit	Action	Result Details	Log Lines
PASS	DB2	install.db2.windows		2477-2529
PASS	DB2	set.db2.grp.lookup		2530-2535
PASS	DB2	restart.db2.for.grp.lookup.change		2536-2552
PASS	DB2	db2.set.license.action		2553-2562
PASS	DB2XMetaDatabase	restart.db2.initial		2569-2585
PASS	DB2XMetaDatabase	create.database.directory		2586-2587
PASS	DB2XMetaDatabase	copy.scripts.to.temp		2588-2589
PASS	DB2XMetaDatabase	update.create.xmeta.db.sql		2590-2592
PASS	DB2XMetaDatabase	create.xmeta.database		2593-2823

Figure 39: The <log>.Analysis.HTML installation actions

The Log Lines column includes links to the range of the lines inside the actual log file, containing the details of the installation action. Every line in the log file is numbered.

```
2577: SQL1064N  DB2STOP processing was successful.
2578: 2014-03-28T02:38:52.722, INFO: CDIIN4584I: Starting DB2...
2579: 2014-03-28T02:38:52.723, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "db2start"
2580: 2014-03-28T02:38:52.723, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "db2start"
2581: 2014-03-28T02:38:52.723, INFO: CDIIN2753I:Command Array: C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "db2start", env = null, working
2582: 2014-03-28T02:38:59.472, INFO: Exit Code: 0, Info: 03/28/2014 02:38:59     0   0   SQL1063N  DB2START processing was succe
2583:
2584: SQL1063N  DB2START processing was successful.
2585: 2014-03-28T02:38:59.481, INFO: CDIIN4482I: End: [actionId = restart.db2.initial, installUnitId = DB2XMetaDatabase]
2586: 2014-03-28T02:38:59.482, INFO: CDIIN4480I:Begin: [actionId = create.database.directory, installUnitId = DB2XMetaDatabase]
2587: 2014-03-28T02:38:59.482, INFO: CDIIN4482I: End: [actionId = create.database.directory, installUnitId = DB2XMetaDatabase]
2588: 2014-03-28T02:38:59.482, INFO: CDIIN4480I:Begin: [actionId = copy.scripts.to.temp, installUnitId = DB2XMetaDatabase]
2589: 2014-03-28T02:38:59.529, INFO: CDIIN4482I: End: [actionId = copy.scripts.to.temp, installUnitId = DB2XMetaDatabase]
2590: 2014-03-28T02:38:59.530, INFO: CDIIN4480I:Begin: [actionId = update.create.xmeta.db.sql, installUnitId = DB2XMetaDatabase]
2591: 2014-03-28T02:38:59.708, INFO: Wrote C:\Users\Administrator\AppData\Local\Temp\2\ibm_is_temp.2014.03.28.02.28.07\xmeta-db-
2592: 2014-03-28T02:38:59.708, INFO: CDIIN4482I: End: [actionId = update.create.xmeta.db.sql, installUnitId = DB2XMetaDatabase]
2593: 2014-03-28T02:38:59.708, INFO: CDIIN4480I:Begin: [actionId = create.xmeta.database, installUnitId = DB2XMetaDatabase]
2594: 2014-03-28T02:38:59.723, INFO: CDIIN5113I: Create Database Script:
2595: C:\Users\Administrator\AppData\Local\Temp\2\ibm_is_temp.2014.03.28.02.28.07\createDatabase.sql.
2596: 2014-03-28T02:38:59.727, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2"
2597: 2014-03-28T02:38:59.727, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2"
2598: 2014-03-28T02:38:59.727, INFO: CDIIN2753I:Command Array: C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2" "uncata
2599: 2014-03-28T02:39:01.86, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2"
2600: 2014-03-28T02:39:01.87, INFO: Executing C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2"
2601: 2014-03-28T02:39:01.87, INFO: CDIIN2753I:Command Array: C:\IBM\SQLLIB\BIN\db2cmd -c -w -i "C:\IBM\SQLLIB\BIN\db2" "-t" "-v
2602: 2014-03-28T02:41:00.260, INFO: Exit Code: 2, Info: CREATE DATABASE xmeta ON 'C:\' ALIAS xmeta USING CODESET UTF-8 TERRITOR
2603:
2604: DB20000I  The CREATE DATABASE command completed successfully.
```

Figure 40: The install log file, with line numbers

InfoSphere Information Server Client Remote Connectivity Test

The Client Remote Connectivity tests verify that the local client can connect to a remote (or local) installation of InfoSphere Information Server and WebSphere Application Server. To run the tool, you must specify the data that is shown in the following figure:

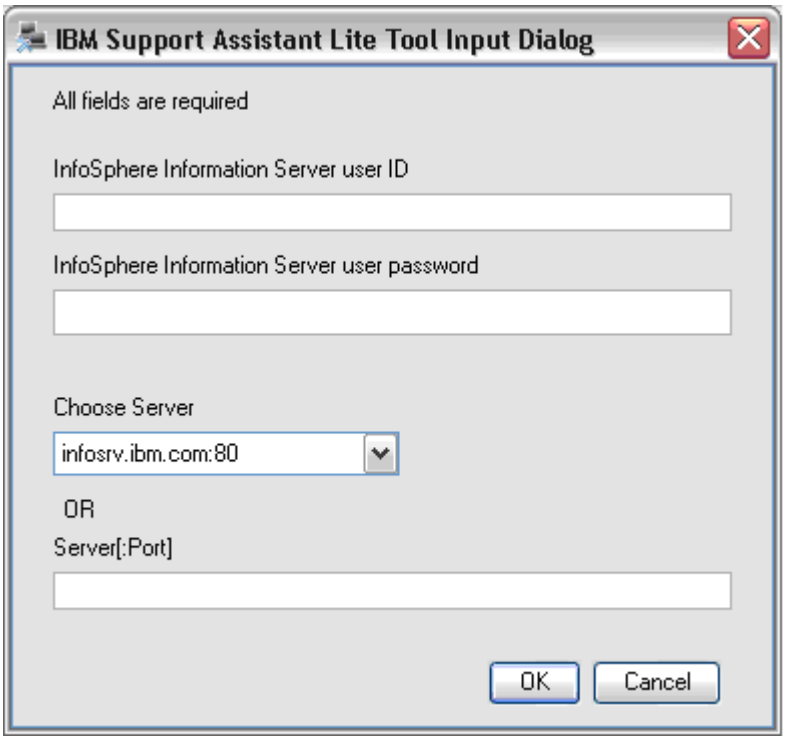


Figure 41

- An InfoSphere Information Server user ID and password
- An InfoSphere Information Server and optional port that you can select from a list of servers or specify in the appropriate text field. The list contains the server names to which the local InfoSphere Information Server client attempted to connect.

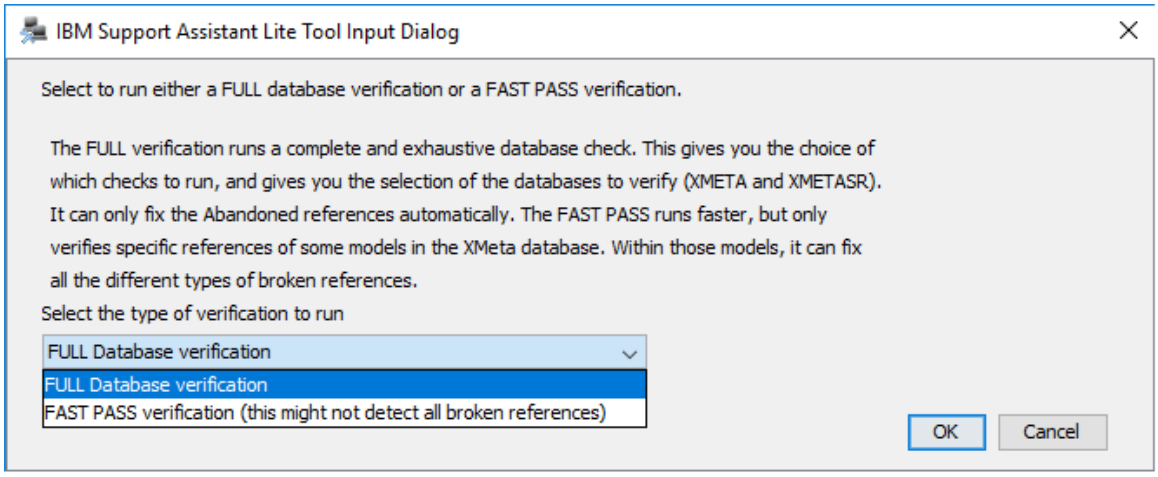
The health checker utility produces two HTML reports, `SuiteHealthChecker.html` and `SuiteHealthChecker-Failures.html` that are included in the user .zip file. The format of the reports is similar to the reports that are created by the General Diagnostic Health Checker tool.

Metadata (XMeta) and Staging (XMETASR) Repository Diagnostic Test

The Metadata Repository diagnostic utility runs diagnostic probes and other tests found in the local services tier of InfoSphere Information Server, analyzes the local or remote Metadata (XMETA) and Staging Repository (XMETASR) databases, and reports and fixes broken references and database corruptions.

Depending on the version of InfoSphere Information Server installed, you may have available two types of verifications:

- **Full database verification**: the most complete low-level diagnostic analysis of the Metadata and Staging repositories using several probes. It can provide an automatic fix of the references of type 'abandoned'. This task is available in all versions of InfoSphere Information Server.
- **Fast Pass verification**: a quick and speedy verification of the XMeta repository, focused at analyzing only specific references of some models of the XMeta database. It can provide an automatic fix of all broken references, within the models analyzed.
  This task is available only in InfoSphere Information Server version 11.5 or later releases.



Full Database verification:

The following tests are performed:

- Invoke the `validateRegistry` command against the Metadata repository (XMeta)
- Invoke the `dumpRegistry` command against the Metadata repository (XMeta) and collect the `xmeta_DumpRegistry.zip` file
- Invoke the `runDiagnostics` command (diagnostic probes) against the Metadata repository (XMeta), if selected
- Invoke the `runDiagnostics` command (diagnostic probes) against the Staging repository (XMETASR), if selected

You can also select which diagnostic probes to run against the Metadata and Staging Repositories:

- ✓ Dangling References Probe
- ✓ Unbalanced References Probe
- ✓ Abandoned References Probe
- ✓ Corrupt Clob References Probe

In addition, if running the Abandoned References probe, select to fix the issues found or just report them. You need to confirm the fix operation, as the task makes changes to the repository database.

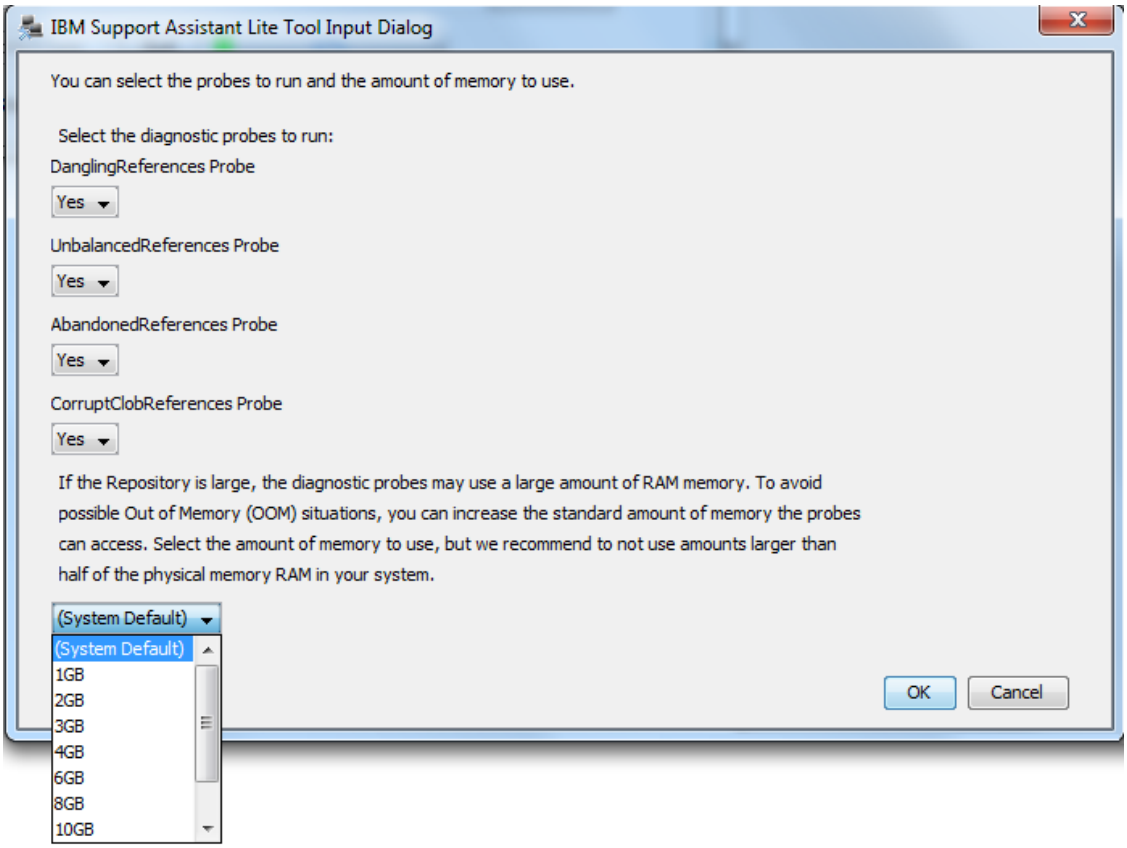


Figure 42: Select the diagnostic probes to run and the memory to use

If you select to run the diagnostic probes, ensure that users are not logged into InfoSphere Information Server, or at least limit their operations on the system, as active users can affect the diagnostic results. When running the diagnostic probes, the test can take from several minutes to several hours to complete.

The Full Database verification test produces several artifacts and reports that are included in the collection .zip file:

- `XMETAHealthChecker.html`: HTML report with summary of findings (see sample below).
- `xmeta_DumpRegistry.zip`: results of the `dumpRegistry` command
- `XMetaDiagnosticReport.xml`: Probes diagnostic information that is useful to IBM Support to create an SQL scripts that can be run against the database to fix the corruptions encountered.

After you run a Full database verification, follow these steps:

1. Analyze the results included in the `XMETAHealthChecker.html` file inside the collection .zip.
2. If the selected probes returned broken or corrupted references that need to be fixed, provide the entire collection .zip file to IBM Support. They will provide instructions and an SQL script that you can run against the repositories to fix the database discrepancies.

Figures 43, 44, and 45 show extracts from the results of the Metadata diagnostic utility, with a summary of the probe runs, as reported in the `XMETAHealthChecker.html` file.

XMeta Repository: Diagnostic Test Steps

Table of Contents

```
 ---------------------------------------
 Running: xmetaAdmin validateRegistry:
 ---------------------------------------
Log file path: /tmp/.ISALite_651620449861518739root/tmp_2017.01.25-10.12.23.378-0500/log/AdminCmd.log
Executing validateRegistry...
Validating model registry contents...
Checking models: 50 Active
Checking tables for agent...
Checking tables for ASCLAnalysis...
Checking tables for ASCLBI...
Checking tables for ASCLCommonProject...
Checking tables for ASCLCustomAttribute...
Checking tables for ASCLHistory...
Checking tables for ASCLLogicalModel...
Checking tables for ASCLModel...
Checking tables for ASCLOSLC...
Checking tables for ASCLRules...
Checking tables for AssetTracking...
Checking tables for AssetUsage...
Checking tables for BlueprintModel...
Checking tables for CommonEvent...
Checking tables for CommonRepositoryAdministration
```

.....

```
Checking tables for XMetaBase...
Checking tables for XMetaLinkPointElements...
Checking model views...
Validate completed, no errors found
-------------------------------------------

 ---------------------------------------
 Running: xmetaAdmin dumpRegistry:
 ---------------------------------------
Log file path: /tmp/.ISALite_651620449861518739root/tmp_2017.01.25-10.12.23.378-0500/log/AdminCmd.log
Executing dumpRegistry...
Dumping registry contents to xmeta.20170125.10.15.19.343.zip...
Output completed
 ---------------------------------------------------------------
 File xmeta_DumpRegistry.zip is included in collection ZIP file
 ---------------------------------------------------------------

 -------------------------------------------------------------
 Running: xmetaAdmin runDiagnostics (XMeta repository probes):
 -------------------------------------------------------------
   Probes selected to be run:
   = CorruptClobReferences Probe
   = AbandonedReferences Probe (with Report Only option)

Memory to use set to XMETA_JAVA_OPTS=-Xmx2G

Log file path: /tmp/.ISALite_651620449861518739root/tmp_2017.01.25-10.12.23.378-0500/log/AdminCmd.log
Executing runDiagnostics...
Outputting results to /tmp/.ISALite_651620449861518739root/tmp_2017.01.25-10.12.23.378-0500/log/XMetaDiagnosticReport_01.25.2017_10.15.31_0974.xml.
Connected as user=xmeta to DB2/LINUXX8664 (10.5) SQL10052
Probe AbandonedReferencesProbe started at 2017-01-25 10:15:33.115
Probe AbandonedReferencesProbe finished at 2017-01-25 10:15:52.901  status: SUCCESS  elapsed time: 19 seconds, 785 ms
Probe CorruptClobReferencesProbe started at 2017-01-25 10:15:52.902
Probe CorruptClobReferencesProbe finished at 2017-01-25 10:16:17.628  status: SUCCESS  elapsed time: 24 seconds, 725 ms

 ---------------------------------------------------------------
 File XMetaDiagnosticReport.xml is included in collection ZIP file
 ---------------------------------------------------------------
```

Figures 43: Tests against the Metadata Repository (XMeta)

XMeta Repository: Diagnostic Probes Summary of Results

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XMeta Repository Diagnostic Probes report file (included in ZIP file):	XMetaDiagnosticReport.xml

```
================================================================================
                        Abandoned References Probe Summary
================================================================================

Description:              This probe reports references in the xmeta database
                          that belong to an object that no longer exists.

Recommended Action:       This probe did not find any issues.

TODO:                     No action is required.

Automatic Repair Enabled: No

Results:

Total abandoned references Found: 0

Total Uncheckable References: 0
Total References Checked: 540

The probe found no problems.

================================================================================
```

Figure 44: Results from one of the probes run

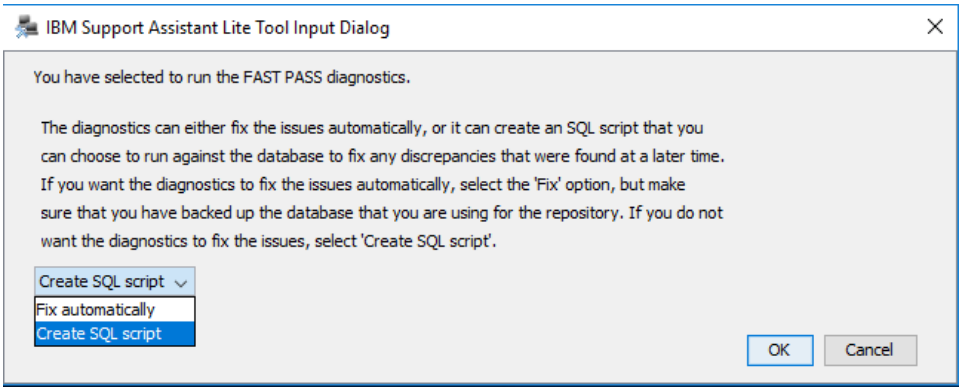
```
================================================================================
                       Diagnostic Utility Execution Summary
================================================================================

Number of Probes Run : 4
Number of Probes Successful : 4
Number of Probes with Warnings : 0
Number of Probes with Errors : 0
Number of Probes that Could Not Run : 0

Total Elapsed Time: 17 minutes, 33 seconds

Individual Diagnostic Probe Results :

 - AbandonedReferencesProbe : SUCCESS
 - CorruptClobReferencesProbe : SUCCESS
 - DanglingReferencesProbe : SUCCESS
 - UnbalancedReferencesProbe : SUCCESS

================================================================================
```

Figure 45: Summary of the probes runs

Fast Pass database verification:

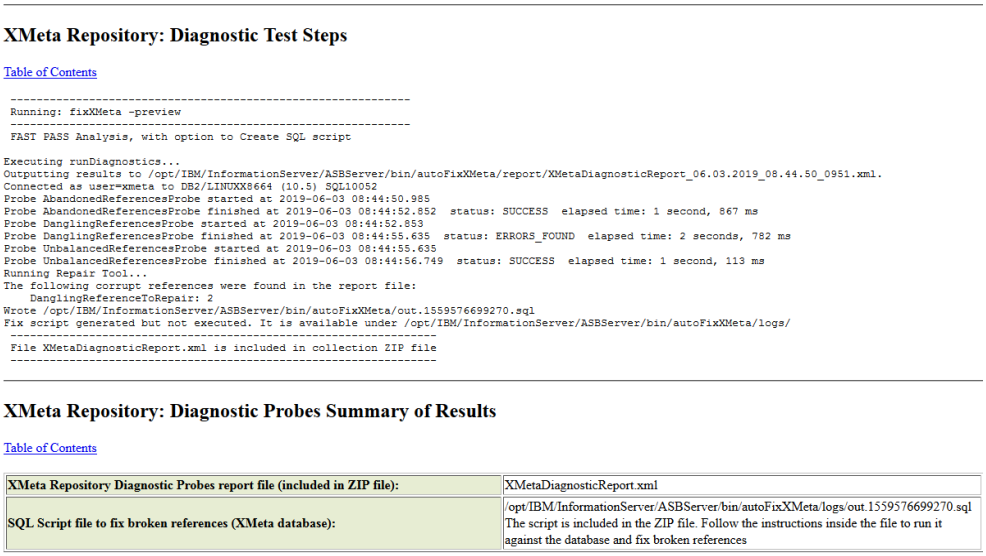
The FAST PASS diagnostics provides a quick analysis of the XMeta repository focused at examining only specific references of some models of the XMeta database. This task is available only in InfoSphere Information Server version 11.5 or later releases.

Once the analysis is complete, the tool can fix automatically broken database references and corruptions or can create an SQL script that you can run against the database to fix the discrepancies at a later time. Select the desired action from the options provided:



The SQL script file, if generated, is included in the collection .zip file and contains in its header the instructions on how to use it.
The Fast Pass verification produces several artifacts and reports that are included in the collection .zip file:

- `XMETAHealthChecker.html`: HTML report with summary of findings (see sample below).
- `XMetaDiagnosticReport.xml`: Probes diagnostic report that was used to generate the SQL scripts. This file is included in the .zip file only for reference.
- The SQL fix script file, for example "`out.1559577020236.sql`": it is only generated if database corruptions are detected, and therefore an SQL fix script can be used. Both the 'Fix automatically' and 'Create SQL script' options may produce the SQL script.
  When the 'Fix' option is selected, the SQL script is also automatically run against the database to apply the fix. In this case the SQL script is included in .zip file only for reference and does not need to be run against the database, as the fix has already been applied.
- `autofixXMeta0.log`: trace log of the completed run of the SQL script against the database. It is included only when the 'Fix' option is selected, and only if an SQL script file was created.



XMeta Repository: Diagnostic Test Steps

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```
 ---------------------------------------------------------------
 Running: fixXMeta -preview
 ---------------------------------------------------------------
 FAST PASS Analysis, with option to Create SQL script

Executing runDiagnostics...
Outputting results to /opt/IBM/InformationServer/ASBServer/bin/autoFixXMeta/report/XMetaDiagnosticReport_06.03.2019_08.44.50_0951.xml.
Connected as user=xmeta to DB2/LINUXX8664 (10.5) SQL10052
Probe AbandonedReferencesProbe started at 2019-06-03 08:44:50.985
Probe AbandonedReferencesProbe finished at 2019-06-03 08:44:52.852  status: SUCCESS  elapsed time: 1 second, 867 ms
Probe DanglingReferencesProbe started at 2019-06-03 08:44:52.853
Probe DanglingReferencesProbe finished at 2019-06-03 08:44:55.635  status: ERRORS_FOUND  elapsed time: 2 seconds, 782 ms
Probe UnbalancedReferencesProbe started at 2019-06-03 08:44:55.635
Probe UnbalancedReferencesProbe finished at 2019-06-03 08:44:56.749  status: SUCCESS  elapsed time: 1 second, 113 ms
Running Repair Tool...
The following corrupt references were found in the report file:
    DanglingReferenceToRepair: 2
Wrote /opt/IBM/InformationServer/ASBServer/bin/autoFixXMeta/out.1559576699270.sql
Fix script generated but not executed. It is available under /opt/IBM/InformationServer/ASBServer/bin/autoFixXMeta/logs/
 ---------------------------------------------------------------------
 File XMetaDiagnosticReport.xml is included in collection ZIP file
 ---------------------------------------------------------------------
```

XMeta Repository: Diagnostic Probes Summary of Results

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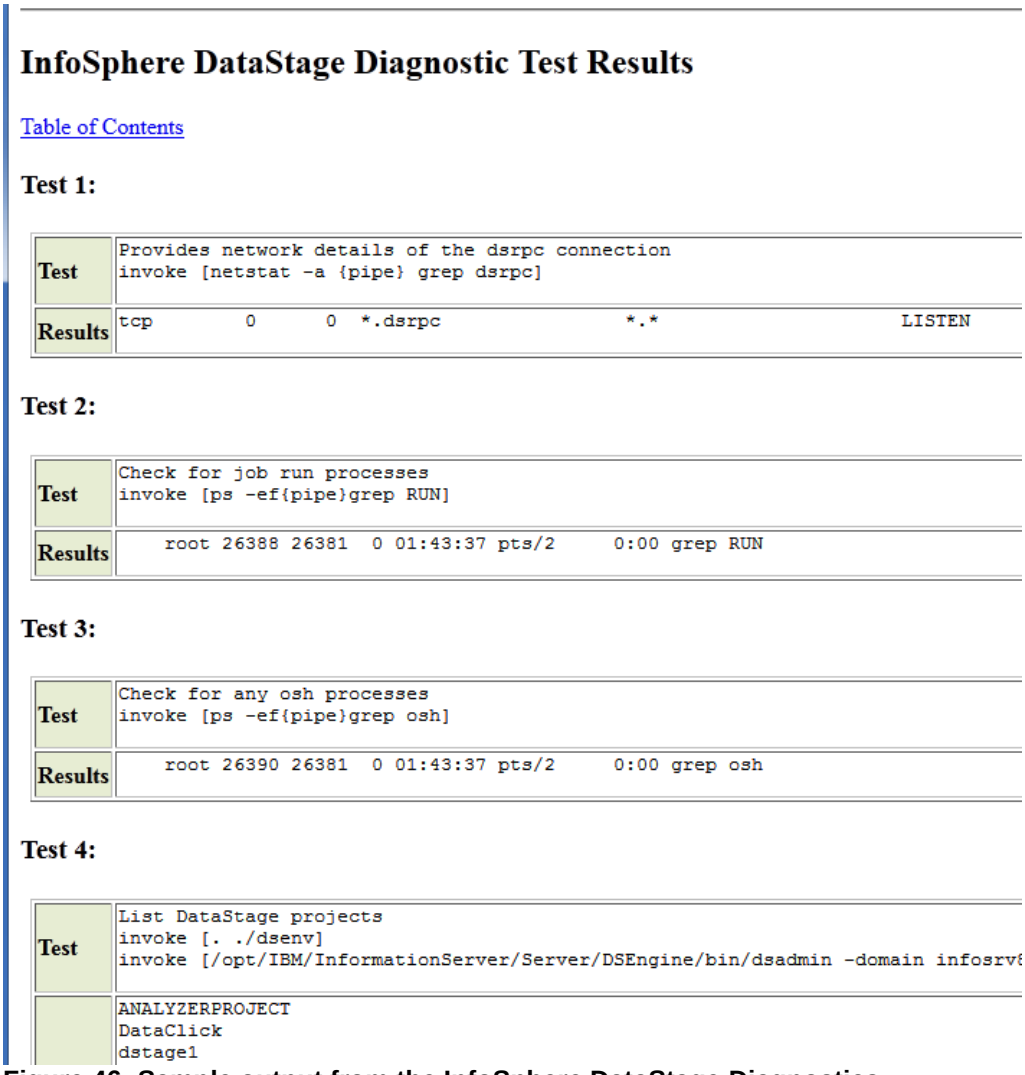
XMeta Repository Diagnostic Probes report file (included in ZIP file):	XMetaDiagnosticReport.xml
SQL Script file to fix broken references (XMeta database):	/opt/IBM/InformationServer/ASBServer/bin/autoFixXMeta/logs/out.1559576699270.sql The script is included in the ZIP file. Follow the instructions inside the file to run it against the database and fix broken references

Information Server DataStage Diagnostic Test tool

This diagnostic tool includes a set of test commands that gather InfoSphere DataStage and QualityStage information. These tests are not run from the General Health Checker tool.
The InfoSphere DataStage Diagnostic Test tool is invoked on the engine tier of InfoSphere Information Server and performs the following tests:

- ✓ Verifies the InfoSphere DataStage credentials by retrieving them from InfoSphere Information Server and using them to get a list of InfoSphere DataStage projects on an engine tier.
- ✓ Lists the connections on the current system that are made to an InfoSphere DataStage server. Includes the IP address to identify the InfoSphere DataStage server.
- ✓ Lists the InfoSphere DataStage or InfoSphere QualityStage processes that are running on the server.
- ✓ Lists the InfoSphere DataStage or InfoSphere QualityStage projects.
- ✓ Lists information such as the InfoSphere DataStage engine uvconfig settings, lock information, and dynamic hashed files.
- ✓ List the issues that were found with each InfoSphere DataStage or InfoSphere QualityStage project.

The results of the run are included in the HTML report `DataStageHealthChecker.html` as shown in Figure 46. The HTML report is included in the collection .zip file.



InfoSphere DataStage Diagnostic Test Results

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Test 1:

Test	Provides network details of the dsrpc connection invoke [netstat -a {pipe} grep dsrpc]
Results	tcp 0 0 *.dsrpc *.* LISTEN

Test 2:

Test	Check for job run processes invoke [ps -ef{pipe}grep RUN]
Results	root 26388 26381 0 01:43:37 pts/2 0:00 grep RUN

Test 3:

Test	Check for any osh processes invoke [ps -ef{pipe}grep osh]
Results	root 26390 26381 0 01:43:37 pts/2 0:00 grep osh

Test 4:

Test	List DataStage projects invoke [. ./dsenv] invoke [/opt/IBM/InformationServer/Server/DSEngine/bin/dsadmin -domain infosrv
	ANALYZERPROJECT DataClick dstage1

Figure 46: Sample output from the InfoSphere DataStage Diagnostics

InfoSphere Information Server PX Engine Configuration Test

This diagnostic test verifies the basic health of the parallel engine and its ability to compile and execute a simple parallel job by using a two-node configuration file and a more complex parallel job that involves a transformer stage.

The results of the test are described in two files, which are included in the .zip file: `PXhealthChecker.log` and `PXHealthCheckerOsh.log`.
A summary of the test results is included in the `PXHealthChecker.html` HTML report.

Figure 47 shows an example of the `PXHealthChecker.html` file.

PX Engine Configuration Test Steps

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PX Engine Configuration Test

Result	Status Code	Description
PASSED	PXEHC1001I	Health checker setup test
PASSED	PXEHC1002I	PXEngine home validation test
PASSED	PXEHC1003I	Environment configuration test
PASSED	PXEHC1004I	Configuration file test
PASSED	PXEHC1005I	Basic osh execution test
PASSED	PXEHC1006I	Compiler detection test
INFO	PXEHC1007I	Transform compilation test
INFO	PXEHC1007I	APT_COMPILER = cxx
INFO	PXEHC1007I	APT_COMPILEOPT = -W/TP -W/EHa -DAPT_USE_ANSI_IOSTREAMS -c -W/Zc:wchar_t-
INFO	PXEHC1007I	APT_LINKER = cxx
INFO	PXEHC1007I	APT_LINKOPT = -s -W/dll -W/base:0x50000000 -W/Zc:wchar_t-
FAILED	PXEHC1007I	Transform compilation test - Missing or misconfigured compiler/linker and/or options. Resolution: Check the PXHealthCheckerOsh.log file and update the compiler environment. PXEHC2000I PXEngine Health Checker: END EXECUTION at Wed Jan 20 15:33:20 2010

PX Engine Configuration Test Results

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```
##I IIS-DSEE-TFCN-00001 15:33:05(000)
IBM WebSphere DataStage Enterprise Edition 8.1.0.4987
Copyright (c) 2001, 2005-2008 IBM Corporation. All rights reserved



##I IIS-DSEE-TFCN-00006 15:33:05(001)  conductor uname: -s=Windows_NT; -r=1; -v=5; -n=FERRARI; -m=Pentium
##I IIS-DSEE-TOSH-00002 15:33:05(002)  orchgeneral: loaded
##I IIS-DSEE-TOSH-00002 15:33:05(003)  orchsort: loaded
##I IIS-DSEE-TOSH-00002 15:33:05(004)  orchstats: loaded
##E IIS-DSEE-TBLD-00076 15:33:15(000)  Error when checking composite operator: Subprocess command failed with exit status
##E IIS-DSEE-TFSR-00019 15:33:15(001)  Could not check all operators because of previous error(s)
##W IIS-DSEE-TFTM-00012 15:33:15(002)  Error when checking composite operator: The number of reject datasets "0" is less t
##I IIS-DSEE-TBLD-00000 15:33:15(003)  Error when checking composite operator: Output from subprocess: C:\IBM\Information$
        with
        [
            _Ty=APT_KeyLookupRange::rangeOption
        ]
\tmp\osh_tmp\checkosh_Transformer.C(180) : warning C4101: 'output' : unreferenced local variable
\tmp\osh_tmp\checkosh_Transformer.C(175) : warning C4101: 'input' : unreferenced local varia
##I IIS-DSEE-TBLD-00000 15:33:15(004)  Error when checking composite operator: Output from subprocess: ble

##W IIS-DSEE-TFEV-00025 15:33:15(005)  Error when checking composite operator: Converting string to number.
##W IIS-DSEE-TFEV-00023 15:33:15(006)  Error when checking composite operator: Implicit conversion from source type "Strir
```

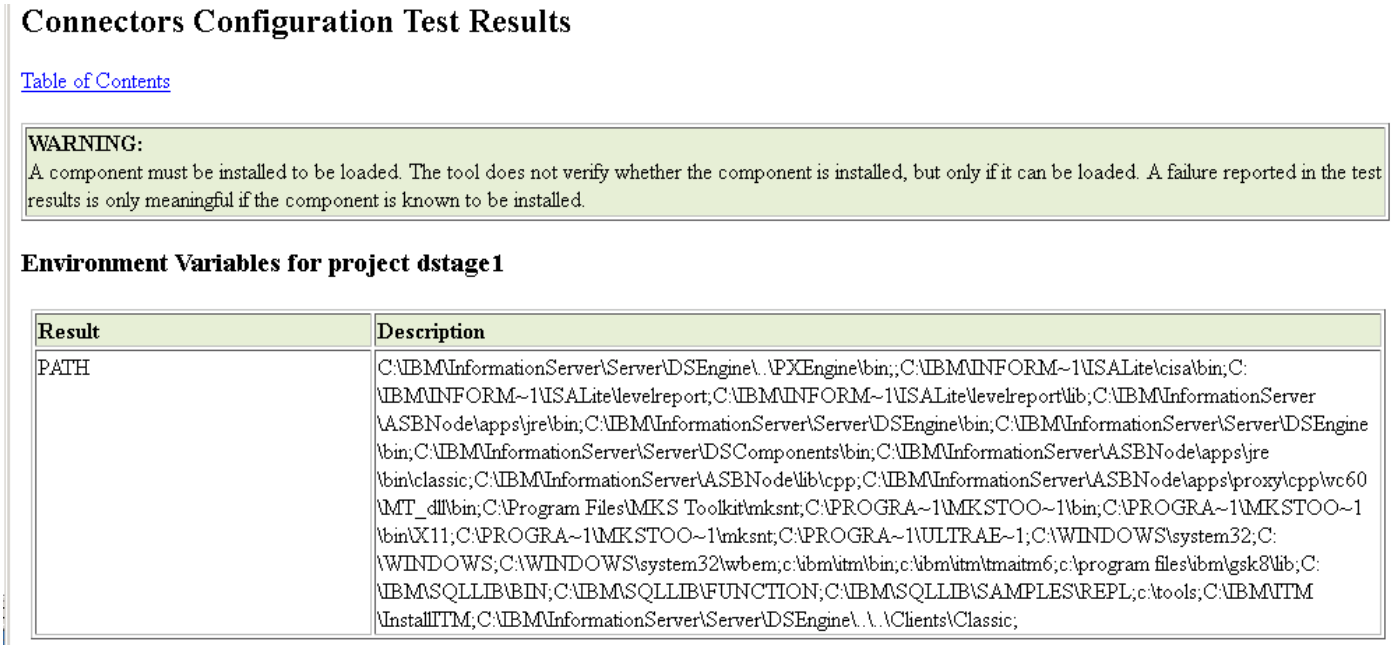
Figure 47

Connectors Load Test

One of the most common issues with InfoSphere DataStage connectivity stages is the inability to load a connectivity library. This issue occurs when the connectivity stages cannot load the third-party libraries that they depend on (for example, an Oracle client library) because the libraries are not installed or the PATH or LIBPATH environment variables are not defined correctly. The Connectors Configuration Test tool reports whether the InfoSphere Information Server connectivity libraries, such as plugins, operators, connectors, and related libraries, can be loaded. If one cannot be loaded, the tool reports a reason for the failure.

To run the Connectors Load Test, the InfoSphere Information Server DataStage server tier must be installed. After you invoke the tool, provide the credentials to the InfoSphere DataStage server and services tier. Select an InfoSphere DataStage project from the list of projects in the repository. The project that you select is used only as a reference by the tool, and the tool does not modify the project. The diagnostic results include information on the environment variables that are set in the project.

The tool creates the `ConnectorsHealthChecker.html` HTML report file, which contains all the results from the tests, and a `ConnectorsHealthChecker-Failures.html` file, which contains only results from the failed tests. An extract of a sample report file is shown in Figures 48 and 49.



Connectors Configuration Test Results

Table of Contents

WARNING:
A component must be installed to be loaded. The tool does not verify whether the component is installed, but only if it can be loaded. A failure reported in the test results is only meaningful if the component is known to be installed.

Environment Variables for project dstage1

Result	Description
PATH	C:\IBM\InformationServer\Server\DSEngine\..\PXEngine\bin;;C:\IBM\INFORM~1\ISALite\cisa\bin;C:\IBM\INFORM~1\ISALite\levelreport;C:\IBM\INFORM~1\ISALite\levelreport\lib;C:\IBM\InformationServer\ASBNode\apps\jre\bin;C:\IBM\InformationServer\Server\DSEngine\bin;C:\IBM\InformationServer\Server\DSEngine\bin;C:\IBM\InformationServer\Server\DSComponents\bin;C:\IBM\InformationServer\ASBNode\apps\jre\bin\classic;C:\IBM\InformationServer\ASBNode\lib\cpp;C:\IBM\InformationServer\ASBNode\apps\proxy\cpp\vc60\MT_dll\bin;C:\Program Files\MKS Toolkit\mksnt;C:\PROGRA~1\MKSTOO~1\bin;C:\PROGRA~1\MKSTOO~1\bin\X11;C:\PROGRA~1\MKSTOO~1\mksnt;C:\PROGRA~1\ULTRAE~1;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\system32\wbem;c:\ibm\itm\bin;c:\ibm\itm\tmaitm6;c:\program files\ibm\gsk8\lib;C:\IBM\SQLLIB\BIN;C:\IBM\SQLLIB\FUNCTION;C:\IBM\SQLLIB\SAMPLES\REPL;c:\tools;C:\IBM\ITM\InstallITM;C:\IBM\InformationServer\Server\DSEngine\..\..\Clients\Classic;

Figure 48: The environment variable set in the InfoSphere DataStage project

Connector Configuration Test - All Results - Netezza Connector

Result	Description	Recommendations
INFO	CC_GUARDIUM_EVENTS = No value.	
INFO	TMPDIR = No value.	
INFO	CC_NZ_LOG_LEVEL = No value.	
INFO	ODBCINI = No value.	
INFO	NZ_ODBC_INI_PATH = No value.	
FAILED	Netezza Connector Connector - failed to load library ccnz.dll The specified module could not be found.	Ensure that the Netezza ODBC driver directory is set properly in odbc.ini. On unix, ensure ODBCINI and NZ_ODBC_INI_PATH are set correctly. Ensure IS and external product libraries are both 32-bit or both 64-bit.

Connector Configuration Test - All Results - Teradata 12 Connector

Result	Description	Recommendations
INFO	CC_GUARDIUM_EVENTS = No value.	
INFO	TMSM_ENABLED = No value.	
INFO	TMSM_HOME = No value.	
INFO	CC_TERA_RECONNECT_FLAG = No value.	

Figure 49: Results from loading the connectors

The WebSphere MQ, Oracle, and DB2 Connector stages link to the product libraries that are required dynamically at run time. Because the libraries are loaded dynamically, the InfoSphere Information Server Connectors Configuration Test cannot verify the presence of the dependent WebSphere MQ, DB2, or Oracle client libraries. Therefore, the WebSphere MQ, Oracle, and DB2 Connector stages tests might not report failures even when a runtime failure occurs. Because the WebSphere MQ, DB2, and Oracle Connector stages share requirements with their plugins and operators, use the results of the plugin and operator stage tests as results of the connector stages tests.
For example, if the WebSphere MQ Plugin stage fails when you use the WebSphere MQ Client libraries, the WebSphere MQ Connector stage will also fail when it is used in a job that requires the WebSphere MQ Client libraries, even though its connector stage test may show a PASSED result.

Connectors Configuration Test

The tool verifies the correct operations of the InfoSphere Information Server Connectors by testing the connection to a specified resource or repository, using a chosen connector. The user will:

a. Select a connector to test among the ones installed
b. Get a list of connection properties for the connector
c. Provide values for these properties
d. Test the connection using the properties provided

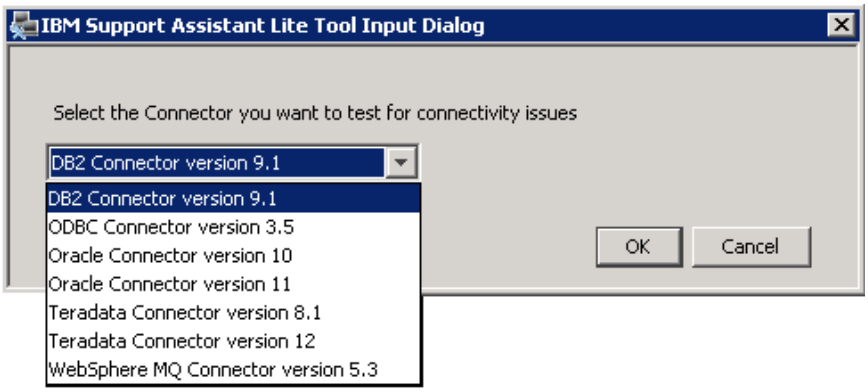


Figure 50: Selecting a Connector to test

Once an InfoSphere DataStage project and a connector have been selected, provide the values of the parameters to be used for the connection to the specified data source.

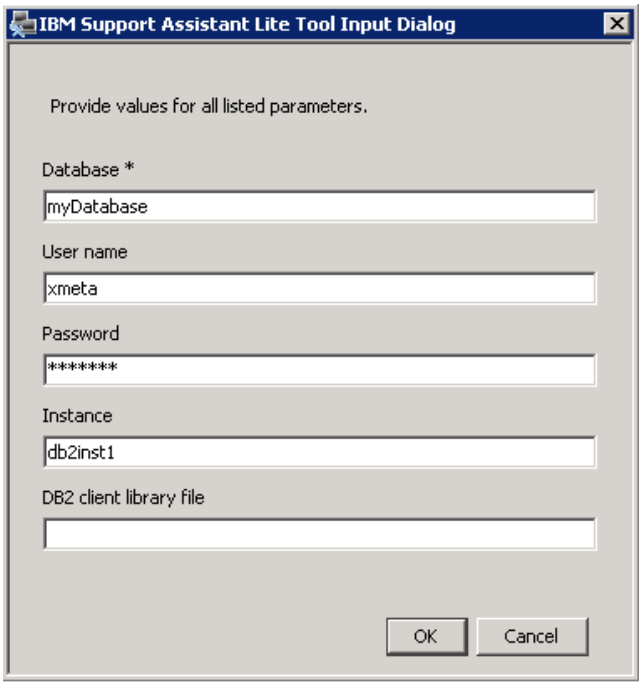


Figure 51: Providing values for the connector's parameters

The tool connects to the data source and reports connection results and diagnostic data, as shown in Figure 52

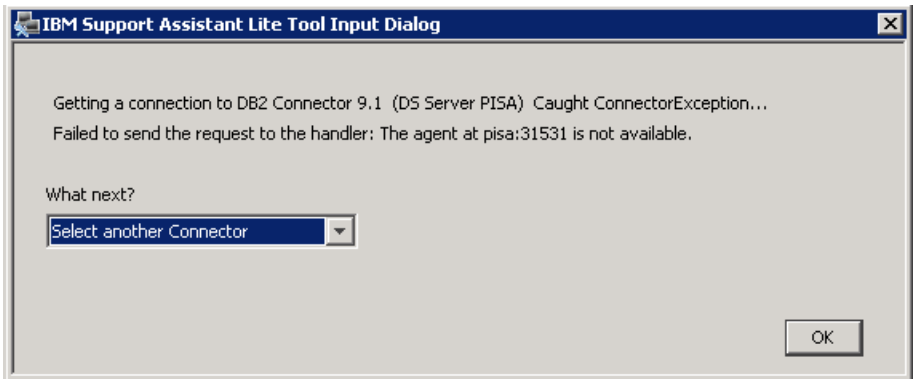


Figure 52: Testing the connection

Results of all the attempted connections are gathered in html reports that are include in the collection .zip file, as shown in Figure 53.

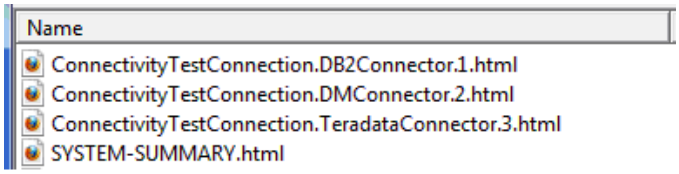
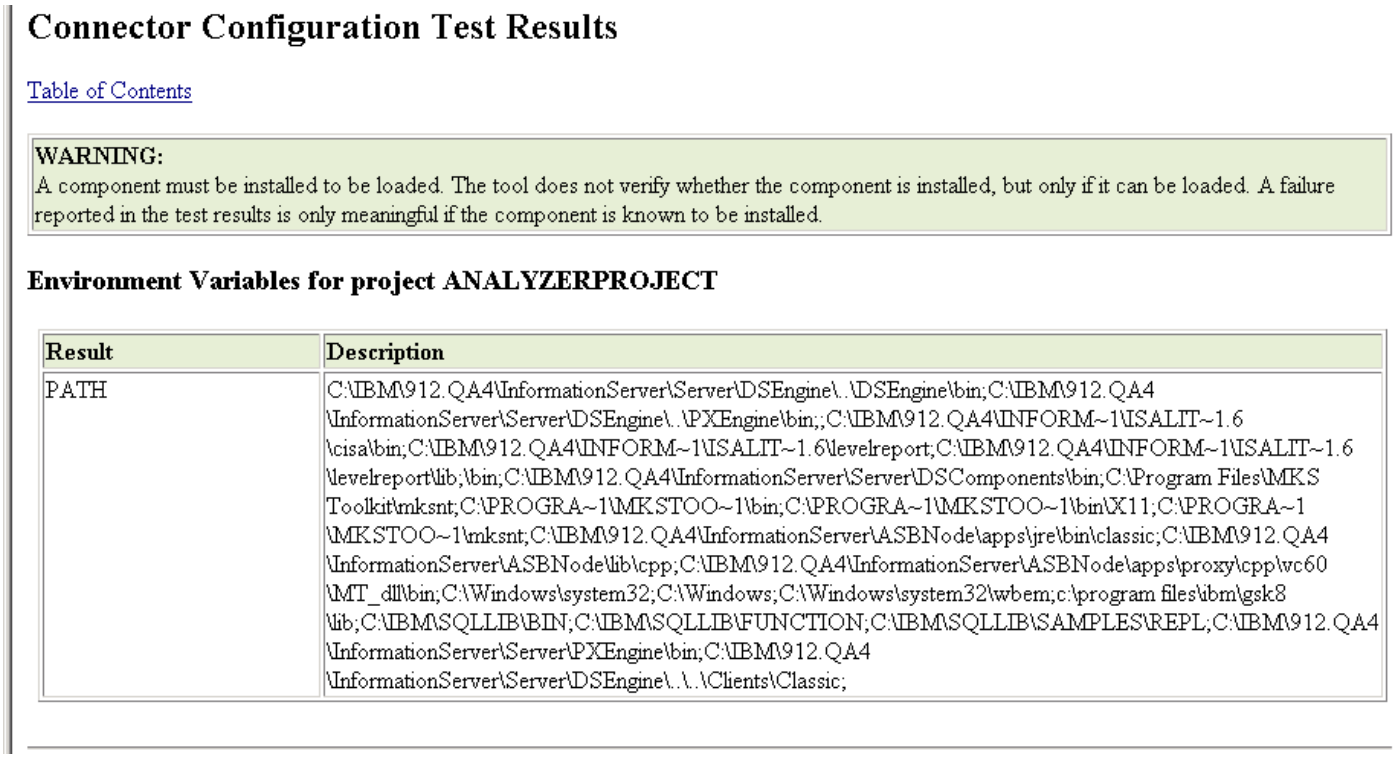


Figure 53: Results found in the collection .zip file

A sample of the report in the following figures shows the test environment, the results of the loading of the connector and the results of the connection to the repository using the parameters provided.



Connector Configuration Test Results

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WARNING:
A component must be installed to be loaded. The tool does not verify whether the component is installed, but only if it can be loaded. A failure reported in the test results is only meaningful if the component is known to be installed.

Environment Variables for project ANALYZERPROJECT

Result	Description
PATH	C:\IBM\912.QA4\InformationServer\Server\DSEngine\..\DSEngine\bin;C:\IBM\912.QA4 \InformationServer\Server\DSEngine\..\PXEngine\bin;;C:\IBM\912.QA4\INFORM~1\ISALIT~1.6 \cisa\bin;C:\IBM\912.QA4\INFORM~1\ISALIT~1.6\levelreport;C:\IBM\912.QA4\INFORM~1\ISALIT~1.6 \levelreport\lib;\bin;C:\IBM\912.QA4\InformationServer\Server\DSComponents\bin;C:\Program Files\MKS Toolkit\mksnt;C:\PROGRA~1\MKSTOO~1\bin;C:\PROGRA~1\MKSTOO~1\bin\X11;C:\PROGRA~1 \MKSTOO~1\mksnt;C:\IBM\912.QA4\InformationServer\ASBNode\apps\jre\bin\classic;C:\IBM\912.QA4 \InformationServer\ASBNode\lib\cpp;C:\IBM\912.QA4\InformationServer\ASBNode\apps\proxy\cpp\vc60 \MT_dll\bin;C:\Windows\system32;C:\Windows;C:\Windows\system32\wbem;c:\program files\ibm\gsk8 \lib;C:\IBM\SQLLIB\BIN;C:\IBM\SQLLIB\FUNCTION;C:\IBM\SQLLIB\SAMPLES\REPL;C:\IBM\912.QA4 \InformationServer\Server\PXEngine\bin;C:\IBM\912.QA4 \InformationServer\Server\DSEngine\..\..\Clients\Classic;

Figure 54: The test environment, as defined by the project selected

Connector Configuration Test - All Results - DB2 Connector

Result	Description	Recommendations
INFO	DB2INSTANCE = DB2	
INFO	CC_GUARDIUM_EVENTS = No value.	
INFO	CC_DB2_ZLOAD_MAXBLOCKSIZE = No value.	
INFO	CC_DB2_ZLOAD_BYTESPERTRACK = No value.	
INFO	CC_DB2_ZLOAD_TRACKSPERCYL = No value.	
PASSED	DB2 Connector Connector - Successfully loaded library ccdb2.dll	
PASSED	DB2 Connector Connector - Successfully loaded library db2app.dll	

Connectivity Test Parameters

Table of Contents

Parameter	Value
Database *	xmeta
User name	xmeta
Password	******
Instance	
DB2 client library file	

Connectivity Test Results

Table of Contents

```
Getting a connection to DB2 Connector
Succeeded!
```

Figure 55: The Connector loading and the connectivity test results

InfoSphere Information Server Pack for SAP Configuration Test

The Pack for SAP Configuration Test loads the InfoSphere Information Server Pack for SAP connectivity libraries and reports if they can be loaded. If a library cannot be loaded, the test reports a reason for the failure. The connectivity libraries include a set of libraries for the services tier and a set for the client tier. To run the SAP Packs Configuration Test, the InfoSphere Information Server Pack for SAP must be installed.

After you invoke the tool, you must provide the credentials to the InfoSphere DataStage server and domain. Then, you select an InfoSphere DataStage project from a list of projects in the repository, as shown in Figure 56. This project is used only as a reference by the tool, and no modifications to the project are made.

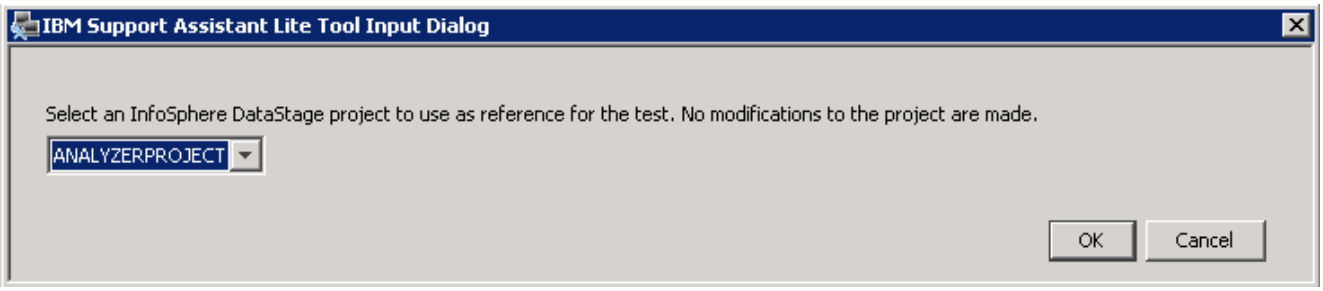

Figure 56

The tool creates the `SAPHealthChecker.html` and `SAPHealthChecker-Failures.html` HTML reports. The reports, which are in the .zip file, contain results from the tests. An example of the report is shown in Figure 57.

SAP Packs Configuration Test Results

WARNING:
A component needs to be installed in order to be loaded. The tool checks components from all versions of SAP Packs. A failure reported in the test results is only meaningful if the component is known to be installed at the level specified.

Server Tier

Result	Description
PASSED	RFC lib Plugin - Successfully loaded library librfc32.dll
FAILED	RFC lib Plugin - failed to load library librfc32u.dll The specified module could not be found.
PASSED	RFC lib Plugin - Successfully loaded library libsapucum.dll
PASSED	RFC ICU lib (RFC SDK 7.0 or 7.1 or 7.2) Plugin - Successfully loaded library icudt30.dll || icudt32.dll || icudt34.dll
PASSED	RFC ICU lib (RFC SDK 7.0 or 7.1 or 7.2) Plugin - Successfully loaded library icuin30.dll || icuin32.dll || icuin34.dll
PASSED	RFC ICU lib (RFC SDK 7.0 or 7.1 or 7.2) Plugin - Successfully loaded library icuuc30.dll || icuuc32.dll || icuuc34.dll
FAILED	RFC lib (Pack 65x only) Plugin - failed to load library libsapu16vc71.dll The specified module could not be found.
PASSED	RFC ICU lib (SAP RFC SDK 7.2 - Pack 7x only) Plugin - Successfully loaded library libicudecnumber.dll
PASSED	RFC NW lib (SAP RFC SDK 7.2 - Pack 7x only) Plugin - Successfully loaded library sapnwrfc.dll
PASSED	JCO lib (SAP JCO 3.0 - Pack 7x only) Plugin - Successfully loaded library sapjco3.dll

Client Tier

Result	Description
PASSED	RFC lib Plugin - Successfully loaded library librfc32.dll
FAILED	SAP Admin Plugin - failed to load library dsr3util.exe The specified module could not be found.

Figure 57

Information Analyzer Diagnostic test

The test verifies the configuration of the InfoSphere Information Analyzer component in an InfoSphere Information Server environment. It provides tests for:

- **The global-level settings of** InfoSphere **Information Analyzer:**
  - global-level job execution settings
  - global-level connection to the InfoSphere Information Analyzer database
  - global-level connection to the InfoSphere DataStage engine
- **The project-level settings of** InfoSphere **Information Analyzer:**
  - project-level job execution settings
  - project-level connection to the InfoSphere Information Analyzer database
  - project-level connection to the InfoSphere DataStage engine

The tool requires data inputs as shown in the following figures:

1. Provide connection information to the InfoSphere Information Server (services tier):

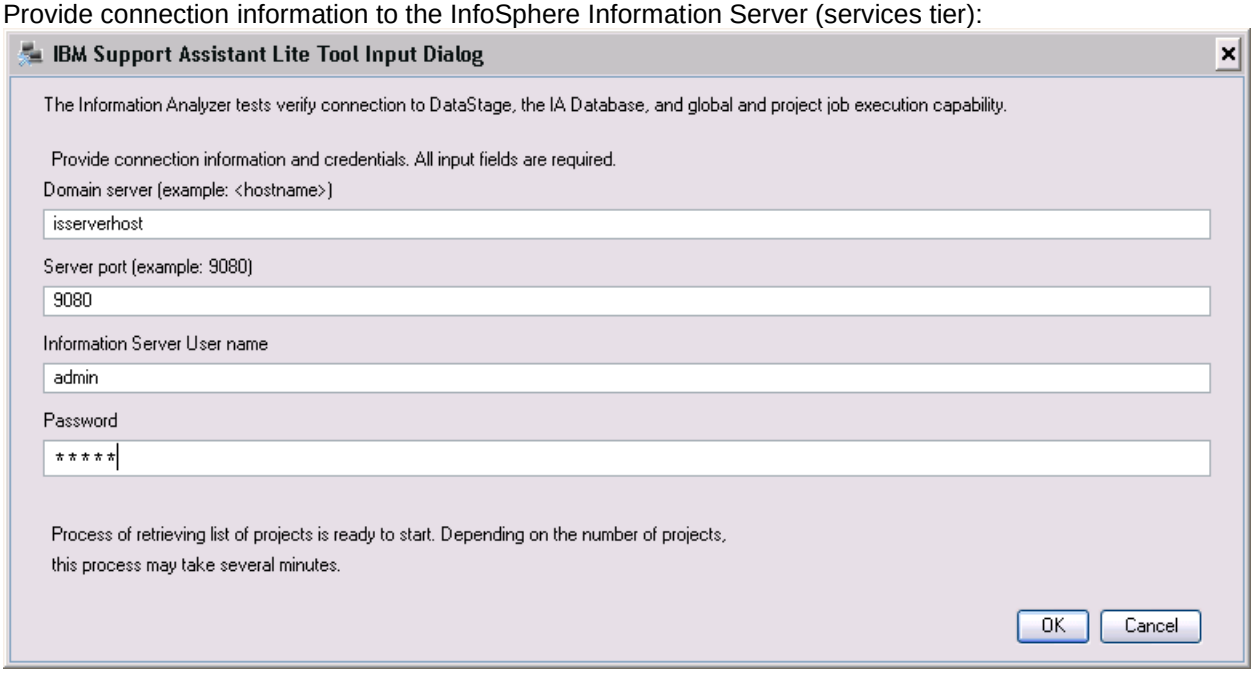

Figure 58

2. Select an InfoSphere Information Analyzer project or <ALL Projects> to test:

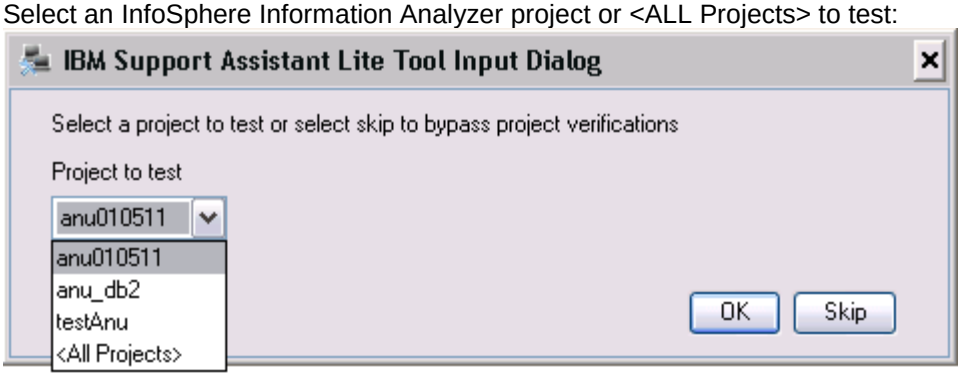

Figure 59

The tool creates an HTML report file, `IAHealthChecker.html` which contains all the results from the tests, and `IAHealthChecker-Failures.html,` which contains results from only the failed tests.

Information Analyzer connection information

Table of Contents

Information Server Host:	**localhost**
Information Server Port:	**9080**
Information Server User ID:	**admin**

Information Analyzer Global level diagnostics

Table of Contents

Information Analyzer Global level diagnostics - All Results

Result	Description	Result Details
PASSED	4004 Validate IADB Connection	Driver = com.ibm.db2.jcc.DB2Driver; DatabaseUrl = jdbc:db2://wb-gecko-xp:50000/iadb; User = iauser
PASSED	4002 Validate DataStage Connection	DS Project = dstage1; Host = WB-GECKO-XP; Port = 31538; User = admin
PASSED	4006 Validate EngineJobExecution	DS Project = dstage1; Host = WB-GECKO-XP; Port = 31538; DSUser = admin; Driver =

Information Analyzer project level diagnostics

Table of Contents

Information Analyzer Project selected:	[]

Information Analyzer Project diagnostics - All Results

Result	Description	Result Details
PASSED	4005 Validate IADB Connection For Project testAnu	Driver = com.ibm.db2.jcc.DB2Driver; DatabaseUrl = jdbc:db2://wb-gecko-xp:50000/iadb; User = iauser
PASSED	4005 Validate IADB Connection For Project anu_db2	Driver = com.ibm.db2.jcc.DB2Driver; DatabaseUrl = jdbc:db2://wb-gecko-xp:50000/iadb; User = iauser
PASSED	4005 Validate IADB Connection For Project anu010511	Driver = com.ibm.db2.jcc.DB2Driver; DatabaseUrl = jdbc:db2://wb-gecko-xp:50000/iadb; User = iauser
PASSED	4003 Validate DataStage Connection For Project testAnu	DS Project = dstage1; Host =

Figure 60

InfoSphere Information Server System Requirements

Information Server Prerequisites Checker tool

The Prerequisite Checker tool evaluates the system state and can reduce the overall time that it takes to install InfoSphere Information Server. The tool uses a set of predefined rules to detect the operating system level, package installation, kernel parameters, and system files and to uncover potential problems that can cause installation issues. The tool can be used in the following situations:

- **Clean installation**
  Before you start a new installation of InfoSphere Information Server, you can invoke the Prerequisite Checker to determine if the system is ready for the InfoSphere Information Server installation. Even on a clean operating system, packages that are required might not be installed, kernel parameters can be too low for a successful installation, or the settings of environment variables can cause problems. The Prerequisite Checker detects problematic situations. You can address issues before you start the installation process.

  

  When the tool is run on a computer where InfoSphere Information Server components are installed, some of the conditions report a failure. These failures are normal, as the Prerequisite Checker for a clean installation does not expect to find an existing installation of InfoSphere Information Server. For example, the Prerequisite Checker checks to verify if a directory is empty. In other cases, however, the failure indication might be misleading. Contact IBM Support.

- **Evaluation of a failed installation attempt**
  If an installation attempt failed, run this tool to help diagnose potential issues and identify artifacts that need to be cleaned up before you retry the installation.

The tool generates two HTML reports, which are included in the collection .zip file:

- `PrereqChecker.html` – Summarizes all findings by InfoSphere Information Server tier and highlights which tests that it performed on the system passed and failed. If a test fails, a recommendation is made on how to correct the problem. A warning can also be reported if a potential problem is encountered.

- `PrereqChecker-Failures.html` – Summarizes only the failed tests that were performed on the system.

Prerequisite Check of a Clean Install of Information Server

When you invoke the Prerequisite Checker to verify a new installation of InfoSphere Information Server, you can specify to use a response file that was created by a previous installation of the same version of InfoSphere Information Server. The response file contains installation data, folder paths, and parameters that were used by an installation. You can reuse this information in the prerequisite check verifications. You can also skip this step and elect to use default values. In both cases you will be able to edit and modify any of the parameter values before the prerequisite tests are invoked.

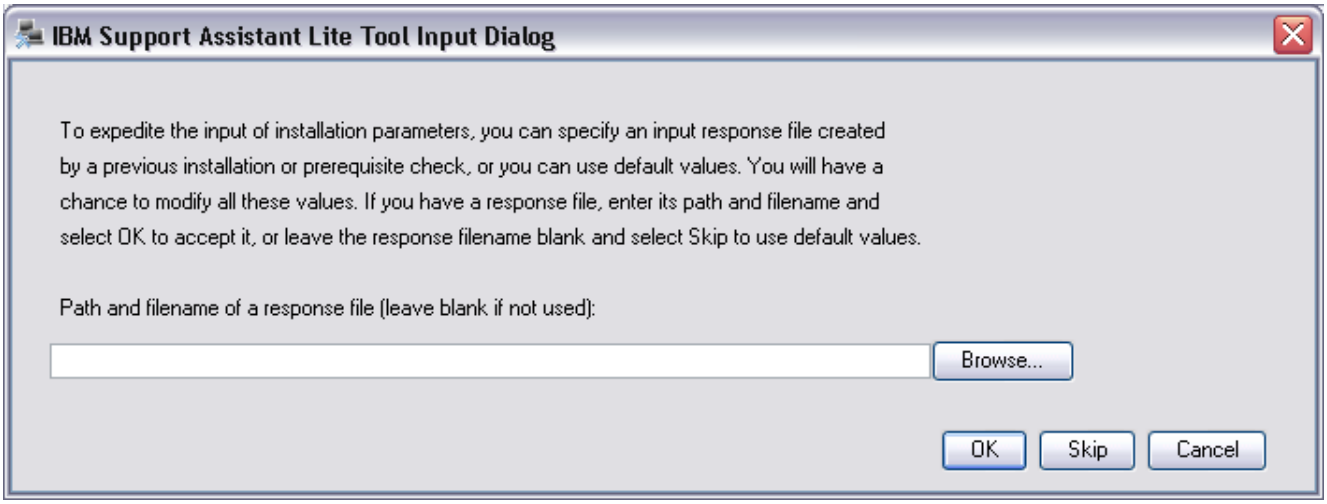

Figure 61

Specify the InfoSphere Information Server installation folder and select the InfoSphere Information Server tiers to verify, as shown in Figure 62.

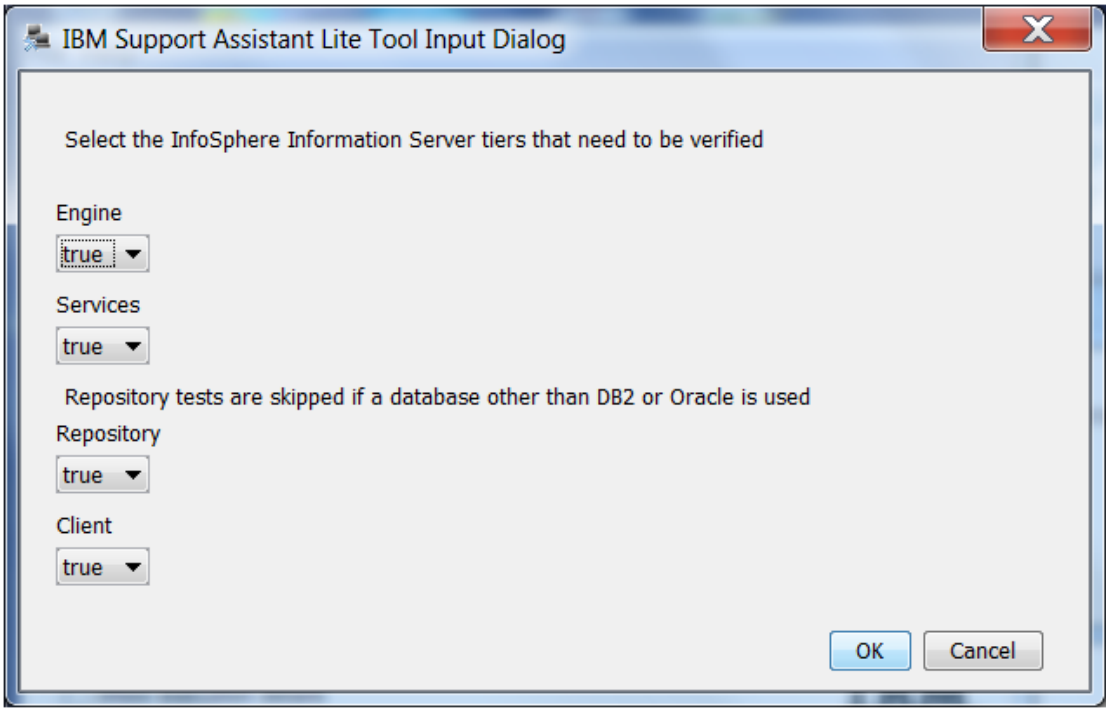

Figure 62

Select the InfoSphere Information Server components that you want to verify:

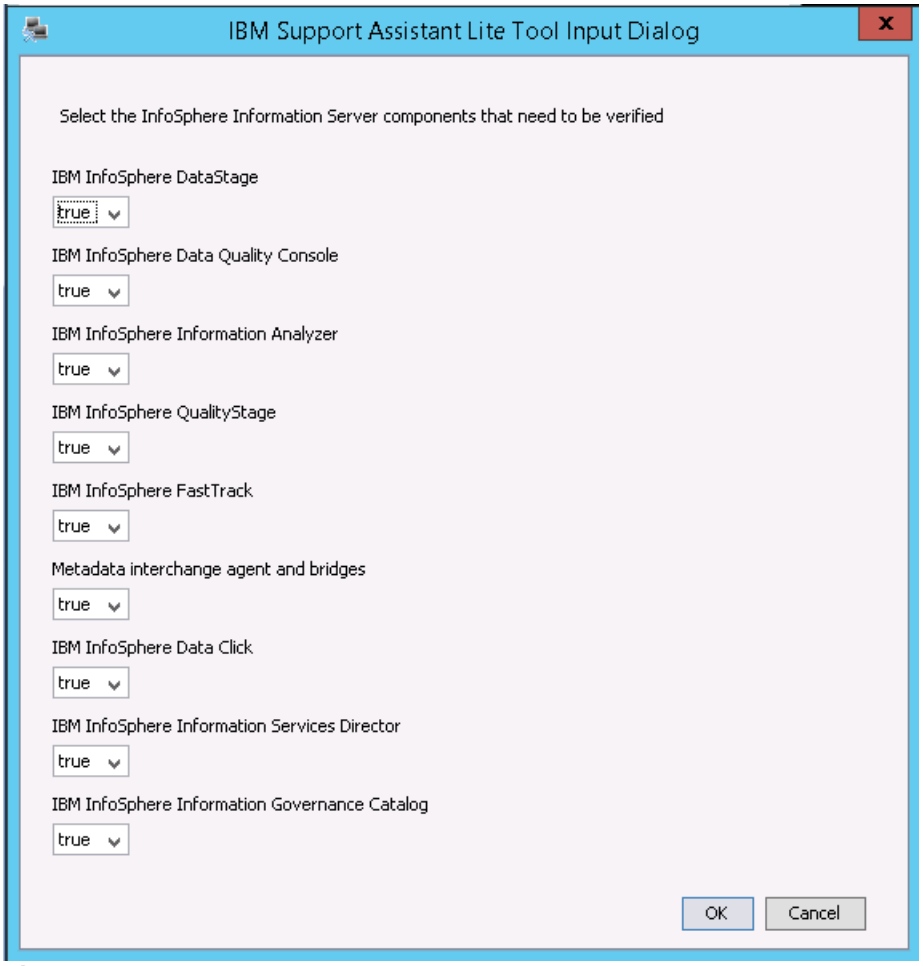

Figure 63

Select the configuration to be tested.

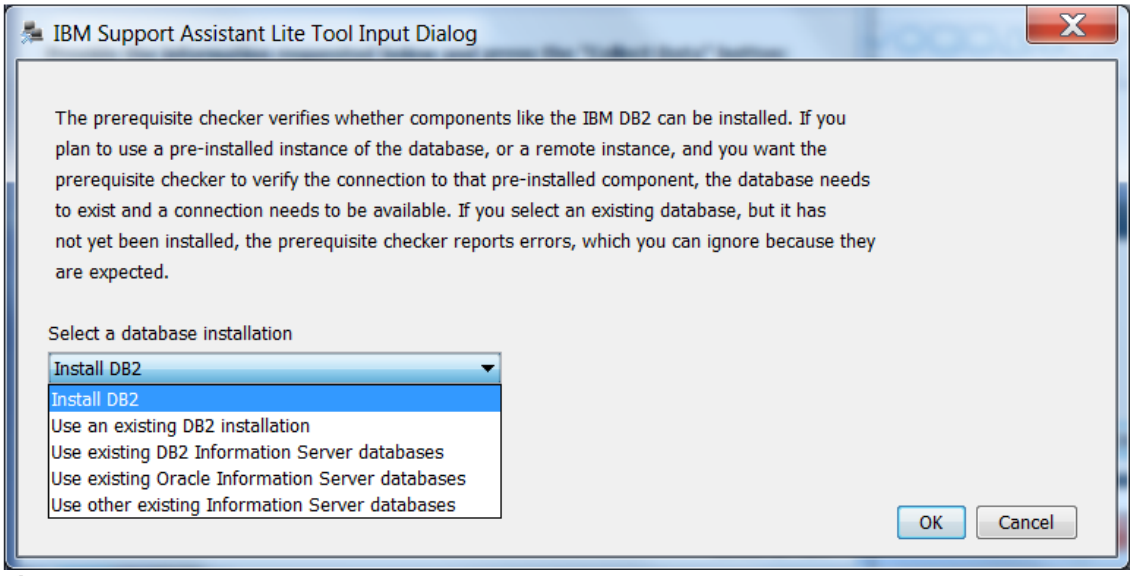

Figure 64

Modify parameters to suit the installation to verify. Depending on the components selected, there may be other screens with additional data that needs to be provided.

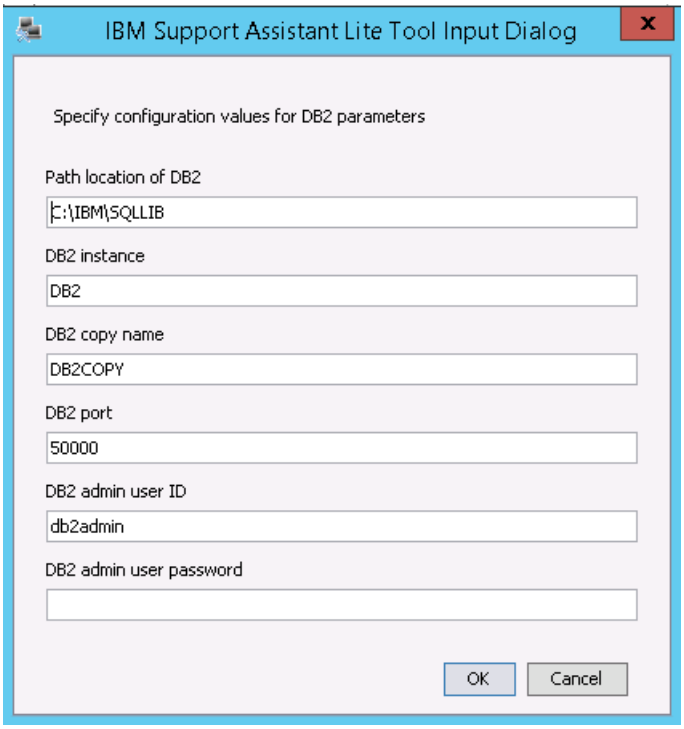

Figure 65

Save the modified installation parameters in a new response file or click **Skip** to bypass saving a file.

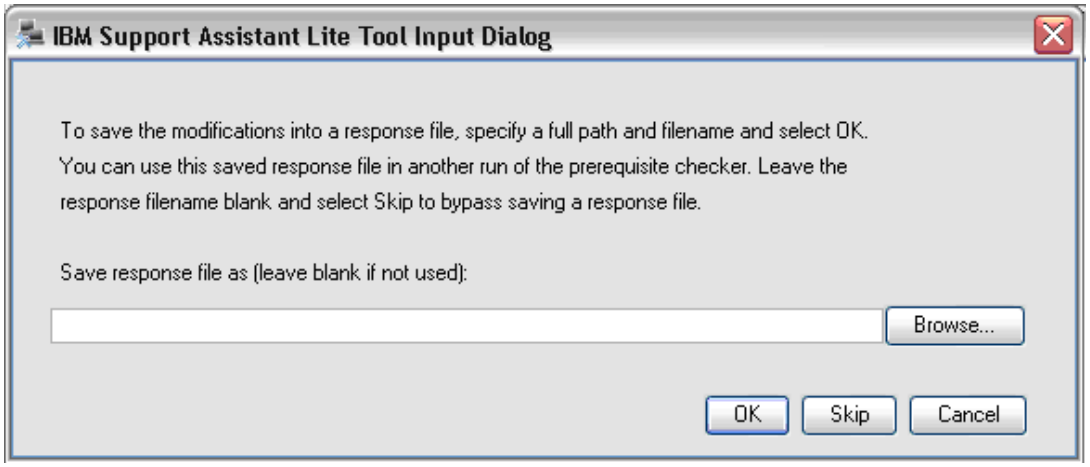

Figure 66

A response file saved by this step produces a file that contains passwords in the clear. Use appropriate security to prevent unauthorized users from viewing these files. The response file generated by this step is not included in the collection .zip file to send to IBM Support.

Due to the limited numbers of response file parameters that the Prerequisite Checker uses, a response file that is saved when you run the Prerequisite Checker cannot be used for a full installation of InfoSphere Information Server. The response file can be used only for a Prerequisite Checker task. However, a response file that was created during an installation of InfoSphere Information Server can be used as input to the Prerequisite Checker.

A Prerequisite Checker response file is not the same as an ISALite recorded response file discussed in the Record and playback of an ISALite session chapter in this document. The two response files serve different purposes and are not compatible.

Figure 67 shows an extract from a sample HTML report:

InfoSphere Information Server Prerequisites Checker

WARNING: If the system already contains an installation of Information Server, some of the failures reported in these results might not be accurate. Consult with IBM Support.

Multi-Tier [New InfoSphere Information Server 11.3 - Fresh install]

Result	Status Code	Description
PASSED	CDIPR2003I	Ensure that the InfoSphere Information Server installation directory C:\IBM\InformationServer2 is empty or does not exist.
PASSED	CDIPR2034I	Ensure that the directory path C:\IBM\InformationServer2 length is not more than 83 characters.
FAILED	CDIPR2016I	The disk space requirement for C:\IBM\InformationServer2 is 3350 MB. This drive or partition has 0 MB available. Resolution: Free up disk space or specify a different installation directory.
FAILED	CDIPR2016I	The disk space requirement for C:\Users\ADMINI~1\AppData\Local\Temp\2\ is 260 MB. This drive or partition has 0 MB available. Resolution: Free up disk space or specify a different installation directory.
FAILED	CDIPR2016I	The disk space requirement for C: is 6440 MB. This drive or partition has 0 MB available. Resolution: Free up disk space or specify a different installation directory.

Metadata Repository Tier [New InfoSphere Information Server 11.3 - Fresh install]

Result	Status Code	Description
PASSED	CDIPR2001I	Ensure that the operating system is at the correct level for the DB2 installation.
PASSED	CDIPR2119I	Ensure that the operating system is at the correct fix pack level and has the required software packages for the DB2 installation.
PASSED	CDIPR2116I	Ensure write access to the system temporary directory C:\Users\ADMINI~1\AppData\Local\Temp\2\.

Figure 67

InfoSphere Information Server Pack for SAP Applications Prerequisite Checker

For an InfoSphere Information Server Pack for SAP Applications to work correctly, proper version of SAP system libraries must be installed, and PATH must be set appropriately. The InfoSphere Information Server Pack for SAP Applications Prerequisite Checker verifies this configuration and reports missing libraries.

Select the InfoSphere Information Pack for SAP Applications version to verify as shown in Figure 68, and click **OK**.

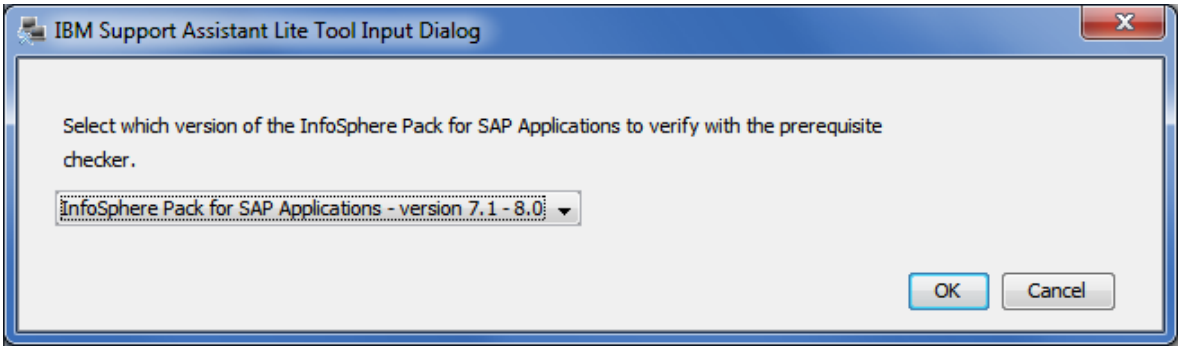

Figure 68

A `SAPPrereqChecker.html` file is generated and included in the .zip file, as shown in Figure 69:

Pack for SAP Applications Prerequisites Checker

Pack for SAP Documentation Location

SAP Version	Prerequisite Documentation
7.1 - 8.0	See the section "Required SAP SDKs" of the System requirements technote: http://www.ibm.com/support/docview.wss?uid=swg27023107 Or the System Requirements for InfoSphere Information Server Pack for SAP Applications 7.1

Pack for SAP 7.1 - 8.0 Prerequisite Checker Engine Tests

Result	Description	Result Details	Recommendations
FAILED	Check that file '/opt/IBM/InformationServer/Server/DSComponents/bin/libsapnwrfc.so' exists	File '/opt/IBM/InformationServer/Server/DSComponents/bin/libsapnwrfc.so' does not exist	Copy the file to the required location
FAILED	Check that file '/opt/IBM/InformationServer/Server/DSComponents/bin/libsapucum.so' exists	File '/opt/IBM/InformationServer/Server/DSComponents/bin/libsapucum.so' does not exist	Copy the file to the required location
FAILED	Check that file '/opt/IBM/InformationServer/Server/DSComponents/bin/libicudecnumber.so' exists	File '/opt/IBM/InformationServer/Server/DSComponents/bin/libicudecnumber.so' does not exist	Copy the file to the required location
FAILED	Check that file '/opt/IBM/InformationServer/Server/DSComponents/bin/librfc.a' exists	File '/opt/IBM/InformationServer/Server/DSComponents/bin/librfc.a' does not exist	Copy the file to the required location
FAILED	Check that file '/opt/IBM/InformationServer/Server/DSComponents/bin/librfccm.so' exists	File '/opt/IBM/InformationServer	Copy the file to the

Figure 69

If library files are missing, download from SAP the current SAP RFC SDK libraries and install them on the InfoSphere DataStage server and DataStage client. For more information see the InfoSphere Information Server Release Notes.

InfoSphere Information Server Utilities

Detect, view, and fix issues with invalid InfoSphere DataStage projects

This tool provides a simple interface to view issues found with InfoSphere DataStage projects and to attempt to correct them. You can work with all InfoSphere DataStage projects or select a specific project. You can view the issues with the selected project or attempt to fix the issues. Notice that even when reporting the status of a project, if certain repository issues are present, the query may trigger a modification of the project repository. Project data, however, is not affected.

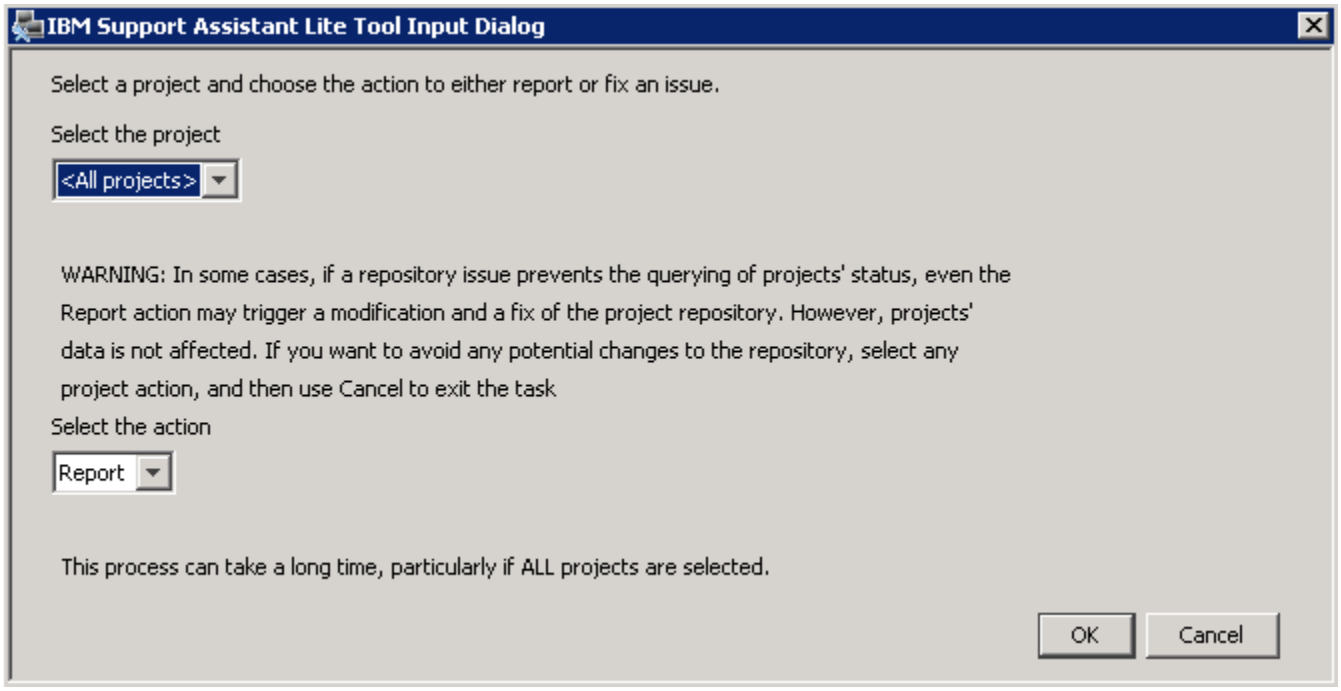

Figure 70

- **Report project issues**
  The tool summarizes the issues that were found in the selected project and creates a `DSProjReport_<projName>.html` file, which is included in the user .zip file. An example of the output from the report is shown in Figure 70:

```
IS Host = MBBSHH
IS Port = 9080
IS User = admin
DS Host = MBBSHH
DS Port = 3158

DataStage Project: dstage4
--------------------------

ISSUE: Unable to lock project.

DataStage Project: dstage5
--------------------------

1 Issues Found.
```

DataStage Project = dstage9
---

2 Issues Found.

ISSUE: DS Engine Job ‘testJob’ is missing.
ISSUE: DS Engine Job ‘testJob2’ category ‘incorrectCategory’ should be ‘correctCategory’

Overall Summary
---
2 Issues found.

Figure 71

Fix project issues

The tool attempts to resolve issues that are found in the selected projects, as described in the following list:

- The tool first attempts to lock the project. If the attempt fails, a message is generated and the tool attempts to lock the next project (if <ALL Projects> has been selected). If the tool locks the project, the tool attempts to locate issues that must be resolved. If no issues are found, a message is generated.
- The tool attempts to resolve any issues found that relate to a project. If the tool cannot resolve an issue in a project, the report displays a message that indicates that the issue remains unresolved. The tool then attempts to fix the next issue.
- A report is generated that describes whether the issues were resolved successfully.

The report summary is formatted into an HTML report titled DSProjFix_<projName>.html, which is included in the user .zip file. The following example shows output from a successful fix:

DSEngine Restorer Fix Results

Feb 05, 2010 9:39:00 AM

IS Host = MBBSHH
IS Port = 9080
IS User = admin
DS Host = MBBSHH
DS Port = 3158

DataStage Project: dstage3

RESOLVED: DS Engine Job ‘testJob’ is missing.
RESOLVED: DS Engine Job ‘testJob2’ folder ‘incorrectFolder’ should be ‘correctFolder’.

2 Issues resolved.
0 Issues remaining.

DataStage Project: dstage5

RESOLVED: DS Engine Job ‘test2Job’ is missing.

1 Issues resolved.

```
0 Issues remaining.

Overall Summary
---------------
3 Issues resolved.
0 Issues remaining.
```

Figure 72

The following example shows output from a fix that was not successful:

```
DSEngine Restorer Fix Results

Feb 05, 2010 9:39:00 AM

IS Host = MBBSHH
IS Port = 9080
IS User = admin
DS Host = MBBSHH
DS Port = 3158

DataStage Project: dstage3
--------------------------

UNRESOLVED: DS Engine Job ‘testJob’ is missing.
UNRESOLVED: DS Engine Job ‘testJob2’ folder ‘incorrectFolder’ should be ‘correctFolder’.

Overall Summary
---------------
0 Issues resolved.
2 Issues remaining.
```

Figure 73

Due of current behavior of the DS Engine, the fixed project will be reconstructed in the project default directory. If the project to be fixed is in a directory other than the default, it will be moved and recreated in the default location. This behavior may be fixed in an upcoming release. See technote https://www-01.ibm.com/support/docview.wss?uid=swg21633665 for details.

The ISALite task “Detect, view, and fix issues with invalid DataStage projects” cannot be recorded into a response file and played back. This limitation is due to the interactive user interface that the ISALite tool uses when it detects, fixes, and reports issues with InfoSphere DataStage projects and also to the nature of the operation, which might modify the InfoSphere Information Server metadata repository.

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