



## Troubleshooting the Pentaho BI Suite: Common Problems and Solutions



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# Introduction

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This document contains no unique content; it is a compilation of all of the troubleshooting content contained in Pentaho Enterprise Edition documentation. Each guide has its own troubleshooting section, where applicable, that contains problems and solutions that Pentaho customers and partners have encountered in the past or are anticipated to encounter in the future. The *Troubleshooting Guide* is designed to address customers, partners, consultants, and internal Pentaho employees who are already familiar with the installation, configuration, and operation of the BI Suite, and only need to consult the documentation to solve a problem.

# General

---

This section contains problems and solutions that apply to the BI Suite in general.

## File Names and Paths

---



**Note:** This is the most common installation problem.

Many of the configuration files and paths in this guide are similar, and it is easy to confuse them, which could result in modifying the wrong files or copying to the wrong locations. Double-check your file names and paths and ensure that you've copied all of the right files to all of the correct directories.

Trailing slashes are important; both their inclusion and their absence, depending on the file and parameter or element you are modifying. Follow the examples in this guide exactly unless otherwise directed.

## JDBC Driver Problems

---

First, ensure that the correct JDBC driver JARs are installed to the correct locations, then check to make sure that there aren't conflicting driver versions. The BI Server installation instructions explain how to add driver JARs to the correct locations; there is also a section titled **Adding a JDBC Driver** in the *Pentaho BI Suite Administrator's Guide* that explains driver locations for all parts of the BI Suite.



**Note:** Some database vendors (and driver developers) require using JDBC version 4 drivers with a Java 6 environment. Check with your database or driver vendor if you suspect you have having JDBC driver compatibility issues.

## Adding a JDBC Driver

Before you can connect to a data source in any Pentaho server or client tool, you must first install the appropriate database driver. Your database administrator, CIO, or IT manager should be able to provide you with the proper driver JAR. If not, you can download a JDBC driver JAR file from your database vendor or driver developer's Web site. Once you have the JAR, follow the instructions below to copy it to the driver directories for all of the BI Suite components that need to connect to this data source.



**Note:** Microsoft SQL Server users frequently use an alternative, non-vendor-supported driver called JTDS. If you are adding an MSSQL data source, ensure that you are installing the correct driver.

### Backing up old drivers

You must also ensure that there are no other versions of the same vendor's JDBC driver installed in these directories. If there are, you may have to back them up and remove them to avoid confusion and potential class loading problems. This is of particular concern when you are installing a driver JAR for a data source that is the same database type as your Pentaho solution repository. If you have any doubts as to how to proceed, contact your Pentaho support representative for guidance.

### Installing JDBC drivers

Copy the driver JAR file to the following directories, depending on which servers and client tools you are using (Dashboard Designer, ad hoc reporting, and Analyzer are all part of the BI Server):



**Note: For the BI Server:** before copying a new JDBC driver, ensure that there is not a different version of the same JAR in the destination directory. If there is, you must remove the old JAR to avoid version conflicts.

- **BI Server:** `/pentaho/server/biserver-ee/tomcat/lib/`
- **Enterprise Console:** `/pentaho/server/enterprise-console/jdbc/`
- **Data Integration Server:** `/pentaho/server/data-integration-server/tomcat/webapps/pentaho-di/WEB-INF/lib/`
- **Data Integration client:** `/pentaho/design-tools/data-integration/libext/JDBC/`
- **Report Designer:** `/pentaho/design-tools/report-designer/lib/jdbc/`

- **Schema Workbench:** /pentaho/design-tools/schema-workbench/drivers/
- **Aggregation Designer:** /pentaho/design-tools/agg-designer/drivers/
- **Metadata Editor:** /pentaho/design-tools/metadata-editor/libext/JDBC/

 **Note:** To establish a data source in the Pentaho Enterprise Console, you must install the driver in both the Enterprise Console and the BI Server or Data Integration Server. If you are just adding a data source through the Pentaho User Console, you do not need to install the driver to Enterprise Console.

## Restarting

Once the driver JAR is in place, you must restart the server or client tool that you added it to.

## Connecting to a Microsoft SQL Server using Integrated or Windows Authentication

The JDBC driver supports Type 2 integrated authentication on Windows operating systems through the **integratedSecurity** connection string property. To use integrated authentication, copy the **sqljdbc\_auth.dll** file to all the directories to which you copied the JDBC files.

The **sqljdbc\_auth.dll** files are installed in the following location:

```
<installation directory>\sqljdbc_<version>\<language>\auth\
```

 **Note:** Use the **sqljdbc\_auth.dll** file, in the x86 folder, if you are running a 32-bit Java Virtual Machine (JVM) even if the operating system is version x64. Use the **sqljdbc\_auth.dll** file in the x64 folder, if you are running a 64-bit JVM on a x64 processor. Use the **sqljdbc\_auth.dll** file in the IA64 folder, you are running a 64-bit JVM on an Itanium processor.

## Version Check

---

The instructions in this guide are specific to the Pentaho BI Server Enterprise Edition version 3.8.0-GA. The installation process can change significantly between BI Server releases to address new features, updated requirements, and bug workarounds, so the instructions in this guide should be assumed not to work with any other BI Server version, including the open source BI Server Community Edition version 3.8-stable.

## I don't know what the default login is for the DI Server, Enterprise Console, and/or Carte

---

For the DI Server administrator, it's username **admin** and password **secret**.

For Enterprise Console administrator, it's username **admin** and password **password**.

For Carte, it's username **cluster** and password **cluster**.

Be sure to change these to new values in your production environment.

 **Note:** DI Server users are not the same as BI Server users.

## Examining Log Files

---

If the BI Server fails to start or work properly, the log file you should consult is **pentaho.log** in the /pentaho/server/biserver-ee/tomcat/bin/ directory. The contents of this file will assist you in tracking down the problem.

# Upgrade

---

This section contains problems and solutions that apply to the Upgrade Guide for both the BI Server and Pentaho Data integration.

## Tomcat Logs Report Memory Leaks

---

When shutting down Tomcat, you may see some SEVERE-level warnings in the log file similar to these:

```
Dec 17, 2010 10:18:19 AM org.apache.catalina.loader.WebappClassLoader
clearReferencesJdbc
SEVERE: The web application [/pentaho] registered the JDBC driver
[mondrian.olap4j.MondrianOlap4jDriver] but failed to unregister it when the web
application was stopped. To prevent a memory leak, the JDBC Driver has been forcibly
unregistered.
Dec 17, 2010 10:18:19 AM org.apache.catalina.loader.WebappClassLoader
clearReferencesThreads
SEVERE: The web application [/pentaho] appears to have started a thread named [HSQLDB
Timer @49cf9f] but has failed to stop it. This is very likely to create a memory leak.
Dec 17, 2010 10:18:19 AM org.apache.catalina.loader.WebappClassLoader
clearReferencesThreads
SEVERE: The web application [/pentaho] appears to have started a thread named [MySQL
Statement Cancellation Timer] but has failed to stop it. This is very likely to create
a memory leak.
Dec 17, 2010 10:18:19 AM org.apache.catalina.loader.WebappClassLoader
clearThreadLocalMap
SEVERE: The web application [/pentaho] created a ThreadLocal
with key of type [java.lang.InheritableThreadLocal] (value
[java.lang.InheritableThreadLocal@a1320e]) and a value of type
[org.pentaho.platform.engine.security.session.TrustedSystemStartupSession] (value
[org.pentaho.platform.engine.security.session.TrustedSystemStartupSession@111089b]) but
failed to remove it when the web application was stopped. This is very likely to create
a memory leak.
```

These warnings are nothing to be concerned about when shutting down the Tomcat server, since they report problems with processes that are immanently being killed. However, they can have significance if you are only restarting or redeploying the Pentaho BI Server or DI Server Web applications. To avoid any memory leak problems in redeployment, you should restart Tomcat instead of redeploying or restarting the Web application with a live server.

## context.xml Changes Do Not Take Effect After Re-deploying a WAR

---

Re-deployment of a WAR or EAR with a custom **context.xml** will, in some cases, cause the original context.xml that you deployed with the original WAR or EAR to become permanently cached. Tomcat in particular will generate a WAR-specific context configuration file, and keep it in place even after the WAR is deleted. The location and naming convention for this file are: **\$CATALINA\_HOME/conf/Catalina/<host>/<war name>.xml**. Typically this will be something like: **/tomcat/conf/Catalina/localhost/pentaho.xml**. If this file exists, you will have to delete it prior to re-deploying pentaho.war if you have made any changes to context.xml.

## Dashboards Created Prior to 3.8 No Longer Work

---

If you execute a dashboard that has been known previously to work but now only displays a white screen with an edit panel, then your dashboard templates need to be upgraded. You might also see an error in your browser console similar to this:

```
e is null
e.style.display = this.isPovPanelShown() ? 'block' : 'none';
```

To fix this problem you must upgrade your dashboard templates to be compliant with BI Suite 3.8 standards. Refer to [Updating Dashboard Designer Templates](#) on page 8.

## Updating Dashboard Designer Templates

This process only applies to Pentaho Dashboard Designer customers who have created custom dashboard templates. Follow the instructions below to upgrade your custom Dashboard Designer templates to be compatible with BI Suite 3.8.

1. Open a custom template file with an XML editor.

2. Find the following XML tag:

```
<vbox id="widget-area" pho:type="scrollarea" flex="1">
```

3. Paste the following XML tag in after that line:

```
<box id="FilterPanel" pho:type="povpanel" height="100" hidden="true"></box>
```

4. Save and close the file, then repeat this process for all other Dashboard Designer templates.

Your old dashboard templates are now compliant with BI Suite 3.8 standards.

# BI Server and Pentaho Enterprise Console

---

This section contains problems and solutions that pertain to the BI Server and Pentaho Enterprise Console.

## Library Conflicts

---

The BI Server relies on many third-party libraries that provide everything from database connectivity to specific Java classes that add necessary features to the BI Server. If you have incompatible versions of any of these third-party libraries in your application server's global lib directory, they can cause a variety of problems related to starting and running the BI Server. You will have to discover and individually canonicalize these files according to your needs.

Some known-problematic JARs are:

- commons-collections-3.2.jar (from Pentaho)
- commons-collections.jar (from JBoss in `/jboss/server/default/lib/`)
- jettison-1.01.jar (from Pentaho)
- jettison.jar (from JBoss in `/jboss/default/deploy/jbossws.sar`)

## Report Parameters That Include Accented Characters Fail to Validate

---

If you run a report that has parameters that include accented characters and you see an error message that says "This parameter value is of an invalid value," then you must make the Tomcat server modification explained in this task:

[Modifying server.xml To Work With Accented Characters](#) on page 9.

## Modifying server.xml To Work With Accented Characters

This procedure is only necessary if you plan to use character sets that include accents, such as Spanish and French.

Follow the instructions below to implement accented character set support. Change the paths to match your configuration.

1. Stop the Tomcat service.

```
sudo /etc/init.d/tomcat stop
```

2. Open the `/tomcat/server/conf/server.xml` file with a text editor.

3. Locate each **Connector** node (typically there are four in a default Tomcat configuration) and add a **URIEncoding="UTF-8"** parameter to it, as shown below:

```
<Connector URIEncoding="UTF-8" port="8080" protocol="HTTP/1.1"
           connectionTimeout="20000"
           redirectPort="8443" />
```

4. Save and close the file, then restart the Tomcat service.

```
sudo /etc/init.d/tomcat start
```

Tomcat is now properly configured to handle accented characters.

## vfs-provider.xml Duplicates

---

The above-referenced configuration file may be present in a number of JARs in other applications that you've deployed to your Java application server. Having multiple instances of this file will cause classpath exceptions. You must merge the multiple files into one canonical edition in order to solve the problem.

## Varying Context and Data Source Configuration Methods

---

The instructions in this guide direct you to edit a **context.xml** override for Tomcat and build it into the WAR. Your application server may not support this method, or may not accept these files by default. This will be especially true if you are using unsupported application servers or versions, or if you are on Linux and your distribution provider alters the default package configuration for Tomcat.

There are other methods of changing context settings, especially through other kinds of configuration files such as **server.xml** or application-specific XML files that your application server creates for each deployed WAR. If the context and data source instructions in this guide do not work for you, consult your application server's documentation to learn the preferred method of configuration, and adapt the Pentaho-supplied process to accommodate it.

## Licenses Not Found After Installation

---

If you've successfully installed the BI Server and Pentaho Enterprise Console, then installed licenses, and are later unable to access Dashboard Designer, Pentaho Analyzer, or ad hoc Reporting through the Pentaho User Console due to missing licenses, then you must either reinstall those licenses under the user account that will always start the Pentaho Enterprise Console and BI Server services, or you must set a Java virtual machine parameter to point to a static license path. This will override the default license path, which changes depending on which user started the Pentaho Enterprise Console and BI Server services or servers. The parameter is appended to the Tomcat or JBoss service execution commands, and to the Pentaho Enterprise Console **start-pec** script. Examples are shown below:

### Windows Tomcat service adjustment command

```
tomcat5 //US//pentahobiserver ++JvmOptions "-Dpentaho.installed.licenses.file=C:\Pentaho\installedLicenses.xml"
```

### Linux start-pec.sh script snippet

```
"$_PENTAHO_JAVA" -Dpentaho.installed.licenses.file="/home/pentaho/.pentaho/.installedLicenses.xml" -Xmx512M -XX:PermSize=64M -XX:MaxPermSize=128M -Djava.awt.headless=true -DCONSOLE_HOME=$DIR_REL -Dlog4j.configuration=resource/config/log4j.xml -cp $CLASSPATH com.pentaho.pac.server.ProJettyServer
```

## Cannot Create Hibernate Tables in MySQL

---

The Pentaho solution repository uses long text strings that require a longer maximum character limit than the default UTF-8 configuration allows. Therefore, if your MySQL character set is configured to use UTF-8, you must change it to **ASCII** instead in order to use it as a Pentaho solution database. Using UTF-8 will prevent the MySQL initialization scripts from running during installation.

## Case-Insensitivity for Usernames, Passwords, and Filenames

---

This problem can manifest in two different known ways. It can show as case-insensitivity as mentioned above, or it can show up when you change the case of an action sequence file name.

The source of the problem is the collation method and character set for your MySQL server. Selecting the wrong configuration will cause all usernames, passwords, and content files stored in the database to become identical in terms of characters without regard for case; this can cause name collisions. **SUZY**, **Suzy**, and **suzy** will all be the same username as far as the BI Server will be able to tell. To change this, you must set your database or table collation method to **latin1\_general\_cs**. You can do this by editing the database scripts mentioned below, or by modifying your MySQL server configuration.

## Unable to Use the Database Init Scripts for PostgreSQL

---

The **pg\_hba.conf** file contains host-based authentication information. If you can't run the SQL scripts that generate the Hibernate and Quartz databases, it's probably because the default user accounts for each database don't have the right permissions. To change this, edit the file to ensure that connections from local users created by the Pentaho sql scripts (**hibuser** and **pentaho\_user**) will be able to connect. The default on Debian-based systems is for local connections you use **ident** authentication, which means that database users must have local user accounts. In other words, to continue using **ident**, you would have to create local **hibuser** and **pentaho\_user** accounts. It's easier to just change the authentication method to something less restrictive, if your IT manager permits you to do so.

## HTTP 500 or "Unable to connect to BI Server" Errors When Trying to Access Enterprise Console

---

If you have trouble controlling the BI Server through the Pentaho Enterprise Console, it is likely because you've changed the BI Server's IP address or hostname (the **fully-qualified-server-url** node in `web.xml`) from the default 127.0.0.1 to something else without also applying this change to the Proxy Trusting Filter in the `web.xml` file. See [Configuring the Proxy Trusting Filter](#) on page 11 for instructions on how to fix this.

### Configuring the Proxy Trusting Filter

If you have set the BI Server to run on a specific IP address or hostname other than the default 127.0.0.1, you must modify the trusted proxy between the BI Server and Pentaho Enterprise Console to match that address or hostname.

1. Stop the Pentaho Enterprise Console.
2. Stop the BI Server.
3. Open `biserver-ee/tomcat/webapps/pentaho/WEB-INF/web.xml` and search for **TrustedIpAddr**s.



**Note:** The `param-value` immediately below **TrustedIpAddr**s is a comma-separated list of IP addresses that should be trusted.

```
<filter>
  <filter-name>Proxy Trusting Filter</filter-name>
  <filter-class>org.pentaho.platform.web.http.filters.ProxyTrustingFilter</filter-
class>
  <init-param>
    <param-name>TrustedIpAddr</param-name>
    <param-value>127.0.0.1</param-value>
    <description>Comma separated list of IP addresses of a trusted hosts.</description>
  </init-param>
</filter>
```

4. Add the IP address of the host running the Pentaho Enterprise Console.
5. Open `enterprise-console/resource/config/console.xml` and search for **platform-username**.
6. Change the default **admin** user name, (default is joe) to your desired admin user name.
7. Start the BI Server.
8. Start the Pentaho Enterprise Console.

## JBoss Fails to Start When the Pentaho HSQLDB Sample Database Is Running

---



**Note:** This problem can also manifest as the Pentaho sample database refusing to start when the BI Server is deployed to JBoss.

The Pentaho-supplied HSQLDB sample database operates on the default HSQLDB port of 9001. JBoss has its own HSQLDB instance running on the same port; therefore, the port collision will prevent the JBoss version from starting, and cause the startup process to halt. You can change the Pentaho sample database port by editing the `start_hypersonic` script and adding the **-port 9002** switch to the last line:

```
"$_PENTAHO_JAVA" -cp $THE_CLASSPATH org.hsqldb.Server -port 9002 -database.0 $DIR_REL/
hsqldb/sampledatab -dbname.0 sampledatab -database.1 $DIR_REL/hsqldb/hibernate -dbname.1
hibernate -database.2 $DIR_REL/hsqldb/quartz -dbname.2 quartz
```

## JBoss Fails to Start After Manually Unpacking pentaho.war

---

If you unpack the `pentaho.war` file by hand, you must name the resultant directory **pentaho.war** as well. If you unpack it to any other directory name, including "pentaho" without the `.war` extension, JBoss will fail to deploy the WAR without any meaningful warnings.

## Web-App Path doesn't validate in Enterprise Console

---

If you are deploying to JBoss and don't unpack the pentaho.war into a directory, the Pentaho Enterprise Console will not be able to find the correct Web-App Path value. To fix the problem, unpack the pentaho.war to a directory of the same name.

# Report Designer

---

This section contains problems and solutions that pertain to Pentaho Report Designer.

## Hive Database Disappears From Database Connection Dialogue

---

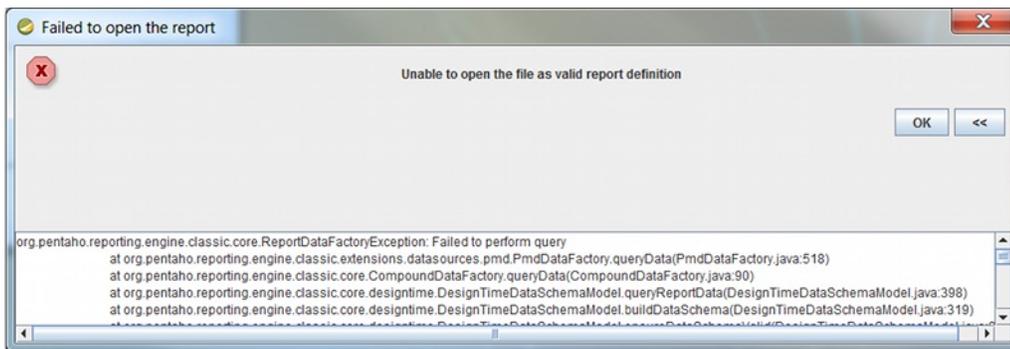
If your Hive database type disappears from the list in the database connection dialogue in Report Designer or Metadata Editor, this probably means that your Pentaho BI Suite For Hadoop license has expired, or the license file has been moved, deleted, or become corrupt. You must install a valid license key in order to reintroduce this functionality in Report Designer.

If you do not update the licence key, all of your existing Hive-based reports will still work. However, you will not be able to alter the Hive connection details or create a new Hive connection.

## Reports Using Hive Metadata Data Sources Stop Working

---

If, when designing, editing, or running a report that contains a Hive metadata data source, you see an error like the one below, then your Pentaho BI Suite For Hadoop license has expired, or the license file has been moved, deleted, or become corrupt:



You must install a valid license key in order to reintroduce this functionality.

# Analysis

---

This section contains problems and solutions that pertain to Pentaho Analysis, including JPivot, Schema Workbench, and Pentaho Analyzer.

## Old Analysis Schemas Still Show Up in Pentaho User Console

---

If you have unwanted analysis schemas in the schema list in the Pentaho User Console -- this is the list that appears when you create a new analysis view or Analyzer report -- then you must edit the `datasources.xml` file and remove the unwanted entries as explained in [Removing Mondrian Data Sources](#) on page 14.

## Removing Mondrian Data Sources

Every time you publish a schema from Schema Workbench or Pentaho Data Integration, a new XMLA data source entry is created in `/pentaho/server/biserver-ee/pentaho-solutions/system/olap/datasources.xml`. If you modify a schema and republish it, the data source entry will be updated accordingly. You do not have to manually add anything to this file, and under most circumstances you won't have to modify or remove anything from it, either. However, there is no automatic method to expire a registered data source, so each time you publish a new schema, a new entry is permanently added to `datasources.xml`.

The Pentaho User Console uses `datasources.xml` to populate a schema drop-down selection list that appears when users create new analysis views and Analyzer reports. As you phase out old analysis schemas, you will have to manually remove their `<DataSource>` entries in `datasources.xml`.

Below is the example `datasources.xml` that ships with a default Pentaho configuration:

### `datasources.xml`

```
<?xml version="1.0" encoding="UTF-8"?>
<DataSources>
  <DataSource>
    <DataSourceName>Provider=Mondrian;DataSource=Pentaho</DataSourceName>
    <DataSourceDescription>Pentaho BI Platform Datasources</DataSourceDescription>
    <URL>http://localhost:8080/pentaho/Xmla?userid=joe&password=password</URL>
    <DataSourceInfo>Provider=mondrian</DataSourceInfo>
    <ProviderName>PentahoXMLA</ProviderName>
    <ProviderType>MDP</ProviderType>
    <AuthenticationMode>Unauthenticated</AuthenticationMode>
    <Catalogs>
      <Catalog name="SteelWheels">
        <DataSourceInfo>Provider=mondrian;DataSource=SampleData</DataSourceInfo>
        <Definition>solution:steel-wheels/analysis/
steelwheels.mondrian.xml</Definition>
      </Catalog>
      <Catalog name="SampleData">
        <DataSourceInfo>Provider=mondrian;DataSource=SampleData</DataSourceInfo>
        <Definition>solution:steel-wheels/analysis/SampleData.mondrian.xml</
Definition>
      </Catalog>
    </Catalogs>
  </DataSource>
</DataSources>
```

## Multi-Byte Characters Don't Appear In PDFs Exported From Analyzer

---

If you are using a multi-byte character set, such as would be used for languages like Japanese or Chinese, and find that you have missing or corrupted output when exporting Analyzer reports to PDF, you will have to specify a default TrueType font for PDF rendering that supports multi-byte characters. The default PDF font in Analyzer is Helvetica, which does not support multi-byte character sets. To change this setting, see [Setting a Default Font for PDF Exports](#) on page 15.

## Setting a Default Font for PDF Exports

Before following this procedure, stop the BI Server and Pentaho Enterprise Console.

When displaying data in Analyzer, your reports will use the default browser fonts. However, the PDF export function may not have the same fonts available to it when creating a PDF from your Analyzer report, resulting in output that doesn't look the same way in PDF format as it does in the browser. The default font for PDFs is Helvetica, but you can specify any TrueType font or collection to replace it. Follow the instructions below to specify a different font for PDF exports.

 **Note:** If you have localized your schema in a language that uses a multi-byte character set (most Asian languages fit into this category), this process is required to make PDF output appear without errors.

1. Edit the **analyzer.properties** file in the `/pentaho/server/biserver-ee/pentaho-solutions/system/analyzer/` directory.

2. Uncomment the **renderer.pdf.font.path** line.

```
renderer.pdf.font.path=C:/WINDOWS/Fonts/MSGOTHIC.TTC,1
```

3. Replace the value of this line with the TrueType font or collection that you want to use as the default.

If you are specifying a collection, you must put a **,1** after the font name, as shown in the above example. This does not apply to individual fonts (TTF files).

```
renderer.pdf.font.path=/usr/share/fonts/truetype/freefont/FreeSans.ttf
```

4. Save and close the file, and start the BI Server.

Your PDF exports from Analyzer should have the font you specified.

# Data Integration

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This section contains problems and solutions that pertain to Pentaho Data Integration.

## Action Sequences That Call PDI Content Won't Run

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If you've established an enterprise repository in PDI to store your jobs and transformations, and you attempt to use that stored PDI content in an action sequence on the BI Server, the action sequence will not execute. This is because the BI Server needs specific connection information for the Data Integration (DI) Server in order to retrieve the job or transformation.

## Adding PDI Enterprise Repository Content Support to the BI Server

If you are using a Pentaho Data Integration (PDI) enterprise repository (through a Data Integration Server) to store PDI jobs and transformations, and you plan on using those jobs and transformations in action sequences that will be run on the BI Server, you must install some BI Server plugins from the PDI client tool package. This is not a typical scenario, but there is no harm in performing it if you aren't sure if you are or will be using a PDI enterprise repository to store content.

1. Download a PDI Enterprise Edition 4.1.3 client tool archive package from the Pentaho Knowledge Base or Enterprise Edition FTP Site.  
The package name (available in both tar.gz and zip formats) is: **pdi-ee-client-4.1.3-GA**
2. Unpack the archive to a temporary location.
3. Edit the `/pentaho/server/biserver-ee/pentaho-solutions/system/kettle/settings.xml` file.
4. Change the value of the `<repository.type>` node from `files` to `rdbms`.
5. Enter your enterprise repository connection information in the proper nodes.
6. Enter the location of your local `repositories.xml` file in the `<repositories.xml.file>` node.



**Note:** This file is created on your PDI client workstation when you establish a connection to an enterprise repository. Once you have made all of your repository connections on a workstation, copy the `repositories.xml` file to the `~/.kettle/` directory on the BI Server and DI Server machines. If the client tool and servers are all on the same machine, you do not have to copy the file. If you have not yet established any repositories, you will have to revisit this procedure later when your PDI environment is fully configured.

7. Copy the contents of `/data-integration/plugins/` to the `/pentaho/server/biserver-ee/pentaho-solutions/system/kettle/plugins/` directory.

```
cp -r /tmp/data-integration/plugins/* /home/pentaho/pentaho/server/biserver-ee/pentaho-solutions/system/kettle/plugins/
```

8. Remove the unpacked archive.

```
rm -rf /tmp/data-integration/
```

Your BI Server is now configured to

## Jobs scheduled on the DI Server cannot execute a transformation on a remote Carte server

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You may see an error like this one when trying to schedule a job to run on a remote Carte server:

```
ERROR 11-05 09:33:06,031 - !
UserRoleListDelegate.ERROR_0001_UNABLE_TO_INITIALIZE_USER_ROLE_LIST_WEBSVC!
com.sun.xml.ws.client.ClientTransportException: The server sent HTTP
status code 401: Unauthorized
```

To fix this, follow the instructions in [Executing Scheduled Jobs on a Remote Carte Server](#) on page 16

## Executing Scheduled Jobs on a Remote Carte Server

Follow the instructions below if you need to schedule a job that you want to run on a remote Carte server. Without making these configuration changes, you will be unable to remotely execute scheduled jobs.

1. Stop the DI Server and remote Carte server.
2. Open the `/pentaho/server/data-integration-server/tomcat/webapps/pentaho-di/WEB-INF/web.xml` file with a text editor.
3. Find the **Proxy Trusting Filter** filter section, and add your Carte server's IP address to the **param-value** element.

```
<filter>
  <filter-name>Proxy Trusting Filter</filter-name>
  <filter-class>org.pentaho.platform.web.http.filters.ProxyTrustingFilter</filter-
class>
  <init-param>
    <param-name>TrustedIpAddrs</param-name>
    <param-value>127.0.0.1,192.168.0.1</param-value>
    <description>Comma separated list of IP addresses of a trusted hosts.</
description>
  </init-param>
  <init-param>
    <param-name>NewSessionPerRequest</param-name>
    <param-value>>true</param-value>
    <description>>true to never re-use an existing IPentahoSession in the HTTP
session; needs to be true to work around code put in for BISERVER-2639</description>
  </init-param>
</filter>
```

4. Uncomment the proxy trusting filter-mappings between the `<!-- begin trust -->` and `<!-- end trust -->` markers.

```
<!-- begin trust -->
<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/authorizationPolicy</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/roleBindingDao</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/userRoleListService</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/unifiedRepository</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/userRoleService</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/Scheduler</url-pattern>
</filter-mapping>

<filter-mapping>
  <filter-name>Proxy Trusting Filter</filter-name>
  <url-pattern>/webservices/repositorySync</url-pattern>
</filter-mapping>
<!-- end trust -->
```

5. Save and close the file, then edit the **carte.sh** or **Carte.bat** startup script on the machine that runs your Carte server.
6. Add **-Dpentaho.repository.client.attemptTrust=true** to the **java** line at the bottom of the file.

```
java $OPT -Dpentaho.repository.client.attemptTrust=true org.pentaho.di.www.Carte "${1+
$@}"
```

7. Save and close the file.
8. Start your Carte and DI Server

You can now schedule a job to run on a remote Carte instance.