

# HP

## Business Process Insight

For the Windows® Operating System

Software Version: 7.50

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## Problem Solving Guide

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# 1 Introduction

This chapter introduces the topics covered in this guide and provides information about how to contact HP if you are unable to resolve the problem. The chapter also describes the tools that are available to you to help identify and resolve problems, which are described in this guide.

The following topics are covered in this chapter:

- How to contact HP; see section [Contacting HP](#) on page 10.
- The HPBPI problem solving tools that are available to you; see section [Tools for Problem Solving](#) on page 11.

Specific problem areas are described in the following chapters of this guide:

- [Chapter 2, Problems Installing and Removing HPBPI Components.](#)
- [Chapter 3, Problems Starting and Stopping Your HPBPI Components](#)
- [Chapter 4, Problems with Performance](#)
- [Chapter 5, Problems Using the HPBPI Clients](#)
- [Chapter 6, Problems Using the Administration Console](#)
- [Chapter 7, Problems with Processes and Business Events](#)
- [Chapter 8, Problems with HPBPI Integrations](#)
- [Chapter 9, Problems When Creating Data in the HPBPI Database](#)
- [Chapter 10, Files and System Problems](#)
- [Chapter 11, openadaptor Problems](#)

Using the log files and trace files to identify problems with the HPBPI system is described in [Chapter 12, Logging and Tracing Problems.](#)

## Contacting HP

If you cannot find a solution to your problem, contact your local support representative, or visit the HP BTO Software Website at:

**[www.hp.com/go/hpsoftwaresupport](http://www.hp.com/go/hpsoftwaresupport)**

From this site you can find contact information and details about the products, services, and support that HP Software offers.

Make sure that you have read the HPBPI Release Notes, which are located on your distribution media. The Release Notes contain information about any restrictions that might impact your HPBPI system, and also related products where these have an impact on HPBPI.

The *Business Process Insight Installation Guide* lists the information that you are advised to collate for, and submit with, your support call.

# Tools for Problem Solving

The following HPBPI components can be used for identifying problems, and in some cases can be used to resolve problems:

- HPBPI Administration Console

The HPBPI Administration Console presents the parameters that you can modify to change some of the configuration for your HPBPI system. The *Business Process Insight System Administration Guide* describes these parameters; however, you should change the parameter values only when requested to do so, or as the result of a change in your configuration.

Using the HPBPI Administration Console, you can view HPBPI component log files and temporarily change the level of detail logged by one or all HPBPI components. Changing the level of detail enables you to obtain more information about the problem; however, you should set the level of detail on a temporary basis only, as the log files consume a large amount of disk space.

- Intervention Client

Use the Intervention Client to delete instances and definitions within your HPBPI system and can also be used to make modifications to instances. The *Business Process Insight System Administration Guide* describes the Intervention Client in more detail.

- Engine and Monitor Instance Cleaner parameters

Use these parameters to manage the amount of completed and active process data that is stored in the database. You also have the option to archive this data to another location if you want to preserve it. The *Business Process Insight System Administration Guide* provides details of how to do this.

- Integrity Checker

Use the Integrity Checker to check that your HPBPI system is installed correctly, for example, that the J2SE version is correct. Section [Using the Integrity Checker for Problem Solving](#) on page 14 of this chapter provides details about how to use the Integrity Checker.

- Business Process Dashboard

The Business Process Dashboard is the interface used to view the progress of the processes defined within your HPBPI system. However, you can also use the Business Process Dashboard to identify problems with processes, data and how your process is progressing. You can then use other tools to solve the problems that you have identified through the Business Process Dashboard; see section [Using the Business Process Dashboard for Problem Solving](#) on page 17.

- Repository Explorer

The Repository Explorer is a Web interface that you can use to view the contents of the Model Repository. It enables you to view all elements of your definitions on one page.; you can also print your business Process definitions. This overview of your business process definitions, including progression rules, is very helpful when trying to identify problems with your Business Processes.

- Log Files

Errors and warnings related to the HPBPI system are written to the log files. These log files can then be viewed through the HPBPI Administration Console. [Chapter 12, Logging and Tracing Problems](#) describes the format of the log files.

- Trace files

HPBPI uses the HP Operations Manager XPL tracing mechanism; this is described in [Chapter 12, Logging and Tracing Problems](#). You can use the information provided in the Trace files to further isolate a problem with your system. Be aware that you might be asked to provide Trace files by the HP support organization.

- Database tools

You can use the database tools provided with your database server to view the HPBPI database tables and their content. This is useful if the Business Process Dashboard is not displaying the information that you are expecting. The database tables used by HPBPI are listed and described in the *Business Process Insight Reference Guide*.

The following contributed tool can also be used for isolating and identifying problems. Contributed tools are not part of the supported product, but they have been included as you might find them useful for some troubleshooting activities:

- Adaptor Console for monitoring your Event adaptors from a central location.

`openadaptor` provides the ability for an adaptor to be controlled remotely using the Adaptor Console. There is a contributed component called the JSP Adaptor Console to help monitor and control your adaptors.

The Adaptor Console is located on the distribution media under the following directory:

```
cd-drive\contrib\openadaptorConsole
```

Refer to the `readme` file in the same directory for instructions on using the Adaptor Console, and refer to the disclaimer text in the `contrib` directory for details of the terms of use for contributed components.

## Using the Integrity Checker for Problem Solving

All the HPBPI components produce logging and tracing files that you can use to identify problems within your HPBPI system; however, these log and trace files do not detect changes to the characteristics and file permissions of the HPBPI files and directories, nor do they inform you of missing files. The Integrity Checker utility is designed to check for problems that cannot be detected by the logging and tracing mechanisms.

The Integrity Checker:

- Generates the files required as the benchmark for a future integrity check.

These files are created as part of the installation process and are tailored to each installation type. These files enable the Integrity Checker to be used to validate that all the installation files exist, are in the correct location, have the correct file permissions set and are complete.

- Uses the HPBPI configuration files to detail the current HPBPI configuration, when required. For example, the Integrity Checker can:
  - Confirm port numbers that are currently configured for use
  - Validate that the HP Operations Manager host is available
  - Validate that all the database objects required by HPBPI have been created successfully; for example, functions, indexes and tables.
- Makes available the version numbers of all the HPBPI component JAR files (from the implementation version field from within the file). This does not include the third-party JAR files.
- Checks that HPBPI can connect to its database, and that all the database tables exist.
- Determines the version of J2SE (Java Virtual Machine) installed on the machine where HPBPI is running.

## Running the Integrity Checker

If the log and tracing files seem to be providing misleading information, or you want to check the status of your HPBPI system for other reasons, you can run the Integrity Checker as follows:

1. On the machine where you have installed the HPBPI Server, change directory to:

```
bpi-install-dir\lbin\bia
```

2. Execute the following file:

```
integritychecker.bat (Windows)
```

```
./integritychecker.sh (HP-UX)
```

3. Examine the contents of the report file generated by the Integrity Checker. This file is located as follows:

```
bpi-install-dir/data/log
```

The file name is in the form `integrity_report_systemtime` and has a `.TXT` file extension. `systemtime` is the system time, which makes the file name unique.

Errors generated by the Integrity Checker, if it fails to run, are written to `stderr`.

Check the errors in the log file generated by the Integrity Checker and then find the problem statement in this chapter and follow the instructions to recover from the error.

The Integrity Checker is also run as part of the Self-Healing Services, which are described in more detail in the *Business Process Insight Installation Guide*.

## Integrity Report

The Integrity Checker creates a log file, which reports on information about the status of the HPBPI system and configuration. The Integrity Checker reports on:

- files that have incorrect checksums

Following a new installation, the Integrity Checker calculates a checksum value for all the files installed. When you run the Integrity Checker, it re-evaluates these checksums and reports the files where the checksums are different.

There might be valid reasons why the checksums have changed, in which case you can ignore the problem, for example, you might have modified the content of one or more files. However, if you do not know why the checksum is different, refer to [Chapter 10, Files and System Problems](#).

- Java environment

The Integrity Checker checks the version numbers for the J2SE installed on your system to ensure that it is compatible with the HPBPI requirements.

If the Integrity Checker reports an error with the Java environment, you should correct the error before using HPBPI. Refer to the *Business Process Insight Installation Guide* for details of the correct version of J2SE required for HPBPI.

- HP Operations Manager integration details

The Integrity Checker confirms that it is possible to connect to HP Operations Manager host that is currently configured for the HPBPI Server. If it is not possible to connect to it, HPBPI is unable to receive operational events from the HP Operations Manager system.

The Integrity Checker is not able to confirm that the HPBPI Operations Manager Adapter configuration is valid, it can check only that HPBPI can communicate with HP Operations Manager through the adapter.



- master configuration properties

The configuration options presented through the HPBPI Administration Console are held in a file called `masterconfig.properties`. The property values in this file are the properties currently being used by the HPBPI system. The Integrity Checker reports on the current values being used by HPBPI, so you can confirm that the values are as you expect.

If the values are not as you expect, you need to modify them using the HPBPI Administration Console.

If `masterconfig.properties` has been deleted, the Integrity Checker returns an error on the command line.

- installed jar files

HPBPI has a number of jar files and the Integrity Checker reports on the implementation version of these files. This implementation version shows whether or not patches have been applied to HPBPI.

- port numbers

All HPBPI port numbers need to be within the range of a number greater than zero (0) or a number less than 65535. The Integrity Checker reports on the port numbers and informs you if any are out of this range.

If the Integrity Checker reports that the port numbers are not valid, you need to change them as described in the *Business Process Insight System Administration Guide*.

## Using the Business Process Dashboard for Problem Solving

You can use the installed Business Process Dashboard to check your HPBPI instances and their status. You can use it to see if the process is progressing as expected, in particular to identify if Events are being received out of sequence.



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## 2 Problems Installing and Removing HPBPI Components

This chapter describes problems that you might encounter when installing HPBPI components. The chapter covers the following topics:

- [HPBPI Server Installation Problems](#) on page 20.
- [Removing HPBPI Windows Services](#) on page 24
- [HPBPI Operations Manager Adapter for Windows Installation Problems](#) on page 25
- [Licensing Problems](#) on page 26
- [Error Creating Database for Microsoft SQL Server](#) on page 28

If the problem you are experiencing is not covered in this chapter, use the Integrity Checker to analyze your system. It might be that you have the incorrect version of a prerequisite component, for example, the J2SE. The Integrity Checker also reports on missing files, which can cause an installation failure. Using the Integrity Checker is described in section [Using the Integrity Checker for Problem Solving](#) on page 14.

# HPBPI Server Installation Problems

The following sections describe problems that can occur during the HPBPI Server, or Server and Modeler installation.

- Error creating SQL Server Database during installation; see section [Error Creating Microsoft SQL Server Database on Installation](#) on page 21.
- Installation fails during database creation; see section [Recovering a Failed Installation During Database Creation Phase](#) on page 22.
- Unexpected behavior when installing on machines where the language settings are not English; see [Regional Settings for Windows](#) on page 103.
- Database connection problems as follows:

- Port number inconsistencies

Check that the port number that you quoted for the database during the installation process is correct. If it is not, re-run the installation with the correct port number.

You also need to check that Microsoft SQL Server is configured to use static and not dynamic port numbers; see the *Business Process Insight Installation Guide* for more details.

- Database not started

It is possible that the database server has been shut down for some reason. Check with your database administrator, and if the database is not running, ask them to restart it.

- HPBPI database user permission problems, which mean the HPBPI database tables cannot be created at installation; see section [Database User Permission and Quota Errors](#) on page 23.

- HPBPI database user quota problems when using an Oracle Server. Quota problems prevent database tables being created at installation; see section [Database User Permission and Quota Errors](#) on page 23.

- Database login problems, where you have entered incorrect credentials for an HPBPI database user or the user that has privileges to create other users, or you have not adhered to the password policies required by Microsoft SQL Server.

- Network problems, in cases where the HPBPI Server is connecting to a database that is installed on a different machine.

- Database setup problems as follows:

- Problems creating the HPBPI database tables.

If you have previously installed and removed the HPBPI Server from the machine that is exhibiting the problem, and you opted to keep the HPBPI database, you cannot reinstall HPBPI until you have cleared out the existing database tables. You need to delete the existing data from the database, or move it, in order to reinstall HPBPI.

Alternatively, this could be due to database user permission or quota problems; see section [Database User Permission and Quota Errors](#) on page 23.

- Database tables from a previous Microsoft SQL Server installation not deleted or not deleted cleanly; see section [Error Creating Microsoft SQL Server Database on Installation](#) on page 21.

You can also find additional information about database problems that you can experience in [Chapter 9, Problems When Creating Data in the HPBPI Database](#).

## Error Creating Microsoft SQL Server Database on Installation

If you receive an error message indicating that the installation is unable to create the database because `hpbpiSchema.mdf` files are still present, it might be due to SQL Server having an inconsistent view of HPBPI database files.

If this is the first time you have installed HPBPI, this is not the problem for you. You see this problem only if you have previously installed, and subsequently removed HPBPI from the machine where you are attempting to reinstall.

If you have removed HPBPI and selected to delete the database tables, there might be HPBPI-related database files still present on your machine that need to be removed before you can continue.

If the HPBPI installation reports that .mdf files are still present check the following:

1. Use SQL Server Enterprise Manager to check if the HPBPI database exists.

If the database exists within Enterprise Manager, you do not have a problem with inconsistencies.

If the database does not exist within Enterprise Manager, you might have a problem with spurious .mdf files.

2. Check whether the `hpbpiSchema.mdf` and the `hpbpiSchema_log.LDF` files are present. `hpbpiSchema` is the default name given to the HPBPI database during installation. By default, these files are located at:

```
sql-server-install\MSSQL\Data
```

where `sql-server-install` is the installation directory for Microsoft SQL Server.

If the files exist, and the database file is not present within Enterprise Manager, your SQL Server installation has an inconsistent view of whether the HPBPI database is present or not, which needs to be corrected.

3. Delete the .mdf files relating to HPBPI and restart the installation.



You need to stop and restart the Microsoft SQL Server database services in order to delete these files as SQL Server locks the files, and therefore prevents you from deleting them.

If this does not solve your problem, there could be database files left from a previous installation of HPBPI. These database files cannot be used and need to be moved or deleted and the installation can then be restarted; see also section [Recovering a Failed Installation During Database Creation Phase](#) on page 22.

## Recovering a Failed Installation During Database Creation Phase

If your HPBPI installation fails during the database creation phase, you need to resolve the problem that caused the failure and then restart the installation. An example of why the database creation phase of the installation might fail is because there is insufficient disk space for the installation.

If you are installing HPBPI for the first time, when you have resolved the problem, you can restart the installation. The installer asks whether you want to delete and recreate all the database functions (tables, stored procedures and so on) and then completes the installation.

If you are upgrading from a previous version of HPBPI, when you have resolved the problem, you can restart the upgrade. The upgrade procedure works out how much of the database migration process is still to be completed and continues with the migration from the point where the failure occurred.

## Database User Permission and Quota Errors

If you have created the database user manually, rather than through the HPBPI installation procedure, it is possible that the user has not been created with sufficient privileges or quota to create the HPBPI database tables.

Check the following log file to make sure that the database tables have all been created correctly:

```
bpi-install-dir\HP_OpenView_Business_Process_Insight_DbSetupLog.log
```

This file is created when there are errors to report after HPBPI has made a successful connection to the database. If there are errors reported in the file, you need to investigate them and make any necessary corrections. You must then reinstall HPBPI and the installer continues as described in section [Recovering a Failed Installation During Database Creation Phase](#) on page 22.

The *Business Process Insight Installation Guide* describes the permissions required for the database user for both Microsoft SQL Server and for Oracle Server, and the quotas required for the database user for the Oracle Server.

# Removing HPBPI Windows Services

The HPBPI uninstall program should delete all HPBPI Windows Services as part of the uninstall process. However, if you do not shut down all the HPBPI Server components before starting the uninstall process, some HPBPI Windows Services might not be deleted. If this is the case, any attempt to reinstall HPBPI fails.

To solve this problem, you need to delete the Windows Services manually, using the Windows `sc` (Service Control) command.

To delete the unwanted HPBPI Windows Services, complete the following steps:

1. Make sure all the HPBPI Windows Services are stopped.

All the HPBPI Windows Services have HPBPI at the start of their name, and a complete list can be found in the *Business Process Insight Installation Guide*. Use the Control Panel, or the `net stop` command to stop these Windows Services.

2. When all the HPBPI Windows Services are stopped, open a Command Window on the machine where the HPBPI Windows Services are defined.
3. Enter the following command:

```
sc delete ServiceName
```

where *ServiceName* is the name of the HPBPI Windows Service that you want to delete.

This command deletes the specified service subkey from the Windows Registry. If the service is running or if another process has an open handle to the service, then the service is marked for deletion until the handle is released, when the service can then be deleted.



# HPBPI Operations Manager Adapter for Windows Installation Problems

The following section describes a problem that you might encounter when installing the HPBPI Operations Manager Adapter on Windows.

## HPBPI Operations Manager Adapter Error Following a New Installation

If you receive the following error message when you attempt to start the HPBPI Operations Manager Adapter immediately after a new installation, it is because the Microsoft .NET Framework is not installed:

```
OVOWOpcscvterm.exe:  
The application failed to initialize properly.
```

You can dismiss the error dialog and the HPBPI Operations Manager Adapter appears to start; however, the HPBPI Operations Manager Adapter cannot operate unless the .NET Framework is installed.

Note that you do not receive an error message in the adapter log file indicating this failure.

To recover from this error, complete the following steps:

1. Stop the HPBPI Operations Manager Adapter.
2. Install the .NET Framework.

Check the *Business Process Insight Installation Guide* for the version of the .NET Framework and any other prerequisite software required by the HPBPI Operations Manager Adapter.

3. Restart the HPBPI Operations Manager Adapter.

# Licensing Problems

The following are licensing problems that you might experience with HPBPI:

- [Failed to Update License Registry Settings](#) on page 26
- [License Errors Reported From HPBPI](#) on page 26

## Failed to Update License Registry Settings

If the HPBPI installation is unable to proceed, or fails, with an error similar to the following, it is due to a problem with the License Manager (HP Autopass):

Licensing Install Failure - Failed to update Licensing Registry Settings

The License Manager software is installed with HP BTO Software products, including HPBPI.

This error could be due to an incomplete, or a corrupt, installation. The problem with the Licensing Manager must be resolved before the HPBPI installation can continue.

Contact your support organization as described in section [Support](#) on page 4 to identify the problems with the License Manager installation.

## License Errors Reported From HPBPI

If you are receiving errors such as the following, it could be because you have not used the correct information when requesting your license key:

- From the Administration Console, you receive an error stating that your temporary license for HP Business Process Insight has expired.
- From the Dashboard you receive an error stating that the HPBPI Server is invalid.

HPBPI uses a Nodelocked license based on the short hostname (not the fully-qualified hostname) of the machine where the HPBPI Server is installed. You must supply a short hostname for the machine where you intend to run HPBPI when completing your license request form. You can obtain the short hostname using the following command from a Windows Command Prompt:

```
hostname
```



Do not supply an IP Address when applying for your license key as you will not be able to use the generated password to unlock your HPBPI installation.

The following is an example of a short host name:

```
server1
```

The following is an example of a fully-qualified hostname:

```
server1.hp.com
```

The following is an example of an IP Address:

```
11.22.33.44
```

If you have not supplied a short node name when requesting your license key, you need to contact the support organization in order to request a revised license key.

# Error Creating Database for Microsoft SQL Server

If you are using a Microsoft SQL Server database and you receive the following error during the HPBPI installation, it is because the database instance that you are attempting to use is configured to be case sensitive.

```
The database specified cannot be used for HPBPI data as it does not have case-insensitive collation set. You must reconfigure the specified database for case-insensitive collation, or select a different database that is already case-insensitive.
```

It is possible to create instances of the SQL Server database that are case insensitive or case sensitive; however, HPBPI does not operate with a database that is case sensitive. If you attempt to install HPBPI using a case sensitive database instance, the installation fails and reports an error.

If HPBPI creates the database instance as part of the installation process, it creates it with the Server Collation set to Case Insensitive. If you are creating the database instance for HPBPI data, you must also create the instance with the Server Collation set to Case Insensitive.

If you receive this error, you need to:

- Create an instance of the database that has the Server Collation set to be case insensitive.
- Allow the HPBPI installer to create an instance of the database, in which case, the installer creates the database with the correct settings.

---

# 3 Problems Starting and Stopping Your HPBPI Components

This chapter covers the problems that you might find when starting and stopping your HPBPI components. The chapter covers the following topics:

- [HPBPI Administration Console Startup](#) on page 30
- [Engine Startup](#) on page 31.
- [Modeler Startup](#) on page 34.
- [HPBPI Web Client Startup Problems](#) on page 39.
- [Problems Stopping the Business Event Handler](#) on page 46

# HPBPI Administration Console Startup

There are a number of reasons why the HPBPI Administration Console fails to start, for example, in cases where any one of the following files is missing:

- `masterconfig.properties`
- `bia-common.jar`
- `bia-admin.jar`

Use the Installation Integrity Checker to check the status of your HPBPI Server system. The Installation Integrity Checker is described in [Using the Integrity Checker for Problem Solving](#) on page 14.

When you have identified which files are missing, or possibly corrupt, you can recover the files from a backup copy if you have one. If you do not have a backup copy of the file, or if there are a significant number of files missing, you are advised to reinstall the HPBPI Server as described in the *Business Process Insight Installation Guide*. Do not make any changes to the HPBPI configuration as part of this reinstallation; you are reinstalling only to update the installed files.



If you have made changes to any component configuration files directly, not using the HPBPI Administration Console, these changes are overwritten by the reinstallation process. If you want to preserve these changes, copy the modified files to another location before starting the installation and reapply the changes when the installation is complete. Database data files can be recovered from a backup copy. Refer to the *Business Process Insight System Administration Guide* for more information about backup and recovery.

If you have made any changes to the Business Process Dashboard, these changes are preserved in the following directory:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\webapps\  
hpbpi-bpd.bak.n
```

You need to reinstate any changes that you have made back to the Business Process Dashboard directory from the backup.

# Engine Startup

There are a number of reasons why the Business Impact Engine can fail to start:

- J2SE not installed, or not on the system path.
- Port number clash.
- Corrupt or missing files.
- Cannot connect to database.

## J2SE Not Installed

If you are unable to start the Business Impact Engine and there is no information in the Engine log file that helps determine what the problem is, check that you have the correct version of the J2SE installed on the system where the Engine is running. You also need to check that you have added the location of the J2SE to the system Path environment variable.

Refer to the *Business Process Insight Installation Guide* for details of the correct version of the J2SE.

## Port Number Clash

It is possible that the RMI port number that the Business Impact Engine is requesting for startup is already allocated. In this case, the HPBPI Server port number clash prevents the components starting up. All HPBPI port numbers need to be within the range of a number greater than zero (0) or a number less than 65535. The HPBPI Administration Console checks that the port numbers entered are within this range. You can also use the Installation Integrity Checker to report on the port numbers that are being used by your HPBPI system (see section [Using the Integrity Checker for Problem Solving](#) on page 14).

In addition, the port numbers must be unique on the system where HPBPI is running. It is possible that the port numbers assigned to one or more of the HPBPI components has already been taken by another component running on the system. You can check if the port numbers are already in use using the following command from a Command Prompt dialog:

```
netstat -a
```

When changing the port number you need to make sure that you stop all the HPBPI components, exit from the HPBPI Administration Console and then restart the Administration Console and the HPBPI components, otherwise, the new port number is not used when making new connections.

If you continue to see a problem with port numbers, try setting them to a high number for example, above 10,000.

## Corrupt or Missing Files

It is possible that your HPBPI files are corrupt or have been inadvertently deleted. You can run the Integrity Checker to check the status of your system; see [Using the Integrity Checker for Problem Solving](#) on page 14 for details of using the Integrity Checker. However, if a number of files are corrupt or have been deleted, then the Integrity Checker might also be impacted and therefore unable to run.

If you suspect that this could be a problem, following the instructions to reinstall the HPBPI components as described in the *Business Process Insight Installation Guide*.



If you have made changes to any component configuration files directly and not using the HPBPI Administration Console, these changes are overwritten by the reinstallation process. If you want to preserve these changes, copy the modified files to another location before starting the installation and reapply the changes when the installation is complete.

If you have made any changes to the Business Process Dashboard, these changes are preserved in the following directory:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\webapps\  
hpbpi-bpd.bak.n
```

You need to reinstate any changes that you have made back to the Business Process Dashboard directory from the backup.



## Cannot Connect to Database

If the Business Impact Engine cannot connect to the database, it does not start. Check the Business Impact Engine log file for errors indicating a possible connection failure. The error should provide more information about the reason for the failure.

In the case of a failure to connect to the database, you can also:

- check that the database services are running and restart them if necessary.
- check that the database password has not been changed. If it has, you can re-synchronize the database login password used by HPBPI through the HPBPI Administration Console.

# Modeler Startup

The HPBPI Modeler needs to connect to the Model Repository when it starts, in order to access the Process, Data, Event and Service definitions. It also requests login credentials, which are controlled using either Select Access or Servlet Engine authentication.

## Unable to Login to Modeler

When you start the Modeler, you are asked for login credentials. If you are unable to login, it might be because the login credentials have changed, or are incorrectly configured.

Details of how to configure the security settings for all of the HPBPI components is described in the *Business Process Insight System Administration Guide*.

There are two security mechanisms that you can be using:

- Select Access

You need to check that you have configured Select Access correctly. Configuring Select Access is described in the *Business Process Insight System Administration Guide*.

- Servlet Engine

In the case of the Servlet Engine, check that you are using the correct User Name and Password for the Modeler (or Model Repository). The names and passwords are held in the following Servlet Engine XML configuration file:

```
bpi-install-dir/nonOV/jakarta-tomcat-5.0.19/conf/  
tomcat-users.xml
```

This file defines the credentials for the roles, or users, for HPBPI; refer to the *Business Process Insight System Administration Guide* for more information about this file.

## Access Denied Errors from Select Access

The following are examples of the errors that you might encounter when using Select Access and possible reasons for them being displayed.

### Example 1

Access Denied to Model Repository  
Unable to authorize user credentials.  
Ensure that Select Access components are properly configured and currently running

This error is shown when HPBPI is unable to access Select Access for information, possibly because one or more of the Select Access components is not available. In particular, check whether the Select Access Validator is configured and running.

### Example 2

Access Denied

There are a number of reasons why you might encounter an Access Denied error:

1. The hostname and port number information added to the Select Access Resource Server for HPBPI components are incorrect. Check the Select Access Resource Server configuration and correct the details if necessary; see also the *Business Process Insight Administration Guide* for information about the information needed to configure the Resource Server.
2. The entry for the Model Repository resource in the Select Access Policy Builder is missing, or is incorrect. In particular, check the spelling of the `OVBPIModelRepository` resource entry.
3. The User Identity that identifies the person that you have configured to have access to the Modeler does not have the appropriate authorization set within Select Access. Check that there is a tick at the intersection of the Identity and the appropriate Model Repository resource.
4. The Select Access Validator has been upgraded, or reinstalled. In this case, you need to start the Select Access Setup Tool and rerun the Servlet Enforcer setup to ensure that the Servlet Enforcer is synchronized with the Validator.

## Login Error When Using Servlet Engine

The following is an error that you might received from the Servlet Engine authentication and why you might receive it.

```
Unable to contact the Model Repository using the login details
provided
The username or password are incorrect
```

This error is shown when HPBPI is unable to authenticate with the Servlet Engine using the username and password supplied. Check that the username and password are correct in the Servlet Engine configuration file (`tomcat-users.xml`).

## Modeler Cannot Access Model Repository

If the Modeler startup fails with an error message similar to the following, there are a number of possible reasons for the failure:

```
The modeler cannot access the Model Repository Server on host
hostname at port port-no
```

This failure could be due to one of the following:

- [Model Repository Not Started](#) on page 36.
- [Invalid Hostname for HPBPI Server](#) on page 37.
- [Invalid Port Number for HPBPI Server](#) on page 37.
- [Network or Security Software Blocking Connection](#) on page 37.
- [Windows Hosts File Does Not Have System Static IP Address Defined](#) on page 38.

## Model Repository Not Started

Use the HPBPI Administration Console to check that the Model Repository is started. If you have recently started all the HPBPI components, you might need to check the Model Repository log file for the following message to confirm that it has started, and is not still in the process of starting up:

```
INFO: Repository Started
```

If the Model Repository is started, this error could be due to one of the other listed problems for Modeler startup problems.

## Invalid Port Number for HPBPI Server

There are two port numbers that you can enter for your HPBPI Modeler connection to the HPBPI Server:

- Server Port Number

Use the HPBPI Administration Console to check the Port Number defined for the RMI Registry. This is the port number that needs to be specified on the HPBPI Modeler dialog.

- Client Port Number

This number needs to be valid within your organization and might need to fit into your organization's firewall policy.

## Invalid Hostname for HPBPI Server

You need to specify the fully qualified hostname for the system where the HPBPI Server is installed on the HPBPI Modeler dialog. If the Modeler is installed on the same system as the HPBPI Server, you can specify localhost as the Hostname.

## Network or Security Software Blocking Connection

It is possible that you have installed network or security software that is blocking the attempts by the Modeler to connect to the HPBPI Server using the specified port number.

Check whether you have personal firewall software or other similar software that prevents communication using specified port numbers; see also [Chapter 10, Files and System Problems](#).

## Windows Hosts File Does Not Have System Static IP Address Defined

If you want to run HPBPI on a machine that is not connected to a network, you need to make sure that the Windows `hosts` file contains the appropriate information.

The `hosts` file needs to have `localhost` defined with the IP address of `127.0.0.1`. Additionally, if your machine has a static IP address, this IP address and the machine host name need to be defined in the `hosts` file.

Refer to the `hosts` file for details of how to define the entries in the `hosts` file:

```
C:\WINDOWS\system32\drivers\etc\
```

# HPBPI Web Client Startup Problems

HPBPI has the following Web Clients:

- Monitor Definer
- Business Process Dashboard
- Repository Explorer
- Notification Server Administration Console
- Intervention Client

Following your first installation of HPBPI, all the Web clients, with the exception of the Business Process Dashboard, require username and password authentication in order to run. You can configure the Security settings for HPBPI and modify the settings for username and password for all components, including the Business Process Dashboard.

In order to link to one of the Web clients from a Web browser window, make sure that the Servlet Engine component has been started through the HPBPI Administration Console.

## Web Client Login Failures

When you start the Web clients, you are asked for login credentials to connect to the HPBPI Server.

If you are unable to login, it might be because the login credentials have changed. Details of how to configure the security settings for the HPBPI components is described in the *Business Process Insight System Administration Guide*.

There are two security mechanisms that you can be using:

- Select Access

You need to check that you have configured Select Access correctly. Configuring Select Access is described in the *Business Process Insight System Administration Guide*.

- Servlet Engine

In the case of the Servlet Engine, check that you are using the correct User Name and Password for the HPBPI Web application that you are attempting to start. The names and passwords are held in the following Servlet Engine XML configuration file:

```
bpi-install-dir/nonOV/jakarta-tomcat-5.0.19/conf/  
tomcat-users.xml
```

This file defines the credentials for the roles, or users, for HPBPI; refer to the *Business Process Insight System Administration Guide* for more information about this file.

If you are using an alternative Tomcat authentication implementation method to ensure the security of your Web applications, you need to check that it allows the correct level of security for your Web client login account.

## Access Denied Errors

The following are examples of the access denied errors that you might encounter and possible reasons for them being displayed.

### Example 1:

```
Access Denied to HPBPI component  
Unable to authorize user credentials.  
Ensure that Select Access components are properly configured and  
currently running
```

where *HPBPI component* is the identifier for the Web client that you are attempting to log on to.

This error is shown when HPBPI is unable to access Select Access for information, possibly because one or more of the Select Access components is not available. In particular, check whether the Select Access Validator is configured and running.



## Example 2:

Access Denied

There are a number of reasons why you might encounter this error:

1. The hostname and port number information added to the Select Access Resource Server for HPBPI components are incorrect.

Check the Select Access Resource Server configuration and correct the details if necessary; see also the *Business Process Insight Administration Guide* for information about the information needed to configure the Resource Server. If you are using HTTPS, you also need to make sure that there are entries the HTTPS protocols in addition to the HTTP protocols within the Select Access Resource Tree.

2. The entry for the Web client resource in the Select Access Policy Builder is missing, or is incorrect.

Check the spelling of the resource entry. The HPBPI resources and how they should be referenced in Select Access is provided in the *Business Process Insight Administration Guide*.

3. The User Identity that identifies the person that you want to have access to the Web client does not have the appropriate authorization set within Select Access.

Check that there is a tick at the intersection of the Identity and the appropriate Web client resource.

4. The Select Access Validator has been upgraded, or reinstalled.

In this case, you need to run the Select Access Setup Tool and rerun the Servlet Enforcer setup to ensure that the Servlet Enforcer is synchronized with the Validator.

### Example 3

HTTP Status 403 - Access to the requested resource has been denied

If you are using Servlet Engine authentication, you can encounter this error if the entries in the Servlet Engine configuration file are incorrect. Check that the `tomcat-users.xml` file contains the correct information, in particular:

1. check that the `tomcat-users.xml` file exists. This file is installed at the following location:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\conf
```

2. check the content of the file and that it contains the credentials for all the HPBPI components. There is a post-migration task that explains how to update the Servlet Engine configuration file to add the new settings; see the *Business Process Insight Installation Guide* for more details.

### Example 4

The page cannot be displayed

You receive this error when the Servlet Engine is not running or is not accessible on the machine where HPBPI is running:

- Check that the Servlet Engine is started on the machine where the HPBPI Server is running.
- If you have installed using the `Dashboard Only` option, check that the Servlet Engine is running on the machine where the Business Process Dashboard is installed.
- If you have installed HPBPI in a Microsoft Server Cluster, check that you are using the virtual host name for the Cluster and not the actual node names.

## Select Access Single-Signon Registration Service Not Working

If the single-signon service for multiple domains that you have configured does not appear to work, it could be because you have not correctly configured the Servlet Enforcer Plugin.

Check that you have enter the correct domain name in the Cookie domain field on the `Generic Enforcer Plugin Setup - Single DNS domain SSO` dialog. This dialog is accessible when you run the Setup tool for the Enforcer Plugin.

## Servlet Engine Login Credentials Ignored

If your login credentials are rejected and the empty login dialog is presented again, HPBPI is unable to authenticate with the Servlet Engine using the username and password supplied. Check that the username and password are correct in the Servlet Engine configuration file (`tomcat-users.xml`).

## Certificate Errors on Login

If you are receiving Certificate errors when trying to start one of the HPBPI Web Clients, or you are not being prompted for a Certificate when you expect to be, it could be a problem with how you have set up HTTPS on the Servlet Engine or within Select Access.

Check the following are configured correctly:

- Certificate-based client authentication is enabled in the Administration Console. This parameter is available from the Security option.
- The appropriate Web clients are enabled for HTTP over SSL in the Administration Console. These parameters are available from the Security option.
- The Servlet Engine is configured for Server to client and client to Server HTTPS access. Refer to the *Business Process Insight Administration Guide* for details of configuring the Servlet Engine to send and receive HTTPS requests.
- If you are using Select Access to further refine your HTTPS access, make sure:
  - the Certificates have been entered in the LDAP server using DER encoding.
  - the LDAP identity entries in the LDAP server match the common name (`cn`), organization unit (`ou`), organization (`o`) and country (`c`) attributes supplied when the Certificate was requested and created.

## Warning about Basic Authentication Without Secure Connection

If you are using Internet Explorer version 7.0 or later, and you receive the following warning, you need to consider setting HTTPS as the authentication method for your password-protected HPBPI Web applications:

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

This warning occurs as a result of the tighter security checking within Internet Explorer version 7.0, or later.

You can prevent this warning being displayed by configuring your password-protected HPBPI Web clients to use HTTPS instead of HTTP for their connections. Refer to the *Business Process Insight Administration Guide* (chapter on security) for details of how to configure your Web clients to use HTTPS.

## Integrity Checker Fails to Run

It is possible that the configuration files for the Integrity Checker have been removed or are corrupt. In this case, the Integrity Checker fails to run.

The following are error messages that might indicate that the Integrity Checker validation files are missing or corrupt:

- System cannot locate file  
`bpi-install-dir\misc\bia\hpbpi_install_type.xml` to use for validation  
  
where `hpbpi_install_type` is the type of installation that you have completed on the system; for example, `bia_full_install_windows`, is the file name when you have completed a full installation on the system.
- Error parsing validation file ...

If this is the case, it is likely that other files in your HPBPI system have been removed or are also corrupt. Follow the instructions in the *Business Process Insight Installation Guide* to reinstall the HPBPI Server, including the Integrity Checker. Do not make any changes to the HPBPI configuration as part of the reinstallation. You are reinstalling only to update the installed files.



If you have made changes to any component configuration files directly and not using the HPBPI Administration Console, these changes are overwritten by the reinstallation process. If you want to preserve these changes, copy the files that you have modified to another location before starting the installation and reapply the changes when the installation is complete.

## Problems Stopping the Business Event Handler

If you use the HPBPI Administration Console to stop all the HPBPI Server components, using the `Stop All` button, you might see the Business Event Handler takes some time to stop.

This occurs in situations where the Business Event Handler is sending events into the Business Impact Engine at the point where the Engine shuts down. As a result the Business Event Handler retries its connection, according to its configuration settings. This means the Business Event Handler can take some time to shut down and is expected behavior.

## Problems Stopping the Business Impact Engine

Occasionally the Business Impact Engine does not completely shut down when you use the `Stop` command in the HPBPI Administration Console.

If this is the case, select the `Stop` command for the Business Impact Engine again, and the Engine shuts down. Be aware that it can take up to two minutes for the Business Impact Engine to shut down.

---

# 4 Problems with Performance

This chapter describes specific problems with performance that you might experience using your HPBPI system. The chapter covers the following topics:

- [HPBPI Server Performance](#) on page 48
- [Modeler Performance](#) on page 52
- [Administration Console Delays when Applying Changes](#) on page 53

# HPBPI Server Performance

The following sections describe possible reasons why your HPBPI system is not responding as expected:

- [Incorrectly Configured Database Parameters](#) on page 48
- [Optimizing Use of Your Oracle Database Server](#) on page 49
- [Build Up of Process and Monitor Instances](#) on page 50
- [Excessive Numbers of Notifications Generated](#) on page 51

## Incorrectly Configured Database Parameters

If your HPBPI system is not responding as you would expect, it could be due to incorrectly configured database parameters.

To determine whether there are any specific errors in the database configuration, check the following log file:

```
bpi-install-dir\HP_OpenView_Business_Process_Insight_DbSetupLog.log
```

This file is created when there are errors to report after HPBPI has made a successful connection to the database.

Other possible reasons why your database configuration might have an effect on performance are:

- Incorrect quotas for the *username\_TS* and *INDX* tables in the database. The *Business Process Insight Installation Guide* provides details of the quotas required for these tables.
- There are insufficient cursors available for the database; see section [Oracle Cursor Setting](#) on page 80.
- The Oracle or Microsoft SQL Server database data files are configured to grow automatically, which can have a detrimental effect on database performance if you are storing a lot of data. Refer to the *Business Process Insight Installation Guide* for details of how to set up the Oracle and Microsoft SQL Server user accounts.

If you need more advice on improving performance, contact your local support representative, or visit the HP BTO Software Web site for additional information.



## Optimizing Use of Your Oracle Database Server

The following are possible reasons why your Oracle Server might not be optimally configured for HPBPI:

- The Oracle Server Redo log file size is set too low.
- The Oracle Server is not using the right optimizer for its queries.
- Customized database partitioning is not enabled

### Redo Logs

The Oracle Redo log files should be set to at least 1GB to reduce the frequency at which new Redo logs are switched, which results in costly database CHECKPOINT activities. Refer to your Oracle Server documentation for details of how to increase the size of the Redo log file.

### Database Table and Index Partitioning in Oracle

Oracle provides a number of features that you can take advantage of to improve the performance of your HPBPI implementation. One of these is database table and index partitioning.

Some of the HPBPI database tables and indexes are designed to enable you to take advantage of Oracle Partitioning; however, you can do this only if you have purchased a suitable Oracle License.

If you have a license to use Oracle Database and Index Partitioning, and you consider that your database performance can be improved by using it with HPBPI, you can configure HPBPI to make use of this Oracle feature.

You enable table and index partitioning for HPBPI as follows:

1. From the Administration Console, stop all the HPBPI components.
2. Open a Command Prompt Window.
3. Change directory to:

```
bpi-install-dir\bin
```

4. Run the following script:

```
OraclePartitioningSwitcher switch
```

where *switch* can be either true or false.

`true` enables partitioning for some HPBPI database tables and indexes and `false` disables any partitioning for HPBPI.

Be aware that when you enable Oracle Partitioning, there can be a significant delay while Oracle makes the required changes. The delay depends on the size of the database tables and indexes that are being partitioned and can be more than one hour.

5. When the partitioning is complete, restart the HPBPI components using the Administration Console.



You must make sure that you have the appropriate license if you decide to enable Oracle Database table and index partitioning.

## Build Up of Process and Monitor Instances

If you find that the performance of your HPBPI Server system deteriorates over time, this could be due to the build up of any or all of the following in the database:

- Completed process instance data
- Business Monitor instance data
- Business Monitor violation data
- Business Process Monitor statistics data can also build up in your database, particularly if you have set a low `Collection Interval`.

The *Business Process Insight System Administration Guide* describes how you can use the Instance Cleaner parameters to delete and archive process and monitor data from the database at different intervals according to your implementation requirements.



If you select the option to delete completed process as soon as the instance has completed, you do not have completed instance data to view through the Business Process Dashboard. In this case, you might be experiencing the problem described in section [Chapter 5, Problems Using the HPBPI Clients](#). This might also result in Active instances that have no parent. In this case you can use the Instance Cleaners to remove these Active instances.

## Out of Memory Errors in Monitor Definer Log File

If see messages related to shortage of memory in the Monitor Definer log files when the Monitor Definer is started, it could be due to the fact that large numbers of monitor statistics are being generated on your Business Processes. In particular, check for monitor statistics that are generated on Business Processes that have been superseded. This is because when you delete Business Process Monitors for a process, it does not automatically delete the Business Process Monitors for the superseded versions of the same Business Process. The monitor statistics for the superseded processes are still being generated and accumulating in the database.

You need to separately delete the Business Monitors for superseded processes.

## Excessive Numbers of Notifications Generated

If you have a significant failure in your business, for example, an application becomes unavailable, you can end up in the situation where thousands of thresholds are violated. This can result in large numbers (or a storm) of notifications being generated.

If you receive excessively large numbers of notifications relating to threshold violations, you can modify the Monitor Engine configuration parameters to provide summary information in order to reduce the number of individual messages that are delivered.

These Monitor Engine Threshold settings enable you to control the number of, and frequency at which, notifications are sent out when monitor threshold violations occur.

Refer to the *Business Process Insight Administration Guide* for details of the Monitor Engine Threshold Violation Notification Settings that you can modify.

## Modeler Performance

If you notice that the HPBPI Modeler starts to respond more slowly when you are using it, it could be because you have a large number of editors open for your Process definitions. You can see how many Process editors that you have open from the `Window` menu option and the `Status Bar`. If there are more than 10 Process editors open, try closing those editors that you are not using. This should improve the Modeler's performance.

# Administration Console Delays when Applying Changes

If the Administration Console is taking a significant amount of time to respond when you are making changes to configuration parameters, it could be because you have too many copies of the Dashboard.

Each time you reinstall the Business Process Dashboard, a new version of the Dashboard files are created at the following location:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\webapps
```

For each installation, a Dashboard `.war` file is created for HPBPI and is named as follows:

```
hpbpi-bpd.war
```

The actual file name varies according to whether this is a new installation, an over-installation or an upgrade. This is because the files are renamed each time you reinstall HPBPI in order to preserve changes. You need to identify the current `.war` files and any versions of the files that you have customized and then delete those that are no longer required.

Each `.war` file has an associated directory structure, which is created when you start the Servlet Engine. The directory name is based on the name of the `.war` file.

Keeping multiple copies of these `.war` files and their associated directories can have an impact on the performance of your machine. This is because each time you make a change to a configuration parameter using the Administration Console, the change needs to be propagated to all the files.

You are advised to delete the copies of these unwanted `.war` files and their associated directories following an HPBPI upgrade.

Deleting these files also has an impact on the length of time the re-installation procedure takes to run.



---

# 5 Problems Using the HPBPI Clients

This chapter describes problems encountered through the following HPBPI clients:

- Modeler
- Business Process Dashboard
- Notification Server Administration Console

The chapter covers the following topics:

- [Problems Deploying a Process](#) on page 56
- [Problems Importing a Definition in the Modeler](#) on page 58
- [Problems Using the Business Process Dashboard](#) on page 59
- [Problems With the Notification Server](#) on page 64

If you are having problems using the Administration Console, refer to [Chapter 6, Problems Using the Administration Console](#).

# Problems Deploying a Process

The following sections cover problems that you might encounter when attempting to deploy a process:

- [Code Too Large](#) on page 56
- [Compilation Errors for Data Definition](#) on page 56

## Code Too Large

If you are trying to deploy a Process, the deployment is failing and you see the following error message in the Model Repository log file, it could be because you are attempting to deploy a Data definition that has a Subscription with too many assignments:

```
code too large for try statement  
catch (Expression.ExpressionException e)
```

Do not exceed 350 assignments in all the subscriptions for a particular Data definition, or the definition cannot deploy successfully. For example, if the Data definition subscribes to one event, do not exceed 350 assignments. If the Data definition subscribes to ten events, do not exceed 350 assignments across the ten event subscriptions.

## Compilation Errors for Data Definition

If the HPBPI Modeler returns a compilation error for the Data definition you are attempting to deploy, it could be because you are using reserved words as property names.

Your database has a number of reserved words. In the case of Oracle, these include: ALTER, CREATE and ORDER. The full list of reserved words can be found in your database documentation.

If you use a reserved word, HPBPI modifies the name by adding an underscore ( `_` ) to the end of the name when processing it. HPBPI does not modify the user presentation of the name. If you subsequently create a property with the same name that also ends in an underscore ( `_` ), there is an internal name clash and the deployment fails with compilation errors.



As an example, if you create a property with the name ORDER, HPBPI adds an underscore the name as follows: ORDER\_. If you then create a property with the name ORDER\_, HPBPI reports a compilation error when you try and deploy the definition as it clashes with an existing definition.

To avoid this problem, do not use words that are reserved for use by your database.

# Problems Importing a Definition in the Modeler

The following sections describe problems that you might encounter when attempting to import a definition into the HPBPI Modeler:

- [Import Option within the HPBPI Modeler Does not Display Characters Correctly](#) on page 58

## Import Option within the HPBPI Modeler Does not Display Characters Correctly

If you are experiencing problems importing definitions into the HPBPI Modeler, it could be due to the regional and language settings on your system. [Regional Settings for Windows](#) on page 103 describes how to set the regional and language settings for your implementation.

# Problems Using the Business Process Dashboard

The following are problems that can occur when using the Business Process Dashboard:

- the Business Process Dashboard does not display the processes that you have configured it to display; see section [Processes Accessible Through Dashboard are Not as Expected](#) on page 60.
- unable to login to the Business Process Dashboard; see section [Web Client Login Failures](#) on page 39.
- no data is available for reporting through the Business Process Dashboard  
This could be because the database had been stopped for some reason. Check why the database has been stopped and request that it is restarted. Section [No Data Available for Reporting](#) on page 60 describes other reasons why the Dashboard might not have data available for reporting.
- there are a large number of completed instances in the database, which can have a severe impact on Business Process Dashboard performance; see [Chapter 7, Problems with Processes and Business Events](#).
- HP Operations Manager data is not available through the Dashboard.  
This could be because there are problems with the configuration between HPBPI and HP Operations Manager. Check that the configuration is correct. The configuration parameters for HP Operations Manager interoperability are described in the *Business Process Insight Reference Guide*.
- Dashboard stops responding and appears to be inactive; see section [Business Process Dashboard Stops Responding](#) on page 61.
- Annotations are not displayed as expected; see section [Annotations Not Displayed as Expected](#) on page 61
- You are presented with a login dialog and do not know the credentials for logging into the Business Process Dashboard; see section [Unable to Logon to the Business Process Dashboard](#) on page 63.

## Processes Accessible Through Dashboard are Not as Expected

If you are using Select Access to control the access to individual processes and whether or not they are accessible through the Business Process Dashboard, you need to check that you have configured Select Access and HPBPI correctly.

You create a `Process` resource in the Select Access Resources Tree to manage the processes that are shown through the Business Process Dashboard.

If you deny a user access to the `Process` resource, the Business Process Dashboard does not present any Business Processes, unless you explicitly add the processes (by name) to the Resources Tree under the `Process` resource and then enable access to each process for each user.

If you give full access to the `Process` resource, all Business Processes are presented through the Business Process Dashboard, unless you explicitly add the processes (by name) to the Resources Tree under the `Process` resource and then deny the user access to each process.

You also need to make sure that the Business Process Dashboard is configured for Select Access security within the Administration Console and that the HPBPI components have been stopped and restarted following any configuration change.

Refer to the *Business Process Insight Administration Guide* for details of configuring Select Access for your implementation.

## No Data Available for Reporting

If you start the Business Process Dashboard and there is no data to view, it is possible that you have set the Engine Instance Cleaner parameters to delete completed process instances as soon as they have completed. In this case, there is no (or minimal) historical information available to view through the Business Process Dashboard.

If this is the case, you should modify the values that you have set for the Engine Instance Cleaner parameters as described in the *Business Process Insight System Administration Guide*.

## Business Process Dashboard Stops Responding

If the Dashboard appears to be inactive and has stopped responding, it could be a problem with the number of connections that have been opened in order to access data in the database. This problem occurs only if you have customized the Business Process Dashboard and are using DBConnection.

You can experience this problem when you use DBConnection to connect to the database and do not release the database connection on the same page as the connection is opened. Refer to the *Business Process Insight Integration Training Guide - Customizing the Business Process Dashboard* for details of using the DBConnection bean.

## Annotations Not Displayed as Expected

This section describes some of the problems that you may encounter when trying to set up annotations for your process:

- [Settings in annotations.xml File Have No Effect](#) on page 61
- [Step Images are Red Boxes](#) on page 62

### Settings in annotations.xml File Have No Effect

When the Business Process Dashboard displays a process diagram, the file `annotations.xml` is processed. If there are any problems with the file, the settings are ignored and no errors are logged. As a result, if you have configured settings for an annotations file and the business process is drawn using defaults, there must be something wrong with your `annotations.xml` file.

If your Business Process does not display annotations as you expect it to, check the following:

- the step name, or names, are spelled correctly.
- the syntax of your XML.

You can use an XML editor, or you can view the XML file within a Web browser; a Web browser checks the XML for consistency.

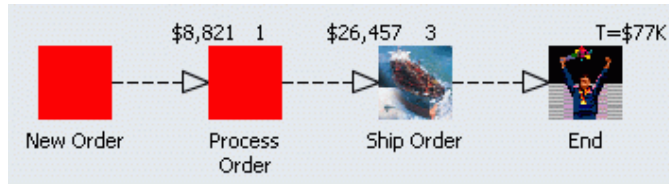
- character set encoding within the XML file.

The `encoding=` attribute within the initial `xml` directive (the first line) specifies the encoding that is to be used for this file. You need to make sure that your XML file contains characters that are within the specified character set; see [Character Set Encoding](#) on page 63 for some further tips about character set issues.

## Step Images are Red Boxes

If your Process Diagram display red boxes and not the graphics that you expect, as shown in [Figure 1](#), you need to check that your images are located in the correct directory.

**Figure 1 Red Boxes for Step Images**



A red box is displayed as the step image when an image that you have specified, within the `<image>` element, cannot be found or cannot be accessed.

Check that the image file name you specified is spelled correctly, and also check that the directory you specified exists. The directory for your images needs to be created under the following directory structure

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\webapps\hpbpi-bpd
```

For example, if you specify an `image` element as follows:

```
<image>myImages/image1.gif</image>
```

You need to make sure that the following directory exists and that it contains an image file called `image1.gif`:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\webapps\  
hpbpi-bpd\myImages
```

## Character Set Encoding

If you want to create an annotations file that contains a specific character set encoding, for example, UTF-8, you need to ensure:

- that you use an editor that supports UTF-8.
- that you specify the first line of your XML as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
```

In the UTF-8 example, if you specify UTF-8 as the XML encoding and do not use a corresponding UTF-8 editor when entering the UTF-8 characters, the Business Process Dashboard fails to parse the file `annotations.xml` and therefore ignores your settings.

You need to make sure that you use an editor that supports the character set encoding that you specify in your annotations file.

## Unable to Logon to the Business Process Dashboard

If the Dashboard unexpectedly requires you to login, it could be because it has been configured to request authorization. Contact the person responsible for managing your HPBPI system and find out the user name and password requirements for the Business Process Dashboard. For other problems relating to logging on to the Business Process Dashboard see also section [Problems Using the Business Process Dashboard](#) on page 59.

The Business Process Dashboard authorization can be configured to use the Servlet Engine authentication, or HP Select Access authorization.

# Problems With the Notification Server

The following section describes the problems that you might encounter when using the Notification Server:

- [Velocity Template Not Recognized by HPBPI](#) on page 64
- [Problems with Email Notifications](#) on page 64

## Velocity Template Not Recognized by HPBPI

If you have created or modified a Velocity template for use within the Notification Server, and the template fails to parse, it could be due to how it is encoded.

If you have saved the Velocity template using a UTF8 encoding, you must make sure that the file is saved without the UTF8 byte order mark (BOM).

A byte order mark (BOM) is a character code at the beginning of a file and can be used to define the byte order and encoding form for the file. BOMs are primarily used for text files, which have been created using applications such as Notepad or Wordpad (on Windows). Some protocols, such as XML, do not allow the use of a BOM. As XML is the protocol used for the Velocity templates, this can cause problems. If you have included the BOM within the template file, the XML parser fails to parse the file as it does not recognize the content as being XML.

Make sure that you create and modify your Velocity templates using an editor that does not add a BOM to the file.

## Problems with Email Notifications

If you have configured HPBPI to send email notifications for violations, and you are seeing `Access Denied` errors in the Notification Server log file, it could be because the SMTP Server has been configured to require authentication.

When you set up the configuration for the Notification Server and its connection to the SMTP Server using the Administration Console, the assumption is that there is no authentication required for the SMTP Server.



If the SMTP Server requires authentication to be configured for users, there is some additional HPBPI configuration required. There is an authentication file for the SMTP Server (`SMTPSetup.properties`), which is located in the following directory:

```
bpi-install-dir\misc\bia\
```

This file contains the following three parameters, which, on an initial installation are disabled. These parameters are applicable to the authentication settings.

```
#mail.smtp.auth=true  
#mail.smtp.user=myuser  
#password=
```

You need to enter the appropriate values for these parameters and remove the comment character (#) to add SMTP authentication to your HPBPI implementation.

You need to add the SMTP username, and a password for the username specified, to the file. These are the username and password that relate to the SMTP Sender address (Sender email address:). You configured the Sender email address: on the Notification Server Configuration page of the Administration Console.

The value of the password must be encoded within the `SMTPSetup.properties` file; you can encode the password using the following script:

```
java -classpath bpi-install-dir\java\bia-event.jar  
org.openadaptor.adaptor.util.Encoder password-value
```

You need to stop and restart the Notification Server for the new parameter values to take effect.



This script file is overwritten when you reinstall HPBPI. The installation procedure makes a copy of the file and renames it as follows:

```
bpi-install-dir\misc\bia\SMTPSetup.properties.bak.n
```

where *n* is a number.

If you complete multiple installations *n* is incremented with each reinstallation. The most recent copy of the file is named as follows:

```
SMTPSetup.properties.bak.0
```



---

# 6 Problems Using the Administration Console

This chapter describes problems that you might see when using the HPBPI Administration Console. The chapter covers the following topics:

- [HPBPI Administration Console Fails to Open](#) on page 68
- [Administration Console Start and Stop Commands Do Not Appear to Be Working](#) on page 69
- [Changes Made to Configurations Not Having Expected Effect](#) on page 70
- [Administration Console Fails When Trying to Start or Stop Components](#) on page 71
- [Server Components Fail to Start and Do Not Write Log File Entries](#) on page 72

# HPBPI Administration Console Fails to Open

There are a number of reasons why the Administration Console can fail to open. If you see any of the following error messages it could be due to missing files:

- Unable to apply configuration  
This is due to a missing `masterconfig.properties` file.
- Could not find the main class. Program will exit  
This is due to a missing `bia-admin.jar` file.
- `ApplicationConfiguration.getInstallDir:OV_INSTALL_DIR` not defined  
This is due to a missing `OV_INSTALL_DIR` from `setenv.bat`

The Administration Console also fails if the `bia-common.jar` file is missing.

To determine if one or more of these files is missing, run the Integrity Checker to obtain a report on your system; see [Chapter 1, Introduction](#).

If this is the case, it is likely that other files in your HPBPI system have been removed or are corrupt. Follow the instructions in the *Business Process Insight Installation Guide* to reinstall the HPBPI Server, including the Integrity Checker. Do not make any changes to the HPBPI configuration as part of the reinstallation. You are reinstalling only to update the installed files.



If you have made changes to any component configuration files directly and not using the HPBPI Administration Console, these changes are overwritten by the reinstallation process. If you want to preserve these changes, copy the modified files to another location before starting the installation and reapply the changes when the installation is complete.

# Administration Console Start and Stop Commands Do Not Appear to Be Working

If you use the HPBPI Administration Console to stop HPBPI components very quickly after starting them, you can find that the component shutdown might fail.

The command to stop a component is not executed until after the component has successfully started; for some components startup can take a few minutes. If the stop command is issued before the start command has completed, it is ignored.

Make sure that the component that you want to stop has successfully started before you attempt to shut it down.

This behavior is the same when you are attempting to start a component very quickly after stopping it.

# Changes Made to Configurations Not Having Expected Effect

If you make changes to configuration parameters using the HPBPI Administration Console and these changes are not applied to your running system, make sure that you have followed the instructions in the *Business Process Insight System Administration Guide* for the parameter that you are modifying.

The most likely reason for the changes not being accepted is that you have not stopped and restarted the HPBPI components after making the change. Configuration changes are not applied dynamically to the HPBPI system. You typically need to stop and restart the HPBPI Server components for the changes to take effect.

Read the section relating to the configuration parameter that you want to change in the *Business Process Insight System Administration Guide*.

# Administration Console Fails When Trying to Start or Stop Components

If your system is running slowly for any reason, the Administration Console can erroneously report that a component has failed to start or stop. The Administration Console waits for 30 seconds before assuming that a component has failed to start and it waits for 10 seconds before assuming that a component has failed to stop.

The error message reported when a component fails to start is:

```
Failed to connect to the Administration Console Server on {hostname} due to a remote exception. Possibly due to an RMI port number conflict or a slow starting Administration Console Server.
```

The error message reported when a component fails to stop is:

```
Failed to stop component Engine. Possibly due to a slow stopping component.
```

This example shows a problem with the Engine component.

If this is happening regularly, check that you are using a recommended system configuration. If you have the recommended configuration, but have a large number of applications running on the system where HPBPI is installed you might need to move some applications to other systems.

# Server Components Fail to Start and Do Not Write Log File Entries

If you are attempting to start the HPBPI Server components using the Administration Console and these components both fail to start and do not generate any log file entries, it could be a problem with the Windows Services Wrappers.

If there is a problem that causes the Windows Services to fail before any of the HPBPI components have started, information regarding the problem can be written to the Service Wrapper log file for the service that is failing to start.

There are configuration files for each of the HPBPI components that also has a Windows Service. In most circumstances, you do not need to modify these configuration files; however, in this case you can alter the setting for logging errors in order to collect logging data relevant to the problem. By default, logging is disabled as the amount of logging information generated can grow excessively. You are therefore advised to enable logging only when you need to collect data for a specific problem scenario.

To enable logging for one, or more, of the Windows Services (for HPBPI Server components), complete the following steps:

1. Locate the appropriate component configuration file for the Windows Service Wrapper configuration.

These configuration files are located in two places; there is an active file and a template file. Each time you make a configuration change using the HPBPI Administration Console, the active files are regenerated based on the content of the template files. For this reason, you need to modify the template file, to ensure that your modifications are preserved following future configuration changes.

Do not modify any of the remaining content of the file, unless otherwise requested to by the support organization, or elsewhere in the HPBPI documentation.



The template configuration files are located at:

```
bpi-install-dir\newConfig\DataDir\conf\bia
```

The configuration files have the following naming convention:

```
HPBPIcomponent-nameWrapper.cfg
```

where *component-name* is the name of the HPBPI Server component; for example: MetricEngine.

2. Locate the following section in the configuration file:

```
# Log file to use for wrapper output logging.
# Make sure that one of the following wrapper.logfile settings is enabled.
# A wrapper.logfile setting with no value disables logging. A
# wrapper.logfile value specifying a valid directory and file name
# causes logging information to be written to the specified file. If
# both lines are disabled, logging information is written to the
# wrapper.log file in the same directory as the wrapper executable.
#wrapper.logfile={{ESC_BIAROOT}} {{ESC_FILE_SEPARATOR}}data{{ESC_FILE_SEPARATOR}}log{{ESC_FILE_SEPARATOR}}OVBPIAdminServerWrapper.log
wrapper.logfile=
```

3. As indicated in the comments, you need to remove the comment character (#) from the start of the line that defines an output log file for the Service Wrappers and add a comment character to the following line:

```
wrapper.logfile=
```

Make the change for each of the Service Wrapper configuration files that you want to log errors for.

Do not add a comment character to both lines. If you do, logging information is written to a log file in the same directory as the service wrapper executable file (.exe). This is because a default filename and directory specification are used when no logging parameters are provided.

4. You now need to run the following file to make the changes to the configuration file, or files, active on your HPBPI system:

```
bpi-install-dir\bin\biaadmin.bat applyconfig
```

Running this command causes all template configuration files to replace the active configuration files with any new or revised settings. There is also a significant number of messages written to the Command Window. Some of these messages are Warning messages, which can be ignored.

When you next attempt to start the HPBPI Service and the Service fails, logging information is written to the following file:

```
bpi-install-dir\data\log\HPBPIcomponent-nameWrapper.log
```

where *component-name* is the name of the HPBPI Server component; for example: `MetricEngine`.

5. Make sure that when you have collected the required logging information that you reset the configuration files and disable the logging that you have enabled.



Note that if you reinstall HPBPI for any reason, the template logging property files are overwritten and you therefore need to reapply your changes.

---

# 7 Problems with Processes and Business Events

This chapter provides information on some of the most common problems that you can encounter when developing processes.

When developing processes and configuring events, make sure that you use the following training documents. These documents contain information about how to use the HPBPI Modeler to develop business processes and how to make sure that the correct business events are received by the HPBPI system:

- *Business Process Insight Integration Training Guide - Modeling Processes*
- *Business Process Insight Integration Training Guide - Business Events*

You are advised to read these documents as they contain information that helps minimize the number of problems that you can encounter when developing business processes. They contain several examples and tips on best practice. The documents also contain information about the tools that you can use to debug your processes.

The chapter covers the following topics:

- [Diagnosing Problems](#) on page 76
- [Processes Completing with One or More Steps Still Active](#) on page 77
- [Processes Not Progressing](#) on page 78
- [Data Instance Deleted](#) on page 79
- [Business Events Not Processed as Expected](#) on page 80
- [Event Adaptor Property Files](#) on page 81
- [Events Not Received by Engine](#) on page 82
- [Business Events Not Progressing Processes](#) on page 84
- [Errors Reporting that Process and Data Instances Do Not Exist](#) on page 85

# Diagnosing Problems

There are a number of reasons why your Business Processes might not be progressing and in order to isolate the problem, you should work through the component log files as follows:

1. the log file for the Adapter that should be receiving the business events to progress the process. You need to check that the Adapter has successfully sent the event to the Business Impact Engine.
2. the log file for the Business Event Handler to check whether the business event was received and subsequently rejected and placed in the event hospital.
3. the log file for Business Impact Engine log to check whether it accepted the Business Event from the Adapter.

If the log files are all as expected and the event was received by the Business Impact Engine, continue as follows:

4. use the Business Process Dashboard to determine if a process instance has been created, or progressed.
5. use the Intervention Client to identify the Data Definition for the event. You need to check whether a definition has been created and if its state has changed.

If the process instance has been created and the Data definition exists and is in the correct state, temporarily modify the logging levels to `FINER` and check how the event is being passed from component to component.

Make sure that you reset the logging levels after you have collected the data that you need.

When you have diagnosed the problem, refer to the remaining sections in this chapter for more information on how to resolve the problem.

# Processes Completing with One or More Steps Still Active

If you have a business process that is completed, but that has steps within the process that are still showing as active, this could be for a number of reasons:

- The events required to complete the steps have not been received by the Business Impact Engine; see section [Business Events Not Processed as Expected](#) on page 80.
- Events are received out of sequence, or have an incorrect Generated Date.

Check the date on the event and make sure that the system time settings for all your systems are synchronized.

- The progression rules for the complete conditions are not correct.  
Use the Repository Explorer to check the progression rules for the process.
- Multiple, or duplicate, events are received.

# Processes Not Progressing

There are a number of reasons why your processes might not progress:

- You have deleted the data instance for the process instance; see section [Data Instance Deleted](#) on page 79.

- Progression rules are not correct.

Use the HPBPI Modeler, or the Repository Explorer to check the progression rules for the process.

- Events are not being received; see section [Events Not Received by Engine](#) on page 82.
- Data in the Event does not have a corresponding Data definition within the HPBPI Modeler.

Check that the data in the Event is correctly represented as a Data definition within the HPBPI Modeler. If it is not, the business process does not have the data to satisfy the start and complete conditions defined for the steps.

- Events received for data instances with no parent process instance.

If you have the scenario where a Process instance is completed and subsequently deleted, but the associated data instances are not set to be terminated, you might see this problem, particularly during development, or if your system receives out-of-sequence events.

This occurs specifically if you have configured the Process instance to be created when the data instance is created. In this case, the data instance already exists, so the process instance can not be created and progressed.

Make sure that all data instances associated with a particular process instance are deleted when the process instance is deleted.

- You have deployed a new version of the Process but have not deployed a new version of the Data definition. Events for existing data instances therefore continue to be processed by the superseded version of the process. It is only when new data instances are created that a corresponding new process instance is created.

If that is a problem, make sure that you deploy a new version of the Data definition at the same time as the new version of the Process definitions deployed.

## Data Instance Deleted

If you have deleted a data instance, or a process instance, including all its data using the Intervention Client, it is possible that you have deleted a data instance used by more than one process instance. In this case, the process no longer has a reference to its data, and none of its instances can progress.

If you suspect that this is the case, and you have removed a data instance that has other dependencies, there is no way of reinstating the data instance for the process.

To solve this problem, you need to remove the process instance from the system using the Intervention Client.

# Business Events Not Processed as Expected

If your processes are not progressing as expected, it could be because your business events are not being received by your HPBPI system.

There are a number of reasons why this might be the case:

- Cursor errors

If you see an error containing the following text in the Business Impact Engine log file, it is likely that you need to increase the value assigned to the number of cursors that are available to HPBPI.

```
ORA - 01000 maximum open cursors exceeded
```

If this is the case, refer to section [Oracle Cursor Setting](#) on page 80.

- Event adaptor property files have incorrect settings; see section [Event Adaptor Property Files](#) on page 81.
- Events are not being received by the Business Impact Engine; see section [Events Not Received by Engine](#) on page 82.
- Events are received by Business Impact Engine but not progressing the process; see section [Business Events Not Progressing Processes](#) on page 84.

## Oracle Cursor Setting

Cursors are used by Oracle to identify objects that are managed through the System Global Area. In the case of HPBPI, one of the uses of cursors is to identify Prepared Statements. For this reason, you need to configure the number of cursors to be equivalent to the number of pooled connections and Prepared Statements that are configured for HPBPI.

The number of Prepared Statements defined for Business Impact Engine is set through the value of `Maximum number of active JDBC Prepared Statements`. This value is set through the `Business Impact Engine` configuration settings in the HPBPI Administration Consoles; see section the *Business Process Insight System Administration Guide*.



Prior to Oracle version 9.2.0.5.0, the maximum number of cursors that could be cached for fast lookup by PL/SQL was bounded by the value of the parameter `open_cursors`. If you currently have `open_cursors` set to a high value (for example, greater than 1000), it is likely that this is causing large numbers of PL/SQL cursors to be cached in the shared pool.

For Oracle version 9.2.0.5.0 and later, the maximum number of cursors that can be cached is determined by the parameter `session_cached_cursors` and not `open_cursors`.

After installing HPBPI for the first time, the value of Maximum number of active JDBC Prepared Statements is set to 10,000.

You need to modify the value of `session_open_cursors`; typically, this parameter is set within the `spfile` (Server Parameter file). To modify the value, use a command similar to the following:

```
ALTER SYSTEM session_open_cursors=10000 SCOPE=BOTH
```

The value of `session_open_cursors` needs to be the same as the value set for Maximum number of active JDBC Prepared Statements.

This sets the value of `session_open_cursors` for the running database instance and also sets it in the `spfile`.

## Event Adaptor Property Files

You typically create a property file (or configuration file) for each event adaptor that you need for your implementation. The *Business Process Insight Training Guide - Business Events* describes event adaptors and their property files in detail.

Make sure that the values in the property files are correct for your implementation, for example, check database (or tablespace name) and database user name. If any of the properties in the file is incorrect, the adaptor might not be able to communicate with the Business Event Handler and send business events into the Business Impact Engine.

You can also set the log levels for the Business Event Handler to the Trace level to find out whether or not it is receiving business events from the adaptor.

## Events Not Received by Engine

If you suspect that the Business Impact Engine is not receiving business events, you can check by setting the `Log BIE events` log level and checking the resultant log file.

The Business Impact Engine might not be receiving business events for the following reasons:

- Event adaptor is incorrectly configured; see section [Event Adaptor Property Files](#) on page 81.
- Incorrect SQL commands.

If you have configured database adaptors to take data from an SQL table, it is possible that the SQL commands for the Event adaptors are incorrect.

If possible test the SQL commands manually to make sure that they return the information that you expect. You can then incorporate them into your HPBPI implementation when they have been tested.

You can also consider running the adaptor such that it does not delete records from the data tables immediately after processing them. This enables you to work out which events have been processed.

- Incorrectly configured adaptor source

Check that the source information for your adaptors is correct and returning the data that the adaptors are expecting. Try running the adaptors manually to determine whether or not they are returning the correct information.

- The Business Impact Engine is shut down, or failed, while the adaptor is running.

If the Business Impact Engine component is shutdown and unable to receive events, the Business Event Handler component manages the queued events and attempts to send them at a later time.

- The Event names are incorrect, or contain data that is not valid. In this case, check to see if the Event has been copied to the Event Hospital.
- Business Event Handler not started.

It is possible that the Business Event Handler has been stopped for some reason. Check the status of the Business Event Handler using the HPBPI Administration Console, and restart it if necessary.

The *Business Process Insight Training Guide - Business Events* provides information on developing and debugging Event adaptors, plus information on Event Hospitals.

# Business Events Not Progressing Processes

If you know that the Business Impact Engine is receiving business events, but the process is not progressing, or not progressing as you expect, check the following:

- that your progression rules and subscription rules are correct. You can use the Repository Explorer to show details of your business processes, including all the progression rules defined for the process.
- whether the events are being received out of sequence and therefore not updating the business process as anticipated.

Where possible, you should write your progression rules to be independent of Event order. Refer to the following training guide for guidelines on developing processes:

*Business Process Insight Integration Training Guide - Modeling Processes*

- whether Events are showing the correct data and time.

It is possible that you are not operating with consistent times across the machines in your HPBPI implementation. Check the system times for all the machines and make sure that they are synchronized.

- whether all the required events have been defined.

It is possible that the Events that you have defined do not provide all the data required by the process. Check that all the Data definitions are being populated from your Event definitions.

- that the Event name being received by the Business Impact Engine matches the Event definition within the HPBPI Modeler.

If the Event name does not match the Event definition, the process cannot progress. Make sure that the Event name is used consistently across your implementation. Event names are not case sensitive.

- The Business Impact Engine has rejected the business event for a particular reason, for example, the process has been received out of sequence and there is no process instance to progress at the point when the event is received. In this case, the Business Impact Engine sends the business event to the event Hospital and marks it to be automatically discharged. This allows time for the relevant process instance to be started before the business event is sent back to the Business Impact Engine for processing.

# Errors Reporting that Process and Data Instances Do Not Exist

If you are receiving regular error messages indicating Process or Data instances do not exist, you need to check how you have configured your Process definitions, Data definitions and Engine Instance Cleaner.

These error messages are reported in the Business Impact Engine log file when an event is received for a Process or Data instance that does not exist, and the system is configured such that the Process or Data instance is not created if it does not already exist.

The following are the errors that the Business Impact Engine reports when a Process or Data instance does not exist:

```
Nov 19, 2004 1:09:13 PM
com.hp.ov.bia.bce.model.AbstractFlowObject doNodeEntryCriteria
WARNING: Entering a flow instance at node "NodeID" when the
instance did not already exist.
```

```
Nov 19, 2004 1:09:17 PM
com.hp.ov.bia.bce.model.AbstractDataModel onEvent WARNING: Data
object with name: DataInstanceName and identifier:
DataInstanceID, identified by event EventName, does not exist.
Filter is Property."PropertyName" == Event."EventPropertyName"
```

The reasons why these errors might be occurring are:

- The instance has completed and has been deleted. Subsequently, an out-of-sequence event has been received for the instance.

If this occurs frequently, consider extending the time period that you have set before completed instances are deleted.

- The Engine Instance Cleaner is set too aggressively and is deleting active instances prematurely.

If this occurs frequently, consider extending the time period that you have set before active instances are deleted.

- The instance has not yet been created and an out-of-sequence event has been received that updates it.

In the case of a Process instance, make sure that all steps close to the start point for a process are configured to enable a Process instance to be created if it does not already exist.

In the case of a data instance, make sure that the data instance can be created for all likely scenarios of event arrivals.

Events received under these circumstances are sent to the event Hospital and marked to be discharged automatically. This allows time for the Process or Data instance to be created before the event is sent back to the Business Impact Engine.

- The instance has been deleted through the intervention client.

---

# 8 Problems with HPBPI Integrations

This chapter describes problems that you might see when integrating HPBPI with other BTO products.

The chapter covers the following topics:

- [Error When Generating HP Operations Dashboard for HPBPI on page 88](#)
- [Error When Enabling Service Source for Business Availability Center on page 89](#)
- [Administration Console Reports Warnings about Relative Thresholds on page 90](#)
- [Modeler Error When Synchronizing with UCMDB on page 91](#)

# Error When Generating HP Operations Dashboard for HPBPI

If you receive errors when generating an HP Operations Dashboard console for HPBPI, it is likely to be because you have not configured, or incorrectly configured, the connection between HPBPI and HP Operations Dashboard.

When configuring the HP Operations Dashboard to integrate with HPBPI, you need to supply the following information:

1. The fully qualified host name of the machine where the HPBPI Server is installed.
2. The port number for the HPBPI Web Services Provider.
3. The port number for the HPBPI Servlet Engine component.
4. The string `OVBPPI`, which is required by HP Operations Dashboard to identify the connection as an HPBPI connection.

You can find the relevant port numbers using the Administration Console on the Port Numbers page. The HP Operations Dashboard uses this information to build a URL to access the HPBPI Web services and the HPBPI Business Process Dashboard pages.

If you omit any of this information, or if you enter incorrect information, you receive errors when you attempt to generate the HP Operations Dashboard console that you are creating for HPBPI.

In particular, you must make sure that you enter the string `OVBPPI` to identify the connect as an HPBPI connection.

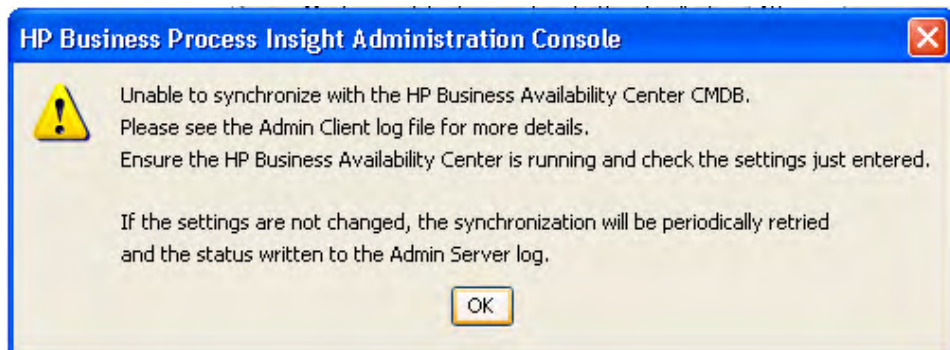


# Error When Enabling Service Source for Business Availability Center

This section describes some of the possible problems that you can experience if when attempting to configure a Service Source for HPBPI.

When configuring a Service Source, you might see a synchronization error message such as that shown in [Figure 2](#).

**Figure 2 Business Availability Center Integration Synchronization Error**



If you do receive this error, check the content of the log files as indicated in the error dialog. The files are located as follows:

```
bpi-install-dir\data\log\bia_adminclient0_0.log  
bpi-install-dir\data\log\bia_adminserver0_0.log
```

Possible reasons for the error are as follows:

- Incorrect or unavailable Gateway server host name.  
Check that you have entered a fully qualified host name for the Business Availability Center Gateway server and check that the machine is available.
- Incorrect User name and Password for the Business Availability Center.  
Check that the User name and Password that you have entered are correct and that the User account has the correct capabilities. Refer to the *Business Process Insight Reference Guide* for details of the account requirements.

# Administration Console Reports Warnings about Relative Thresholds

When you create a Monitor using the Monitor Definer, you cannot create Relative Thresholds unless you have set the `Statistics Collection` attribute to the value `On`.

If you have enabled HPBPI to send data samples to Business Availability Center, the value for the `Statistics Collection` attribute is set to be that of the `Data samples send interval`. The effect of this is to enable you to define Relative Thresholds for all Business Process Monitors regardless of whether the `Statistics Collection` attribute was set to `On` or `Off` prior to the integration with Business Availability Center.

If you subsequently disable the integration between HPBPI and Business Availability Center, the value for the `Statistics Collection` attribute is reinstated and is returned to the value that was set before the integration was enabled. As a result, if the value for `Statistics Collection` was originally set to be `Off`, a Business Process Monitor can be defined to have Relative Thresholds that would not usually be possible to define; these Relative Thresholds are seen by HPBPI to be erroneous and you are warned that the thresholds will be deleted when you disable the integration using the Administration Console. The error message includes the names of the affected thresholds.

# Modeler Error When Synchronizing with UCMDB

If the HPBPI Modeler displays an error such as the following, it could be due to the fact that the setting for Maximum retries for synchronization deadlock is not suitable for your implementation:

Error during uCMDB synchronization

The error occurs when HPBPI attempts to synchronize with Business Availability Center. You also see a warning message in the log file for the Model Repository as follows:

```
WARNING: Synchronization with BAC CMDB failed after process deployment or undeployment. A successful synchronization is required for the changes to be reflected in BAC. The synchronization will be periodically retried and the status written to the Admin Server log.
```

The most common reason for the message is where you have deployed and undeployed two, or more, processes in quick succession. As a result, the synchronization for the first request is started, and still ongoing, when the synchronization for the second request is attempted. As the requests are synchronous, the second request has to wait for the first request to complete. The request is retried, each second, for the number of times specified in the property: Maximum retries for synchronization deadlock. This is a property listed under HP Business Availability Center in the HPBPI Administration Console.

If the synchronization cannot be completed in the time allowed by this property, a flag is set and there is an in-built retry mechanism for the synchronization process. This retry mechanism has a wait time of five minutes. If you are prepared to wait for up to five minutes for all your process data to be synchronized, you do not need to make any changes.

Usually it is better to wait for the background synchronization; however, in some cases you might want to ensure your HPBPI data is synchronized more frequently, in which case, you need to reconfigure the property Maximum retries for synchronization deadlock. The value that you need to set for this parameter is related to your particular environment. You can view the log file for the Model Repository and use the times listed in the log file for the synchronization as a guide. You need to allow more time than that listed for synchronization in the log file.



---

## 9 Problems When Creating Data in the HPBPI Database

This chapter describes database problems where they are directly related to HPBPI. For more general information on database problems, refer to the documentation relating to the database that you have installed.

This chapter covers the following topic:

- [Tablespace Error - Out of Space](#) on page 94
- [Invalid Value Reported in BIE Log File](#) on page 95

See also [Chapter 2, Problems Installing and Removing HPBPI Components](#), which also contains information about installation failures relating to the database.

## Tablespace Error - Out of Space

If you see errors in the log files indicating that the data files or tablespace is out of space and HPBPI is unable to write new records to it, it could be because the data file, or tablespace, is too small.

To solve this problem, you should use your database management tools to increase the size of the data files (MS SQL Server), or Tablespace (Oracle).

At installation, the tablespace size is set initially to 50MB and to automatically increase in size in steps of 100MBs. The initial 50MB is sufficient for approximately 1,000 instances of a five-step business process.

As the database file size is set to automatically increase it is possible that there is no more disk space available to increase the file size. Alternatively, you might have modified the database parameters and set a defined database size, which has been exceeded.

You need to investigate increasing the amount of space available to your implementation. Refer to the *Business Process Insight Installation Guide* for information relating to space requirements for the database data, specifically for HPBPI.

Use the following tools to modify the size of your data file or Tablespace, according to the database software that you are using:

- Enterprise Manager, for Microsoft SQL Server
- Enterprise Manager for Oracle

## Invalid Value Reported in BIE Log File

If you see an error message similar to the following in the Business Impact Engine log file, it could be due to the fact that Event data is outside the range, or precision, supported by the database.

```
The incoming tabular data stream (TDS) remote procedure call (RPC) protocol stream is incorrect. Parameter 15 (""): The supplied value is not a valid instance of data type float. Check the source data for invalid values. An example of an invalid value is data of numeric type with scale greater than precision.
```

In this case, value has been used that is outside the precision defined for the data type float.

When defining data for business events, you need to check that the data being supplied in the event does not exceed the range, or precision, defined by the database that you are using.





---

# 10 Files and System Problems

This chapter describes problems that you might encounter with the system where HPBPI is installed and with the HPBPI files. These system problems might be the cause of other issues you are experiencing with your HPBPI system.

The chapter covers the following topics:

- [Excessive Disk Space Usage](#) on page 98
- [Missing Files and Directories](#) on page 100
- [Checksum Errors in Integrity Checker](#) on page 101
- [Firewalls and HPBPI](#) on page 102
- [Regional Settings for Windows](#) on page 103

# Excessive Disk Space Usage

If your HPBPI is consuming a significant amount of disk space, check the following:

- the correct logging levels are set for the HPBPI components.  
It is possible that someone has reset the logging level for one or more HPBPI components. If this is the case, the log files can get very large and consume large amounts of disk space. Refer to section [HPBPI Server Log Files](#) on page 110 for more information about the log levels.
- the number of generated image files in the HPBPI Business Process Dashboard images directory; see section [Servlet Engine Log File Error: Too many old generated images to clean up](#) on page 98.

## Servlet Engine Log File Error: Too many old generated images to clean up

If you find an error similar to the following in the Servlet Engine log file, you need to delete unwanted generated image files from the Business Process Dashboard images directory:

```
22-Nov-2006 15:56:12 org.apache.catalina.startup.Catalina load
INFO: Initialization processed in 1094 ms
22-Nov-2006 15:56:12 org.apache.catalina.core.StandardService
start
INFO: Starting service Catalina
22-Nov-2006 15:56:17 org.apache.catalina.startup.Catalina start
INFO: Server startup in 4750 ms
22-Nov-2006 15:57:23
com.hp.ov.bia.views.admin.GeneratedImageCleaner
ERROR: Too many old generated images to clean up: C:\Program
Files\HP \HP Business Process Insight
\nonOV\jakarta-tomcat-5.0.19\webapps\hpbpi-bpd\images\generated
```

The Servlet Engine log file is located at:

```
bpi-install-dir\nonOV\jakarta-tomcat-5.0.19\logs
```

If you see an error indicating too many old generated images, you need to delete the unwanted generated image directories from your Business Process Dashboard images directory, or directories, if you have more than one Dashboard. You specifically need to check previous versions of the Business Process Dashboard, which are not deleted when you reinstall HPBPI.

Deleting the generated image files does not impact your system as these files should be removed by the Servlet Engine automatically when you close the Business Process Dashboard session.

The location of the image files is shown in the error message. In the case of the example this is:

```
C:\Program Files\HP \HP Business Process Insight  
\nonOV\jakarta-tomcat-5.0.19\webapps\hpbpi-bpd\images\generated
```

## Missing Files and Directories

You might be alerted to the fact that you have missing files and directories if you have run the Integrity Checker and it has reported that one or more files is missing or corrupt.

If the number of missing files is small and contained, you can recover the files from a backup copy. However, if the number of missing files is significant, you are advised to reinstall the HPBPI components to reinstate all files as described in the *Business Process Insight Installation Guide*.

Do not make any changes to the HPBPI configuration as part of the reinstallation. You are reinstalling only to update the installed files.



If you have made changes to any component configuration files directly and not using the HPBPI Administration Console, these changes are overwritten by the reinstallation process. If you want to preserve these changes, copy the modified files to another location before starting the installation and reapply the changes when the installation is complete.

# Checksum Errors in Integrity Checker

There are a number of reasons why you might see checksum errors, some of which can be ignored. Examples of reasons for these errors are:

- modified files

If you have modified files, for example, configuration files, you will see checksum errors for these files. These errors can be ignored.

- replaced files

You might have been asked to replace files by your support representative, in which case these files will report checksum errors. These errors can be ignored.

- corrupt files

If a file has not been modified or replaced, you could be seeing checksum errors because the file is corrupt. In this case, follow the instructions for missing files and directories; see section [Missing Files and Directories](#) on page 100.

## Firewalls and HPBPI

Be aware that some firewall software can block RMI socket ports and therefore interfere and potentially stop HPBPI operating. This is because some firewall software does not successfully track temporary RMI ports that are created as a result of spawned RMI connections.

If you are using firewall software on the system where HPBPI is installed and HPBPI is not operating correctly, it could be because the RMI communication port is being blocked by the firewall software. If this is the case, you might need to reconfigure the firewall software to ensure that the HPBPI components can successfully communicate with each other.

# Regional Settings for Windows

If you are experiencing problems such as the following, it could be because the regional settings are not set correctly on your Windows system:

- You cannot install HPBPI successfully
- Log files do not display correctly
- The Import option within the HPBPI Modeler does not display characters correctly.

When setting the Regional and Language options through the Control Panel, you need to make sure that the language that you choose is mapped such that it can execute non-unicode programs. If you do not, you might see unpredictable results, particularly with Asia Pacific languages.

The following are examples of how to set the regional settings for Windows XP:

- Open the Regional and Language Options dialog from the Control Panel
- Make sure that the language selected in the Advanced tab matches the language selected in the Regional Options tab. The Advanced tab is where you are matching the language version of the non-unicode programs that you want to use.

# Displaying Asia Pacific Characters

Some properties of your HPBPI definitions can include Asia Pacific characters; for example, definition names and descriptions. If you display these properties on a system that does not have an Asia Pacific locale configured, these properties are not displayed correctly, if at all.

In order to view these Asia Pacific characters on a system that is not configured with an Asia Pacific locale you need to configure your system to recognize the specific fonts that are being used. The configuration required depends on the interface that is exhibiting the problem:

- [HPBPI Web-Based Clients](#) on page 104
- [HPBPI Modeler](#) on page 105

## HPBPI Web-Based Clients

In the case of the HPBPI Web-based clients, you must install the Windows files for East Asian languages. The HPBPI Web-based clients are:

- Business Process Dashboard
- Monitor definer
- Notification Server Administration Console
- Repository Explorer
- Intervention Client

To install these languages, complete the following steps:

1. Open the Control Panel
2. Select Regional and Language Options
3. From the Regional and Language Options dialog, select the Language tab.
4. Select the Install files for East Asian Languages checkbox.
5. Click OK.

The installation of the languages continues; you might be prompted for the Windows installation disks for a copy of the relevant files.



## HPBPI Modeler

In the case of the HPBPI Modeler, the language settings are managed by the Java Runtime Environment installed on the HPBPI system. Specifically, you need to configure the font property file (`font.properties`) in order to display characters in the specific Asia Pacific languages that you need. Details of this file and how to configure it can be found on the Sun Website, a possible URL is:

**<http://java.sun.com/j2se/1.3/docs/guide/intl/fontprop.html>**

Note that URLs are likely to change, so you might have to search the Sun Website if the above URL is out of date.

The font property files are located on your system at the following location:

```
java-install-dir\jre\lib
```

In the case of Asia Pacific languages, you can select from a number of `font.properties` files that corresponds to your particular environment. These files are identified by the country, or locale, suffix that is appended to the file name:

```
java-install-dir\jre\lib\font.properties.locale
```

where *locale* indicates the language; for example:

- `ja` for Japanese
- `ko` for Korean

You need to copy the entries from the language-specific files to `font.properties` to add the support for the additional languages that you require.



---

# 11 openadaptor Problems

This chapter describes problems that you might encounter with openadaptor components, where they are directly related to HPBPI.

For more general information on openadaptor problems, refer to the openadaptor web site:

**<http://www.openadaptor.org/>**

This chapter covers the following topic:

- [openadaptor HAT Security Permissions](#) on page 108

# openadaptor HAT Security Permissions

If you cannot edit or access the `User Roles` or the `Editable Attributes Admin` menu options, it is probably due to the fact that the `HPBPI` user no longer has the `HATSecurity` role assigned to it.

To add the required permissions to the `HPBPI` user, complete the following steps:

1. Start a database management tool that enables you to read and insert records into a database table, for example, Oracle Enterprise Manager Console.

2. Locate the `HPBPI` user database tables.

If you accepted the default database User during the installation, this is the `hpbpiuser`.

3. View the contents of the `DBUSMH_USER` table (the capitalization varies according to the database type).

Note the value of the user identifier for the `HPBPI` database user.

4. Open the following table:

`DBUSMH_USERROLE`

5. Insert a row into the table, where the user identifier is the value noted in step 3, and the role identifier is 5.

A role identifier of 5 specifies the `HATSecurity` role; see the table `DBUSMH_ROLE`.

6. Close the database management tool.
7. Select the `openadaptor HAT Admin` menu option.

You can now access the `User Roles` and `Editable Attributes` options.

---

# 12 Logging and Tracing Problems

This chapter describes the log files for the HPBPI components. If your log files are not displayed correctly it could be due to the language settings on your Windows system; see section [Regional Settings for Windows](#) on page 103.

The chapter covers the following topics:

- [HPBPI Server Log Files](#) on page 110
- [HPBPI Modeler Log Files](#) on page 112
- [Logging Properties Structure and Description](#) on page 113
- [Tracing and XPL](#) on page 115

# HPBPI Server Log Files

The HPBPI Server log files are accessible through the HPBPI Administration Console. For information about the HPBPI Modeler log files, refer to section [HPBPI Modeler Log Files](#) on page 112.

The log files for the Administration Console are called `bia_adminservern_n.log` and `bia_adminclientn_n.log`, and are located in the following directory on the system where HPBPI components are installed:

`bpi-install-dir\data\log` (Windows)

`bpi-install-dir/data/log` (HP-UX)

The HPBPI log files are text files that you can open using a text editor. The structure and naming of the HPBPI log files can be configured and is described in section [Logging Properties Structure and Description](#) on page 113.

There are a number of logging levels available that change the volume and level of logging information provided by each HPBPI component; for most components these levels are:

- Info
- Fine
- Finer

These logging levels listed are in descending order of level and volume of data reported. These log levels complement the levels used by other HP BTO Software products, to provide a consistent level of logging across your HP Software product portfolio.

By default the log levels are set at the INFO level. This level includes WARNING and SEVERE log levels.

In the case of components using Log4J, for example, the Business Event Handler, the levels are:

- Info
- Trace

You can set the levels of logging through the HPBPI Administration Console using the `Logging` option.

The generated log files can be viewed through the HPBPI Administration Console, or from the following location:

- `bpi-install-dir\data\log` (Windows)
- `bpi-install-dir/data/log` (HP-UX)

In the case of a failure in the HPBPI Administration Console, you might need to open the log file directly as you cannot access it through the console.

## HPBPI Modeler Log Files

The Modeler log files are not accessible using the HPBPI Administration Console.

The location of the Modeler log files is described in the *Business Process Insight System Administration Guide*. The properties of the HPBPI Modeler log files is described in section [Logging Properties Structure and Description](#) on page 113.

## openadaptor Log Files

The openadaptor log files are not accessible using the HPBPI Administration Console.

The location of the log files for adaptors developed using openadaptor depend on how your adaptors are configured and are described in the *Business Process Insight Integration Training Guide - Business Events*.

## HPBPI Service Wrapper Log Files

The Windows Service Wrapper log files are located at:

```
bpi-install-dir/bin/bia/wrapper.log
```



# Logging Properties Structure and Description

Most of the HPBPI logging property files all have a similar structure; the following is an extract from the Business Impact Engine property file:

```
#####  
  
# File output is in BIA's log directory.  
java.util.logging.FileHandler.pattern=C:\\Program Files\\HP \\HP Business  
Process Insight\\data\\log\\bia_bce%u_%g.log  
java.util.logging.FileHandler.limit=10000000  
java.util.logging.FileHandler.count=100  
java.util.logging.FileHandler.formatter=java.util.logging.SimpleFormatter  
  
#####  
# Logging levels  
#####  
  
# Available levels are OFF, SEVERE, WARNING, INFO, FINE, FINER, FINEST, ALL  
  
# Default global logging level.  
.level=INFO  
  
# BIA logging level. Recommended setting is INFO.  
# The handling of Events is logged at FINE. The contents of Events are logged  
at FINER.  
# However these settings will produce a large amount of logging which may  
consume disk space.  
com.hp.ov.bia.level=INFO  
  
# This is intended to turn off INFO and below in Hibernate.  
net.sf.hibernate.level=WARNING  
  
# This is intended to turn off RMI logging.  
sun.rmi.level=OFF
```

The Business Event Handler log files have a different structure, which is described in the *Business Process Insight Integration Training Guide - Business Events*.

In the case of the Business Impact Engine example, the following parameters affect how information for the Business Impact Engine component is logged:

- `java.util.logging.FileHandler.pattern`

This parameter determines location and name of the log files. The following tags are used within this parameter:

— `%g`

This is a file generation number and is used as the log files are rotated. When the maximum number of bytes that should be written to a file is reached, or the HPBPI component is restarted, a new log file is opened and named `bia_bce0_0.log`. The previous log file is then renamed, for example, `bia_bce0_1.log`.

— `%u`

This is a unique number that is used to resolve conflicts. This is the second part of the number in the log file name, for example: `0_0`, `0_1` or `0_2`. `%u` generates the 0, 1 or 2 in these file names.

- `java.util.logging.FileHandler.limit`

This parameter specifies an approximate maximum amount to write (in bytes) to a log file. If this is zero, then there is no limit. If this parameter is not set, the HPBPI system default is zero, no limit.

- `java.util.logging.FileHandler.count`

This parameter specifies how many output log files to cycle through. If this parameter is not set, the HPBPI system default is one file.

- `java.util.logging.FileHandler.formatter`

This parameter specifies the name of a Formatter class to use for the log files. If this parameter is not set, the HPBPI system defaults to using the `java.util.logging.XMLFormatter`.

# Tracing and XPL

Many of the HPBPI components can generate trace files. These are binary files that can be read using the HP BTO Software XPL trace viewer. The XPL trace viewer is not installed as part of the HPBPI Server, but is available on your distribution media.

These trace files are intended to aid your support representative to isolate problems with the HPBPI system. The description of the use of the XPL viewer is beyond the scope of this document. However, when running the XPL Viewer to view and save trace files, you need to know which applications listed by the viewer relate to HPBPI components. These are shown in the following table (Table 1):

**Table 1 List of XPL Applications that Relate to HPBPI**

<b>XPL Application</b>	<b>HPBPI Component</b>
OVBPI-Admin	HPBPI Administration Console
OVBPI-Engine	Business Impact Engine
OVBPI-Modeler	HPBPI Modeler
OVBPI-ModelRepositoryServerStop	For internal use only
OVBPI-EventHandler	HPBPI Business Event Handler
OVBPI-JMSEventHandler	HPBPI JMS Business Event Handler
OVBPI-NotificationServer	HPBPI Notification Server
OVBPI-ModelRepository	HPBPI Repository
OVBPI-Metric-Engine	HPBPI Monitor Engine
OVBPI-ServletEngine	Tomcat Servlet Engine
SOAM-Adaptor	HPBPI SOA Manager Adapter
OVBPI-Webservices	Web Services Provider



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