

Deltek

Deltek Costpoint® 8.2

Monitoring Utility

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Overview

A typical Costpoint configuration is comprised of WebLogic®, Database, and IIS servers. These components can be installed across one or more physical machines. Due to the interdependency of all of these components, failure in any one of them will hinder the functionality of Costpoint.

The Costpoint Monitoring Utility is a client/server program that provides a single interface to monitor the overall status of the various components that are part of Costpoint. It uses the standard Java Swing interface and requires the Java Runtime Engine (JRE).

This utility checks for dependencies and verifies the configuration of all servers and the Costpoint components installed on them. A system administrator, consultant, or support engineer can use this utility to check for common configuration issues and troubleshoot production problems quickly and easily. The Monitoring Utility also includes a log viewer to read the contents of the log files generated by the application server.

This utility can also help with remote diagnostics. By reading the configuration of the entire system, the utility can generate detailed information about various attributes that can impact the system's behavior. This diagnostic information is stored in files that can be bundled and sent by email to the Deltek Customer Care team if further analysis is needed.

What Data Is Gathered and What Tests Are Run?

Appendix A of this guide provides a list of:

- The tests that are performed.
- The information gathered during these tests.

When the tests are run, results are shown on the Monitoring Utility screen for immediate review. They can also be saved to files that can be emailed to the Deltek Customer Care team if you need help interpreting test results.

Interactive or Silent Modes

You have two options for running the utility:

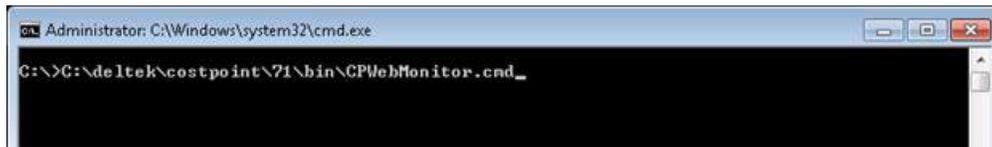
- **Interactive Mode:** Run the utility whenever you have a concern about the health of your Costpoint environment, and review the results of tests on the Monitoring Utility screen. This mode gives you immediate access to detailed information about any problems that the utility encounters.
- **Silent Mode:** Set up the Monitoring Utility to run tests automatically, according to a predetermined schedule. The utility will send you an email alert each time the tests run. However, the email alert provides only a summary of any problem the utility detects; you still need to use Interactive Mode to gather more detailed information.

Use the Monitoring Utility in Interactive Mode

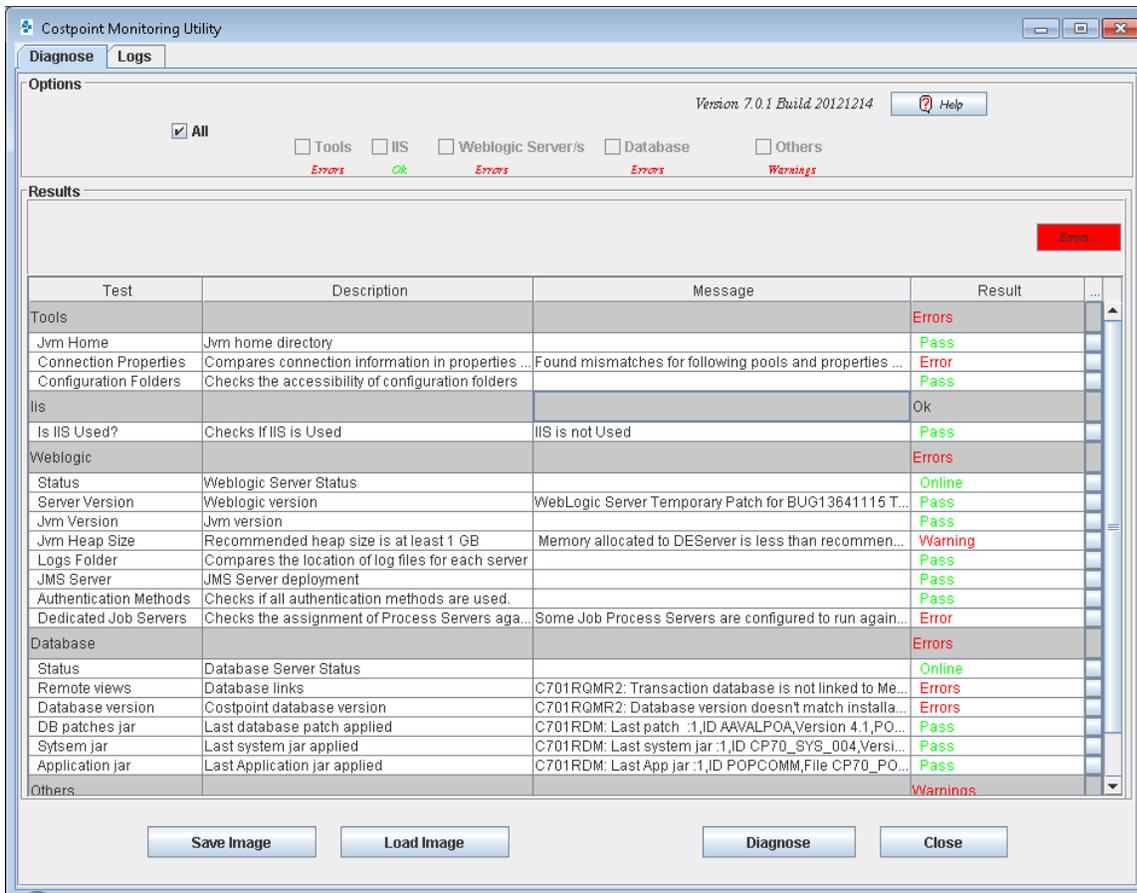
Launch the Utility

To launch the utility in interactive mode:

1. Take one of the following actions:
 - Click **Start » All Programs » Costpoint » Costpoint 8.2 Monitoring Utility**.
 - Run the **CPWebMonitor.cmd** batch file. It should be located with the other Costpoint command files in the `\\deltek\costpoint\82\bin` folder.



This launches the Monitoring Utility screen. Although this screen example shows sample information in the **Results** area, this area will actually be empty until you choose options and run tests.



Select Options

In the **Options** section, select the components to be diagnosed.

The options are:

- **All**
- **Tools**
- **IIS**
- **WebLogic Server/s**
- **Database**
- **Others:** These are miscellaneous components, such as content management interface components.

Tip: When you are first installing Costpoint, it is typically easier to diagnose one component at a time as the installation progresses.

In a production system, you would most likely choose to diagnose **All** components.

Click the **Diagnose** button to begin running the tests.

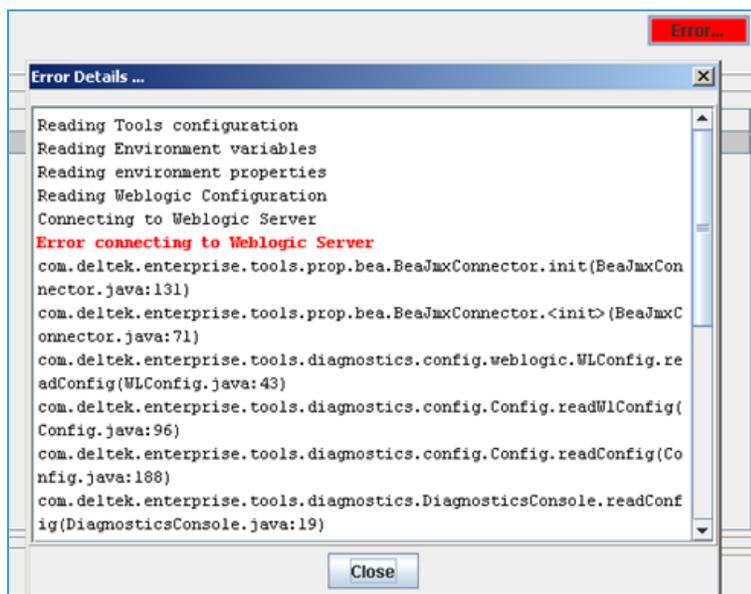
View Results

In the **Results** section, you can monitor the overall progress of the diagnosis, which can take from a few seconds to several minutes.

Details/Error Button

If the utility encounters an error as it runs, the **Details** button turns red and changes to say **Error**.

Click the **Error** button to display detailed information about the progress of the diagnosis. The utility continues running even though you clicked this button.



Use the Monitoring Utility in Interactive Mode

Results Table

As the utility runs, it populates the results table. Each test has a name and a short description. The **Result** column indicates the success or failure of the test.

Note: The Monitoring Utility considers all tests to have a result of **Pass**, **Warning**, or **Error**, with Error being the worst result. However, in the Results table, you may see some different terms used, such as **Failed**. This happens when the test involves a non-Deltek application, which might have its own terminology for test results.

Test	Description	Message	Result
Tools			
Jvm Home	Jvm home directory		Pass
Connection Properties	Compares connection information in properties ...	Found mismatches for following pools and properties ...	Error
Configuration Folders	Checks the accessibility of configuration folders		Pass
IIS			
Is IIS Used?	Checks if IIS is Used	IIS is not Used	Pass
Weblogic			
Status	Weblogic Server Status		Online
Server Version	Weblogic version	WebLogic Server Temporary Patch for BUG13641115 T...	Pass
Jvm Version	Jvm version		Pass
Jvm Heap Size	Recommended heap size is at least 1 GB	Memory allocated to DEServer is less than recommen...	Warning
Logs Folder	Compares the location of log files for each server		Pass
JMS Server	JMS Server deployment		Pass
Authentication Methods	Checks if all authentication methods are used.		Pass
Dedicated Job Servers	Checks the assignment of Process Servers aga...	Some Job Process Servers are configured to run again...	Error
Database			
Status	Database Server Status		Online
Remote views	Database links	C701RQMR2: Transaction database is not linked to Me...	Errors
Database version	Costpoint database version	C701RQMR2: Database version doesn't match installa...	Errors
DB patches jar	Last database patch applied	C701RDM: Last patch :1_ID AAVALPOA,Version 4.1_PO...	Pass
System jar	Last system jar applied	C701RDM: Last system jar :1_ID CP70_SYS_004,Verst...	Pass
Application jar	Last Application jar applied	C701RDM: Last App jar :1_ID POPCOMM,File CP70_PO...	Pass
Others			
			Warnings

You can also click the square at the end of a row to view the tests results in a form view.

The screenshot shows a 'Test Details' dialog box with the following information:

- Test Code:** Logs Folder
- Result:** Warning
- Description:** Compares the location of log files for each server
- Message:** Domain log is not written to common logs folder
DEServer log is not written to common logs folder.

A red arrow in the background points to the square icon at the end of the 'Logs Folder' row in the results table.

Save Results to Files

The Monitoring Utility generates the following files:

- **DiagImageYYYY_MM_DD.zip:** This zip file contains all of the configuration information for the WebLogic server, database setup, server log files, and more. The name of the file contains its creation date. You can email this zip file to the Deltek Customer Care team if you need help diagnosing problems.
- **DiagLog.log:** This file contains the log for the set of tests that you just ran.

To save the files, click the **Save Image** button, and choose a valid folder where all files will be stored.

Attention: See [Appendix A: Data Collected and Tests Run](#) for more information about the contents of these files.

The final size of the DiagImage file will depend on the content of the log folder, which includes installation, hot fix, and runtime log files. Based on the archiving practice followed by clients, this zip file could be several MB in size if the logs are never archived. In situations where the final zip file could be more than 10MB, the users are prompted with an option to either generate a full or partial image.

- **Partial Image File:** This zip file includes the recent and more relevant logs. All files older than 60 days are excluded. Out of the other logs, only the most recent and relevant logs are included in the image to reduce the final image file size. Users are encouraged to use this option for ease of attaching the image to the case or send it via email.
- **Full Image:** This zip file includes all the log files in the log folder. Deltek Support may request the users to pack a complete image in situations where the partial image does not cover the information needed.

Load Files

The Load Image function is used primarily by the Deltek Customer Care team, who use it to take customer files and load them into the Monitoring Utility for analysis. When you send the DiagLog.log and DiagImageYYYY_MM_DD.zip files to Customer Care, they load them into the Monitoring Utility for a consolidated, organized view of your test results.

Costpoint customers can use this function, too, to review previously saved test results.

Use the Monitoring Utility in Silent Mode

You can set up the Monitoring Utility to run automatically, according to a predetermined schedule. The utility will send you an email alert each time it runs, reporting on the results of the tests. However, the email alert provides only a summary of any problem the utility detects; you still need to use Interactive Mode to gather more detailed information.

Note: To get detailed information about the status of Costpoint components, you must run the utility in Interactive Mode.

Launch the Utility

To launch the utility in silent mode:

1. Using a text editor such as Notepad, open the file `..\bin\cpconfig\CPWebMonitorByEmail.cmd`.
2. Set the values for email ID, email subject, mail server URL, and email severity.

An email will be sent only when the diagnosis results exceed the specified severity:

- **ALL:** An email is sent regardless of the test results.
- **WARNING:** An email is sent if any of the tests have a Warning result.
- **ERROR:** An email is sent if any of the tests have an Error Result

For example:

```
SET EMAIL_SERVER_HOSTNAME==xxx.company.com
SET EMAIL_FROM_ID=
SET EMAIL_TO_ID=Administrator@company.com
SET EMAIL_CC_ID=
SET EMAIL_SUBJECT="CPWeb Monitor Message"
@REM SEVERITY valid values are ALL, ERROR, WARN
SET MESSAGE_SEVERITY="ALL"
SET MODULES_TO_TEST="ALL"

SET CP_ROOT=C:\deltek\costpoint\82
CALL %CP_ROOT%\bin\CPWebSetEnv.cmd
SET CLASSPATH=%CP_LIB%\CPWebDiagnosticsTool.jar;%CLASSPATH%

%JAVAHOME%\java -classpath %CLASSPATH% %SOAP_ARGS%
com.deltek.enterprise.tools.diagnostics.MailDiagnosis %MAIL_HOST% %TO_MAIL_ID%
%SUBJECT% %SEVERITY%
```

Schedule the Monitoring Task

You can schedule a task that kicks off the monitoring process at certain time intervals so that you receive regular updates about the status of your system.

To schedule the task:

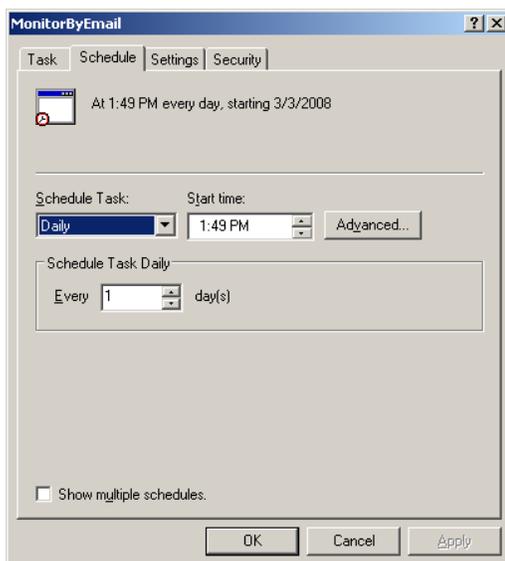
1. From the Windows Control Panel, double-click **Scheduled Tasks**.
2. Double-click **Add Scheduled Tasks**.

This will open a wizard that allows you to choose a task and schedule it to run at a particular interval. Initially, choose to run the process daily.

3. On the last page of the wizard, select the **Open advanced properties for this task when I click Finish** option, and click **Finish**.

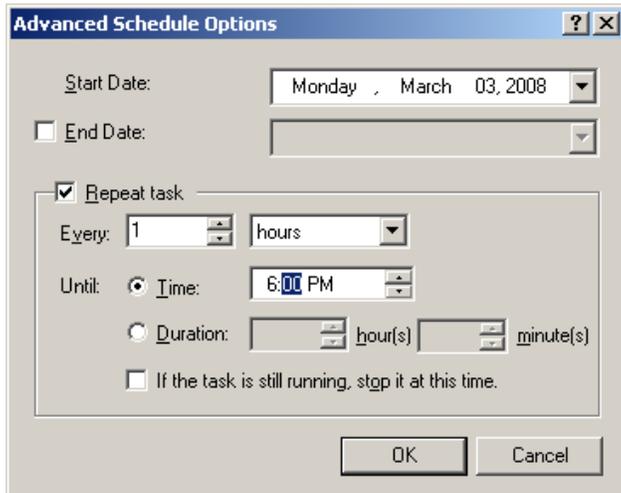


4. Click the Schedule tab.



- (Optional) Click the **Advanced** button to display the Advanced Schedule Options dialog box. Here you have additional, more detailed options for scheduling a process.

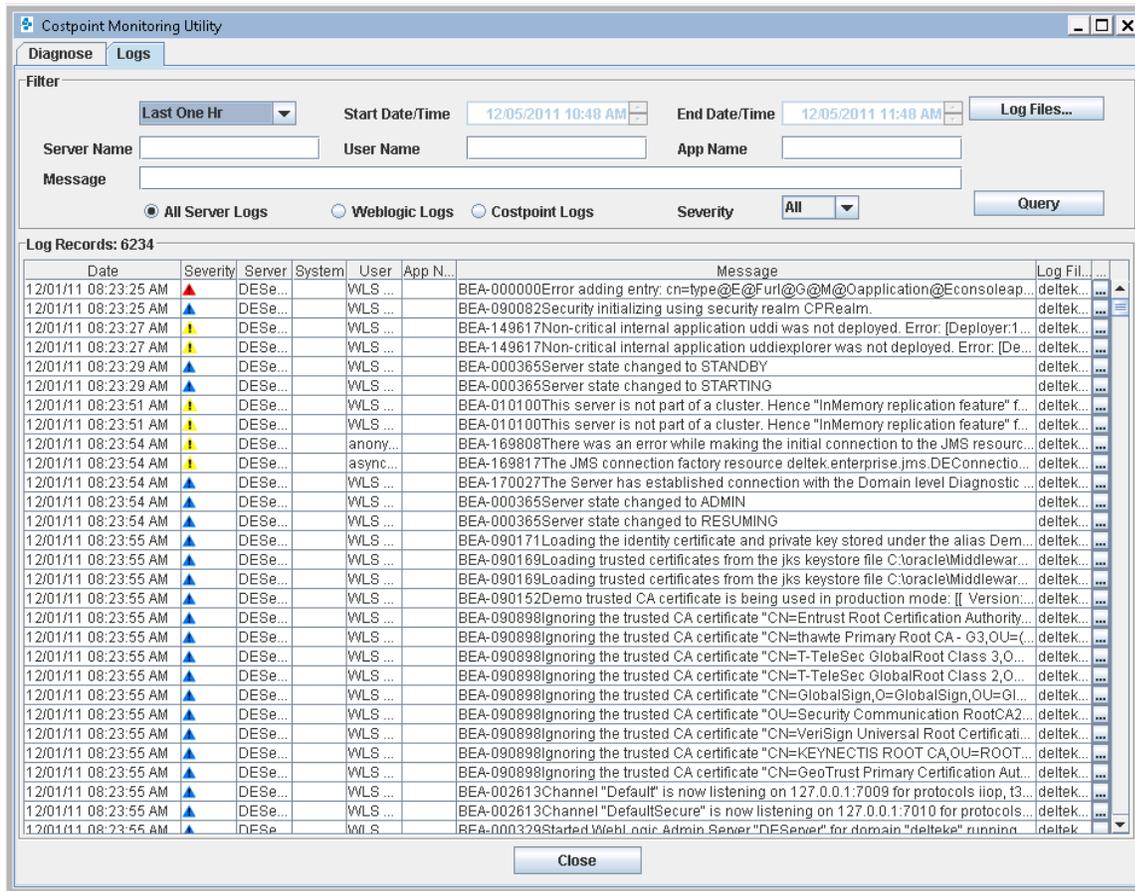
Note: This dialog box varies slightly from one Windows version to another, so yours might look different from the example shown.



View Log

Use the Logs tab of the Monitoring Utility to view the contents of log files generated by the application server. The Log viewer can parse the contents of WebLogic log files and the log files generated by Costpoint applications.

You can query the contents of the log files by specifying various filters.



Generate a List of Log Files

Click the **Log Files** button to display a list of log files available for review. The list displays the contents of the default logs folder (stored at Deltek/82/logs).

You can also choose to load other logs (for example, to review older logs). However, the Monitoring Utility will only let you view logs that it is designed to view and interpret.

To view the contents of different log files (not the defaults):

1. Click the **Log Files** button.
2. Browse to the folder that contains the logs you want to view.
3. Use the **Add Files** and **Remove Files** buttons to choose specific logs.

Apply Filters

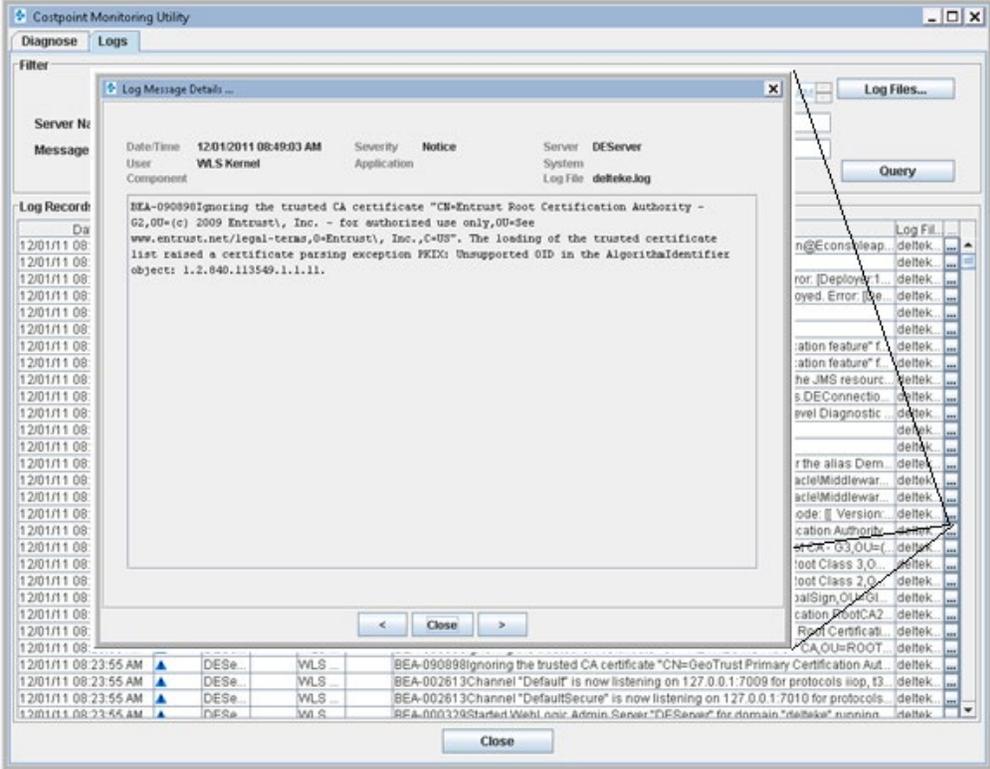
After you have selected the files that you want to review, you can apply any of the following filters to find specific log entries in the log files.

Select your filters, and then click **Query** to perform the search. The resulting log entries are shown in chronological order.

- **Last One Hour:** This filter selects all log entries generated in the last hour.
- **Start Date/Time and End Date/Time:** This filter selects all log entries generated between the start and end dates/times that you select. Selection is based on the timestamps of the log file entries.
- **Server Name:** In a clustered configuration, where log entries are generated by multiple servers, use this filter to select all log entries generated by a specific server. Enter the server name.
- **User Name:** This filter selects log entries based on the name of the Costpoint Application user or the WebLogic Server's internal user.
- **App Name:** This filter selects all log entries associated with a specific Costpoint application or with a specific component of the WebLogic server, such as JDBC or servlets.
- **Message:** This filter selects any log entry that includes a specific text string in its log message. Enter the text string.
- **All Server Logs:** This filter selects all log entries generated by the Costpoint application server or by the WebLogic server.
- **WebLogic Logs:** This filter selects only log entries generated by the WebLogic server.
- **Costpoint Logs:** This filter selects only log entries generated by the Costpoint application server.
- **Severity:** This filter selects log entries based on their severity level. The filter selects all log entries at or below the severity level that you choose.

Display Message Detail

To view the content of any log entry in detail, click  next to the entry.



The screenshot shows the 'Costpoint Monitoring Utility' interface. A 'Log Message Details' window is open, displaying the following information:

Date/Time	Severity	Notice	Server
12/01/2011 08:49:03 AM	WLS Kernel	Application	DEServer
			System: delteke.log

The message content reads: "BEA-090898Ignoring the trusted CA certificate "CN=Entrust Root Certification Authority - G2,OU=(c) 2009 Entrust, Inc. - for authorized use only,OU=See www.entrust.net/legal-terms,0-Entrust, Inc.,C=US". The loading of the trusted certificate list raised a certificate parsing exception PKIX: Unsupported OID in the AlgorithmIdentifier object: 1.2.840.113549.1.1.11."

Below the details window, a log record table is visible:

Date	Severity	Component	Message
12/01/11 08:23:55 AM	▲	DESe...	WLS... BEA-090898Ignoring the trusted CA certificate "CN=GeoTrust Primary Certification Aut...
12/01/11 08:23:55 AM	▲	DESe...	WLS... BEA-002613Channel "Default" is now listening on 127.0.0.1:7009 for protocols: soap, t3...
12/01/11 08:23:55 AM	▲	DESe...	WLS... BEA-002613Channel "DefaultSecure" is now listening on 127.0.0.1:7010 for protocols:...
12/01/11 08:23:54 AM	▲	DESe...	WLS... BEA-000329Started WebLogic Admin Server "DEServer" for domain "delteke" running...

Appendix A: Data Collected and Tests Run

This appendix provides detailed information about:

- The configuration information gathered by the Monitoring Utility, which is also stored in the CPConfiguration.xml file.
- The tests run by the Monitoring Utility, which are also stored in the Diagnosis.xml file.

Configuration Data Gathered

Tools

- **System Environment:** Reads the environment variables of the machine where tools are launched. This information is gathered using `system.getenv()` and includes PATH, CLASSPATH, OS version, and more.
- **System Properties:** Reads the system properties of the computer that runs the diagnostic test. This information is gathered using `System.getProperties()` and includes JVM version, JVM parameters, and more.

IIS

- **IIS Proxy Configuration:** Gathers IIS configuration data by reading the `isiproxy.ini` file
- **Proxy Hot Fixes:** Reports the name and timestamp of the five most recently updated files under the IIS folder

WebLogic

- **Domain Configuration:** Reports the domain name, log file location, log severity, JTA mode (compatibility/Admin port), and JNDI lookup rights
- **Server Configuration:** Reports the server name, log file location, log severity, IS admin server, home directory, server state (running/failed), WebLogic version (including patch information), JVM version, classpath, path, JVM heap size, and OS version
- **JDBC pools:** Reports the name and status of all JDBC pools running on each server in the cluster
- **Bean status:** Reports the status of Costpoint beans for each server in the cluster. This information is captured for all EJBs, Message Beans, JMS queues, and Topics.
- **Dedicated Server Configuration:** Gathers the following information about the use of dedicated job servers:
 - Are they used?
 - How many are used?
 - What are their names?

Database

- **Server Status:** Using the information stored in the properties file, the monitoring utility connects to each of the database servers and reports the status of the server.
- **Server Version:** Reports the SQL Server or Oracle version of each server

- **Costpoint Version:** Reports the Costpoint database version, as stored in the DB_TABLE_VERS.CUR_VERS_ID table
- **Remote Views:** Reports the status of the remote views
- **System JARs:** Reports system JAR names and the dates the JARs were applied
- **App JARs:** Reports application JAR names and the dates the JARs were applied
- **DB Patches:** Reports database patches applied to Meta, Admin, and Transaction databases

Others

- **CMS and SharePoint Access:** Reports the connection information for any content management systems or SharePoint access points configured in Costpoint
- **Application Errors:** Reports the log file entries made in the last hour

Tests Run

Tools

- **JVM Home:** Compares the JVM home used to launch this utility to the JVM home described in the toolconnections.properties file
- **Connection Info:** Compares the JDBC connection information described in the toolconnections.properties file with that in the WebLogic JDBC Pool XML files
- **Folder Access:** Tests all folders described in the toolconnections.properties file for accessibility. If a folder is not accessible, a warning is shown

IIS

- **Proxy INI file:** Verifies the entries in the configuration file
- **Proxy Updates:** Compares files on IIS with files on the WebLogic server to ensure that all updates are in sync

WebLogic

- **Server Status:** Checks the overall status of the WebLogic server. If any components have an invalid status (for example, if the Message Bean is disconnected or any JDBC pool fails), a warning is shown.
- **Cluster Configuration:** Checks the cluster to which each server belongs. In the cluster setup, every server should belong to the same cluster as the Admin server. If not, the cluster should be blank. For dedicated servers, the cluster should be blank.
- **Server Version:** Checks if all Weblogic servers in the cluster are running the same WebLogic version. This test ensures that patches, if any, are deployed uniformly on all servers.
- **JVM version:** Compares the JVM version of all servers in the cluster to the JVM version used by the Monitoring Utility
- **Heap Size:** Checks to see if at least 4 GB of RAM is allocated to each server. If not, a warning is shown
- **Log File Location:** Compares the location of the Server log, Domain Log, and so on, to the log folder described in the toolconnections.properties file

- **JMS Server:** Checks to ensure that the JMS server is deployed on every WebLogic server except the Admin server for the cluster or a dedicated job server
- **Authentication Methods:** Checks the number of users using each of the authentication methods that are configured so that an administrator can eliminate infrequently used methods and perhaps improve performance
- **Dedicated Servers:** Checks the configuration of each dedicated server and ensures that all process servers are assigned to valid dedicated servers

Database

- **Server Status:** Attempts to connect to each database and reports an error if it cannot connect to any of the databases
- **Remote Views:** Reports an error if any remote views are not accessible
- **Database Version:** Reports an error if DB_TABLE_VERS.CUR_VERS_ID does not match the enterprise.properties cpVers value
- **System JAR:** Reports the last system JAR name and the date it was applied
- **Application Jar:** Reports the last application JAR name and the date it was applied
- **DB Patches:** Reports the last database patch that was applied

Others

- **CMS and SharePoint:** Verifies the connection to any content management systems and SharePoint access points configured in Costpoint
- **Application Errors:** Checks the number of errors reported in the application log file in the last hour. If more than 10 errors were reported in the last hour, a message is shown

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