



Installation Guide

GC19-2735-00

Note

Before using this information and the product it supports, read the information in “Notices” on page 133.

This edition applies to version 3.6.0 of IBM FileNet Business Process Framework (product number 5724-R75) and to all subsequent releases and modifications until otherwise indicated in new editions.

© **Copyright International Business Machines Corporation 2006, 2009.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Table of Contents

Revision Log	9
About This Document.....	11
BPF Installation/Upgrade Overview	11
Installation	11
Installation versus Deployment	12
Upgrade.....	12
Typographical Conventions	12
Access IBM FileNet documentation, compatibility matrices, and fix packs	13
Customer support	13
Feedback	13
Plan the Installation	13
Installation Planning Considerations	14
Customer Liaison	14
BPF Prerequisite Worksheet.....	14
Platform Prerequisite Worksheet	18
Database Security Considerations.....	21
LDAP Security Considerations.....	22
JDBC Driver Requirements.....	22
Environment Configuration	23
Configure Users/Groups	23
Copy CDROM Contents to Target Machine	24
Make Staging Folder Accessible.....	26
Grant Access to Process Engine Database	26
Create JDBC DataSource – BPF Metastore	26
Create DataSource.....	26
BEA WebLogic/Microsoft SQL Server.....	26
BEA WebLogic/Oracle.....	27
IBM WebSphere/Oracle	28
IBM WebSphere/SQL Server	30
IBM Websphere/DB2.....	32
JBOSS/SQL Server.....	32
JBOSS/Oracle	32
Oracle Application Server/SQL Server.....	33
Create JDBC DataSource – Process Engine	34
Create DataSource.....	34
BEA WebLogic/Microsoft SQL Server.....	34
BEA WebLogic/Oracle.....	35
IBM WebSphere/Oracle	36
IBM WebSphere/SQL Server	38
IBM Websphere/DB2.....	40
JBOSS/SQL Server.....	41
JBOSS/Oracle	42
Oracle Application Server/SQL Server.....	42
Oracle Application Server/Oracle	43
Update Process Engine Database Views	44
SQL Server.....	44
Oracle	44
DB2.....	44

Install and Configure BPF Explorer and Metastore	46
Install BPF Explorer	46
For both Microsoft SQL Server and Oracle.....	46
If Microsoft SQL Server is selected	48
If Oracle is selected.....	49
Completing the BPF Explorer Installation	50
Create BPF Metastore	50
Microsoft SQL Server	50
Oracle	51
DB2.....	52
Load BPF Metastore	52
Microsoft SQL Server	52
Oracle	53
DB2.....	53
Import Metastore Manifest	53
Edit Metastore Settings.....	53
Define Metastore Roles	55
Configure BPF Explorer For Multiple Metastores.....	55
Install and Configure the BPF Web Application.....	57
Running the BPF Web Application Installer (GUI).....	57
Typical	59
Custom	59
BPF Web Application	60
BPF Operations – Component Manager Component	60
Case Management Sample Configuration	60
User-defined Configuration	60
Running the BPF Web Application Installer (Silent)	75
Windows	75
UNIX.....	75
Troubleshooting Errors Identified during Installation	77
GUI Mode	77
Silent Mode.....	77
Error In Base Manifest or Case Management Manifest	77
Error In Custom Objects Import In Content Engine.....	78
Error In Base Or Solution Specific Workflow Object Creation	78
Error In Custom Workflow Object Creation	78
Error In Updating Solution Specific Process Map	78
Error In Updating Custom Process Map	79
Error In Updating Taskman Policy File.....	79
Error In Updating Taskman Login Configuration.....	79
Error In Updating vwtaskman.xml File	79
Error In Updating taskman.properties File	79
Error In Updating Workplace Integration Files	80
BPF Deployment	81
Deploy BPF Web Application	81
IBM WebSphere 6.0	81
BEA WebLogic 8.1.X.....	82
JBOSS.....	82
Oracle Application Server/SQL Server.....	83
Deploy BPF Help	84
IBM WebSphere	84
BEA WebLogic	85
JBOSS.....	85

Oracle Application Server.....	85
Configure BPF Operations.....	86
Oracle.....	86
Microsoft SQL Server.....	86
DB2.....	87
Edit BPF Operations Component Queue.....	87
Verify BPF Operations Component.....	90
Configuration Tasks.....	91
Configure Stored Searches.....	91
Simple Search Configuration.....	91
Set Content Engine Security.....	92
Optional Configuration Tasks.....	93
Set Tuning Parameters.....	93
IBM WebSphere.....	93
BEA WebLogic.....	94
Index Content Engine Objects.....	94
BPF Operations Logging Modification.....	95
Overview.....	95
Extract XML File.....	95
Modify XML File.....	95
Add XML File Back.....	95
Restart Component Manager.....	95
Installation Validation.....	96
Troubleshooting.....	97
Integrate BPF with P8 Workplace.....	97
Edit Workplace Settings.....	97
Workplace Integration.....	97
Import Content Engine Base Objects.....	101
Import Content Engine Solution-Specific Objects.....	102
Base Or Solution-Specific Workflow Object Creation.....	102
Update Process Map.....	103
Create Workflow Subscription on the CE Case Management Documents	
Document Class.....	104
Test Workflow Subscription on the CE Case Management Documents Document	
Class.....	110
Launching the Workflow Subscription by Creating a New Instance.....	110
Launching the Workflow Subscription Manually.....	111
Troubleshooting the Workflow Subscription.....	114
Edit Taskman Policy.....	116
Edit taskman.properties.....	116
Add Taskman libraries (vwtaskman.xml).....	116
Edit Taskman Login Configuration.....	116
Configure User Tokens.....	117
Configure Toolbar Items.....	118
Edit BPF Web Application “web.xml”.....	118
Uninstall BPF.....	119
Uninstall BPF Web Application.....	119
BEA WebLogic.....	119
IBM WebSphere.....	119

JBOSS	120
Oracle Application Server.....	120
Remove All Deployment Information.....	120
IBM WebSphere	120
BEA WebLogic	120
JBOSS	120
Oracle Application Server.....	120
Uninstall BPF Explorer	121
Microsoft Windows	121
Uninstall BPF Web Application	121
Microsoft Windows	121
UNIX	121
Remove BPF from the environment.....	124
Delete Object Store In Content Engine	124
Delete Object Store Database.....	124
Delete DataSources	124
Delete Metastore Database.....	125
Upgrade BPF	125
BPF 3.5.x to BPF 3.6 (on P8 3.5.x).....	125
Before you upgrade BPF.....	125
To upgrade BPF	126
BPF Release Identification	131
Notices	133
Trademarks.....	134

Revision Log

Date	Revision
01/06/2009	Added information about accessing FileNet documentation and contacting customer support to "About This Document."
	Made various changes to meet IBM documentation requirements.
11/03/2008	<p>Added the following notes under Set Content Engine Security to clarify the topic:</p> <p>NOTE LDAP role groups refer to the LDAP groups that correspond to BPF Metastore roles.</p> <p>NOTE Restart the content engine application server after applying following permissions on BPF specific classes and objects.</p>
10/31/2008	ecmdb00677566 / PJ35212 - Removed "Miscellaneous > Inbasket Filters > Priority" configuration note for Oracle: no need to edit this setting anymore for Oracle implementations using the Case Management Sample Application manifest since the default value works correctly with Oracle.
	ecmdb00662027 / PJ35211 - Added the following note to the Upgrade BPF section:
	<p>NOTE It is possible for BPF-3.5.2 and BPF-3.6.0 instances to share the same instance of AE/Workplace as long as the following considerations are kept in mind:</p> <ul style="list-style-type: none"> • Access Roles are always read from the Application OS (the objectstore defined in BPF Explorer). • The combination of ObjectStore name in BPF Explorer and the Workplace preference name should be unique. If say you have created Workplace36 preference for BPF3.6 application with OS36 and Workplace352 preference for BPF3.5.2 application with OS352 (with access roles created in both the objectstores), using the Workplace36 preference name for BPF3.5.2 and vice versa makes the application fail to logon with error "You are not assigned to any Roles". • The ObjectStore name in bootstrap and BPF Explorer could be different in case of BPF 3.5.2 application but it should be same for BPF 3.6 application.
	ecmdb00553451 / PJ35210 - Changed step 10 of the upgrade procedures to handle a known issue with upgrading from BPF 3.5.2.
	<p>Old step 10:</p> <p>Import BPF manifest. To import case management manifest or metastore manifest exported in previous steps, see Import BPF Manifest.</p> <p>New step 10:</p> <p>If you are upgrading BPF 3.5.2 to BPF 3.6, the BPF Site Designer role needs to be defined. To enable Layout Designer, you must manually create a BPF Site Designer role and assign a user to that role in BPF Explorer. Refer to the <i>IBM FileNet Business Process Framework Web Application User Interface Guide</i> for more information about Layout Designer.</p>
	ecmdb00387310 / PJ35209 - Changed screenshot and added the following note to the sections for setting for CredentialsProtection/UserToken in the WcmApiConfig.properties files in both AE and BPF:

Date	Revision
	NOTE Setting Clear encoding for CredentialsProtection/UserToken results in nuisance logins from AE/Workplace and should be avoided. For practical purposes, Symmetric encoding should be used under all circumstances.
	ecmdb00371646 / PJ35208 - Added a note to the section for BPF Deployment > Deploy BPF Web Application > IBM WebSphere 6.0: NOTE Do NOT change the class loader mode from the default PARENT_FIRST setting. Changing this to PARENT_LAST prevents BPF from working.

About This Document

This document defines the procedures to perform an installation or upgrade of IBM® FileNet® Business Process Framework (BPF).

BPF is built on the FileNet P8 Platform and leverages the latest in Web technology. BPF provides rapid development of process-driven applications that enable Web browser access for process participants. The BPF Web Application is data driven and configurable using the BPF Explorer.

BPF is geared towards customers with the following requirements:

- Case management workflow processes
- Integration with the external systems
- Role based work distribution and work management requirements
- Push and pull mode of work distribution

BPF utilizes other more foundational products from the FileNet P8 Platform product suite. These other products do not specifically focus on the requirements listed above, and oftentimes cannot satisfy unique user interface needs using out-of-the-box functionality the way BPF can. The intent is to allow customers to quickly deploy workflow solutions at a lower cost by minimizing the needed customization effort.

BPF Installation/Upgrade Overview

Installation

The BPF Installation process is designed to copy or create the necessary BPF foundational components on a system that has already been installed with base FileNet products. The following FileNet products must be installed and operational before the BPF installation is started:

- FileNet Content Manager
- FileNet Business Process Manager
- FileNet Workplace (Application Engine)
- FileNet eForms Manager (optionally, if eForms integration from BPF is to be used)

NOTE Steps to integration eForms with BPF are not included in this document and are not part of the standard BPF Installation Package implementation. For information on how to perform this configuration see the document entitled *eForms Integration to BPF*.

At a high level, a typical BPF Installation process performs the following basic activities to deliver all the components needed for BPF use:

- Copies the BPF Explorer configuration tool to the Web application server
- Copies the BPF Web Application to the Web application server
- Creates the BPF Meta database tables needed to support BPF
- Configures the FileNet Content Engine (CE), Process Engine (PE), and Application Engine (AE) environment with BPF
- Copies a set of sample application configuration files (Case Management Sample) into the FileNet environment, if desired.

Installation versus Deployment

BPF is an application framework, which is used as a starting point to create custom Business Process Management applications through both configuration settings and by optionally adding code extensions. For most sites, the development system is the first environment where a BPF installation is performed. The typical BPF installation process is used to establish a copy of BPF for development purposes. The Case Management Sample Application is typically also installed, providing a working sample BPF application in which to test all BPF functionality for installation signoff.

On the development system, whoever is developing the BPF custom application changes configuration files and possibly adds code extensions to create a site-specific BPF Web Application.

For other environments (used for such activities as Unit Testing, User Acceptance Testing, Deployment Staging, Production, and so on), you should discuss with the customer whether a typical BPF installation is appropriate or if these environments have the completed BPF application deployed to them in a different manner than a typical BPF Installation. Some customers have a very specific process for staging and deploying web applications in their enterprise, and there might have to be some further consultation to help them plan how to deploy a BPF-based application per their process. Other customers without a deployment management process can have BPF installed into subsequent environments and then move the site-specific configuration and code extension files to the new environment manually. For more information on migrating BPF related configuration files between systems, see the BPF Explorer Handbook section entitled "Saving/Moving BPF Applications".

Upgrade

The definition of a BPF upgrade in the context of this document refers to re-installing a more recent release of BPF software while preserving all site-specific configuration files in the environment being upgraded. Depending on the versions of BPF being upgraded from/to, the Upgrade instructions might also reference steps that alter data structures that have changed between versions. Refer to the Upgrade section of this manual for instructions to upgrade BPF.

Typographical Conventions

This document uses the conventions in the following table to distinguish elements of text.

Convention	Usage
UPPERCASE	Environment variables, status codes, utility names.
Bold	Paths and file names, program names, clickable user-interface elements (such as buttons), and selected terms such as command parameters or environment variables that require emphasis.
<i>Italic</i>	User-supplied variables and new terms introduced in text
<italic>	User-supplied variables that replace everything between and including the angle bracket delimiters (< and >).
Monospace	Code samples, examples, display text, and error messages.

Access IBM FileNet documentation, compatibility matrices, and fix packs

To access documentation, compatibility matrices, and fix packs for IBM FileNet products:

1. Navigate to the Product Documentation for FileNet P8 Platform support page:
(<http://www.ibm.com/support/docview.wss?rs=3247&uid=swg27010422>).
2. Select a PDF or a Doc Link, whichever is appropriate.

Customer support

For information about contacting customer support:

1. Navigate to the FileNet Product Family support page:
(<http://www.ibm.com/software/data/content-management/filenet-product-family/support.html>).
2. Click **IBM FileNet Support Communications**, or search for a particular support topic under "Enter search terms".

Feedback

Your feedback helps us to provide quality information. Send your comments about this publication or any other IBM FileNet documentation by e-mail to comments@us.ibm.com. Be sure to include the name of the product, the version number of the product, and the name and part number of the book (if applicable). If you are commenting on specific text, include the location of the text (for example, a chapter and section title, a table number, a page number, or a help topic title).

Plan the Installation

Before you begin to install BPF:

- Ensure that you have a fully installed and operational FileNet P8 Platform environment including Content Engine, Process Engine, Application Engine, and, optionally, eForms.
- Retrieve updates to FileNet P8 documentation and software. To download the documents and updates from the IBM support page, see [Access IBM FileNet Documentation, Compatibility Matrices, and Fix Packs](#).
- Review the *IBM FileNet Business Process Framework Hardware and Software Requirements Guide* for information about BPF requirements that differ from FileNet P8 Platform requirements.
- Review the *IBM FileNet Business Process Framework Release Notes* for known issues and limitations and to check for fix packs to be applied.
- Review [Installation Planning Considerations](#) for a list of auxiliary information you might need to gather and a list of tasks you should perform before installing FileNet BPF. In addition, complete the following worksheets included in this section:
 - [BPF Prerequisite Worksheet](#)
 - [Platform Prerequisite Worksheet](#)
- Read through all steps in this document to become familiar with the tasks you must perform when installing BPF.

Installation Planning Considerations

Customer Liaison

Every installation requires a designated person from the customer site to act as a liaison to the service representative that is installing BPF. At a minimum, the liaison assists the service representative by responding to requests for information and facilitating work requests to other departments or groups. For example, the liaison facilitates LDAP account setup requests, DBA requests, and so on.

The customer liaison should know or be aware of customer procedures for

- Creating LDAP groups/users
- Submitting database creation/manipulation requests
- Allocating servers
- Logging on to and running FileNet Workplace
- Logging on to and running the Web Application console
- Submitting IT requests to provide Internet access for downloads, and so on

BPF Prerequisite Worksheet

The following BPF Prerequisite Worksheet is a critical step in preparing for your BPF installation. The worksheet lists the main servers involved in the BPF installation and provides space to enter the collected information, which is necessary to complete the installation. In some cases, these servers might be one and the same; for example, the BPF Admin Workstation and the CE Server might be on the same server.

Some of the prerequisite fields on the worksheet can be collected prior to the start of the installation, and other information is determined and noted on the worksheet as you perform the installation. Review all of the fields, and fill in as much as possible in advance.

The goal of the worksheet is to have a complete and accurate set of site parameters when you are finished with the installation. This completed worksheet should be left with the customer and is a valuable reference when configuration issues or questions arise, or as a reference when performing future BPF installations or upgrades.

References in this document to a BPF Prerequisite Worksheet field are shown like this: **{item}**. These items are referenced as part of the BPF installation procedure.

The worksheet is arranged in the following manner: Server function is in the title row and additional information associated with that server follows.

AE Server		
Server for the FileNet Application Engine.		
	Web Application Service Type/Version (example: WebLogic 8.1 SP2)	
	Operating System Type/Version	
	FileNet P8 Platform Release Version	
	Client Browser Type/Version	
	BPF Release Version Release number for the BPF release to be installed.	
	Machine Usage Production, QA, Development, and so on.	
	BPF Media Staging Folder {staging folder}	
	Machine Name {web application server}	
	Workplace URL {workplace url}	
	AE to PE Router Name {ae pe router name} Name of router running on AE server that connects to the PE.	
	BPF Installation Home {install.home} Home folder path for wfutil and BPF Operations. Folder created during BPF deployment. Environment Property: Build - install.home	
	Web Application Name {web application name} (example: bpf)	
	BPF Port Number {web port} Port number for the BPF Web Application. NOTE Consult your Web Application service for the correct port number.	
BPF Admin Workstation		
Administration workstation for the BPF Explorer application. This application is the utility for modifying the BPF meta database (BPF configuration).		
	Machine Name {bpf admin workstation}	
	Operating System Type/Version	
	Machine Usage Production, QA, Development, and so on.	
BPF Metadata Server		
Server for the BPF Metastore relational database.		
	Machine Name {meta data server}	
	Operating System Type/Version	

	Database Type/Version	
	Machine Usage Production, QA, Development, and so on	
	Database Administrative User {meta admin user} Database Administrative Password {meta admin password} An administrator account needed to access the Metastore Provider. For more information on this user account in both Oracle and SQL Server, see below under Database Security Considerations .	
	Metastore User {meta user} Metastore Password {meta password} The account created for read/write access to the BPF Metastore database. The BPF metastore creation scripts create this user and grant privileges. For more information on this user account in both Oracle and SQL Server, see below under Database Security Considerations .	
	For Oracle implementation: Database System ID {meta database sid} For SQL implementation: Database Name {meta database}	
	{meta datasource} Suggested name: Bp8MetadataDS .	
	{meta data server}	
	{meta connection pool}	
	{class path}	
	{meta authentication name} Suggested name: Bp8MetaAlias .	
	CE Server Server for the Content Engine.	
	Machine Name {ce server}	
	Operating System Type/Version	
	Database Type/Version	
	FileNet P8 Platform Version	
	Machine Usage Production, QA, Development, and so on.	

	Object Store Display Name {os display name} Name of BPF object store in CE. Optionally use an existing object store, or create a new one using the FileNet P8 Platform Enterprise Manager (EM). Refer to the FileNet P8 Platform documentation for the creation procedure details. Suggested object store name: <i>BPF Object Store</i> .	
	Object Store Symbolic Name {os symbolic name} Symbolic name of BPF object store in CE.	
	Administrative User {ce admin user} An account with CE administrator privileges for upgrading existing CE objects.	
	Administrative Password {ce admin password} Password for {ce admin user}	
PE Data Server Server for the Process Engine database.		
	Machine Name {pe data server}	
	Operating System Type/Version	
	Database Type/Version	
	Machine Usage Production, QA, Development, and so on.	
	Database Name {pe database} Database used by PE. Database name can be determined by looking at Image Services System Configuration Editor (... \fnsw\bin\fn_edit.exe) on the Relational Databases tab and RDB Objects sub-tab. Look at the location for object db_name or fn_data; possibly named indexdb.	
	For Oracle implementation: Database System ID {pe database sid} For SQL implementation Database Name {pe database} .	
	Process Engine User {pe user} Process Engine Password {pe password} <i>Oracle:</i> System privileges needed: CREATE SESSION. Object privileges needed: SELECT on all F_SW schema tables, SELECT on all F_SW schema views. <i>SQL Server:</i> Roles needed: Public and db_datareader	
	{pe router url}	
	{pe connection pool}	

	{pe datasource}	
	{pe class path}	
	{pe authentication name} Suggested name: Bp8PEAlias .	
PE Server Server for the Process Engine.		
	Machine Name	
	Operating System Type/Version	
	FileNet P8 Platform Version	
	Machine Usage Production, QA, Development, and so on.	
	Administrative User {pe admin user} An account with PE administrator privileges for upgrading the workflow map.	
	Administrative Password {pe admin password} Password for {pe admin user}.	

Platform Prerequisite Worksheet

General Work Conditions	
Single customer resource designated to assist the service representative installing BPF. Enter name and contact info.	
Able to work from single work machine and remotely access servers. Remote access can be accomplished by using tools such as VNC and PC Anywhere. Enter access details.	
Electrical outlets available next to work machine. Used for laptop, cell phone charging, and so on.	
Land line (phone) available next to work machine.	
Able to access Internet from server on customer network. Internet access used for the following purposes: <ul style="list-style-type: none"> Download BPF installation package and fix packs Access e-mail 	
Able to create folders on Internet server. Used for storing downloaded material. Enter folder location.	
Able to transfer files from designated Internet server to AE and CE server. Enter method.	
FileNet P8 Platform Function and Access	

Object store to be used by BPF can be browsed from Workplace without error. Confirm CE is working.	
Workplace Tasks can be accessed without error. Confirm CE is working.	
<p>P8 Workplace administrator access sufficient for accessing the following:</p> <ul style="list-style-type: none"> • Admin > Site Preferences > General • Admin > Site Preferences > Bootstrap • Admin > Site Preferences > Access Roles • Admin > Site Preferences > Refresh • Admin > Process Configuration Console • Author > Advanced Tools > Search Designer • Author > Advanced Tools > Process Designer 	
Process Task Manager on AE server can be run. Might be on Start menu (if on Windows®), but is usually run from FileNet/Router directory.	
Database Access	
<p>DBA access for creating new database.</p> <p>Scripts need to be adjusted and run for creating BPF Metastore database. This is a generally static database used for storing BPF configuration information.</p>	
<p>DBA access to PE database.</p> <p>A new user needs to be created for read-only access to the PE database. Also, in some cases, some views might be needed to be re-created to work around a case sensitivity issue (Oracle only).</p>	
LDAP Access	
New LDAP groups might need to be created.	
New LDAP users might need to be created.	
CE Access	
Able to run Enterprise Manager.	
Able to set security on CE objects.	
<p>Able to reboot CE server.</p> <p>Rebooting might be needed in some cases to resolve problems.</p>	
AE Access	
<p>Able to logon to Web Application service administrator console.</p> <p>NOTE The BPF Web Application needs to be installed on the same machine where Workplace is installed.</p>	

Able to create JDBC DataSources.	
Able to restart BPF Web Application.	
Able to restart Web Application service.	
Able to reboot AE server. Rebooting might be needed in some cases to resolve problems.	
Misc.	
Need to have file privileges for installing BPF Explorer. (Installed using InstallShield setup. Can be installed on any machine with ODBC access to BPF Metastore.)	
Ability to remove carriage returns (^M) in various text files on non-Windows machines. Depending on the UNIX® platform, use any appropriate utility like dos2unix or dos2aix.	
Ability to edit text files, including XML files. On UNIX machines, the capability to validate an XML file is necessary. This can be accomplished using Netscape Navigator on UNIX servers.	

Database Security Considerations

This section is devoted primarily to clarifying the difference between the BPF **{meta admin user}** and the BPF **{meta user}** RDBMS accounts as referenced in the Prerequisite Worksheet below.

The BPF install process requires two different RDBMS user accounts as described in the following paragraphs.

The **{meta admin user}** is an administrator account needed to access the Metastore Provider normally during database creation *only*.

Oracle: The SYSDBA privilege is required to create new database (assuming the BPF tablespaces are to be located in a new database). Roles needed: DBA. **NOTE** In many cases, it is necessary to ask a DBA who has access to an account with these privileges to perform the tasks of the **{meta admin user}** for you during the course of the install. Many companies do not divulge the passwords for accounts with this level of privilege to installation personnel. In such circumstances, consult with the customer and have one of their DBAs run these scripts for you using any account they like (as long as it has the DBA Role with the SYSDBA Privilege as indicated above). See above under [Customer Liaison](#).

SQL Server: System Administrators server role.

The **{meta user}** is an administrator account needed to access the Metastore Provider on an ongoing basis by both the BPF Web Application and BPF Explorer.

This account needs to have read/write access to the BPF Metastore database. The BPF metastore creation scripts create this user and grant privileges.

Oracle:

a. Roles: CONNECT

b. System Privileges: CREATE SESSION (this comes with the CONNECT Role)

c. Object Permissions: either EXECUTE (for stored procedures) or INSERT, UPDATE, DELETE, and SELECT permission on all Bp8 objects. If your schema is named Bp8 and you are using the Bp8 user account (schema owner) as your **{meta user}**, then your **{meta user}** schema automatically has these permissions. If you are using another account (other than schema owner) as your **{meta user}**, then you must develop and run scripts to grant all of the above privileges on *each* of the objects in the schema to your **{meta user}**. For example:

```
GRANT INSERT, UPDATE, DELETE, SELECT ON application_settings TO Bp8;
```

This needs to be done individually for each table, view, stored procedure, and so on, since the “ANY” privileges apply to the whole database and not just an individual schema – and there is no separate privilege to grant “SELECT” (for example) on all objects in a single schema.

The default name of the BPF Oracle **{meta user}** and schema is “BP8”. If you decide to use any other name for your **{meta user}** and schema in Oracle, you then also need to edit the copy of **Bp8sql.xml** used by BPF Explorer (and located in the home directory of BPF Explorer itself [in the same directory as **BPF Explorer.msc**]) so as to change the following entry at the beginning of the file to reflect your change

```
<ORACLE>alter session set current_schema={meta user}</ORACLE>
```

Assuming you choose to use it (the most common scenario), you also need to reflect this change throughout your **Step0.oracle.Bp8.Metabase.1.0.sql** file before running it (see below under [Create BPF Metastore, Oracle](#)), and then change the following line

```
ALTER SESSION SET CURRENT_SCHEMA={meta user};
```

at the beginning of the following SQL scripts before running them

Step1.oracle.Bp8.Metabase.1.0.sql

Step2.oracle.Bp8.Metabase.1.0.sql

Step3.oracle.Bp8.Metabase.1.0.sql

SQL Server: public and db_owner roles.

LDAP Security Considerations

The Case Management Sample Application maps its BPF Roles to Workplace Access Roles and then maps these Workplace Access Roles to existing LDAP **users** or groups. Users and/or Groups that can be mapped to the following Workplace Access Roles must therefore be prior to the BPF installation in your LDAP repository:

- sue
- joe
- ana
- mark

NOTE The names of your LDAP Users and/or Groups do not need to reflect or resemble the names of the Workplace Access Roles to which they are to be assigned. But since it often takes considerable lead-time to arrange for the creation of new LDAP Users and/or Groups, it is recommended that you make arrangements to have this done well before you begin the actual installation.

JDBC Driver Requirements

The JDBC drivers required to support BPF must be supplied by the customer in accordance with the *IBM FileNet P8 3.6 Hardware and Software Requirements* document and arrangements need to be made with the customer ahead of time to make sure that they are available prior to installing BPF.

Environment Configuration

Configure Users/Groups

Although there are a number of ways to set up the security authentication and authorization for BPF applications, the following describes the method of setup to support the BPF Case Management Sample Application.

The Case Management Sample Application uses Workplace Access Roles and maps them to existing LDAP **users** or groups. There are four BPF Roles defined to support the Case Management Sample Application that must be defined in Workplace Access Roles:

- Supervisor (Add “sue” LDAP user)
- Indexer (Add “joe” LDAP user)
- Reviewer (Add “mark” LDAP user)
- Approver (Add “ana” LDAP user)
- BPF Site Designers (Add “sue” LDAP user)

NOTE In BPF, role membership is managed through LDAP security group membership. BPF Roles are linked to Workplace Access Roles, which are linked to LDAP Users or Groups.

For reasons of performance enhancement, it is strongly recommend that you use Workplace access roles (BPF metastore setting “Enable Access Roles” set to true) instead of direct LDAP integration, especially in cases where the LDAP directory is large or complex (containing many levels of nested groups/folders).

1. Within Workplace Site Preferences, define Workplace Access Roles corresponding to the BPF Roles mentioned above.
 - a. Click Admin > **Site Preferences**.
 - b. Click **Access Roles**.
 - c. Click **Add Role**.
 - d. Name the new role appropriately, such as Indexer.
 - e. Remove all default added role members using the **Delete Role** button next to the access role.
 - f. Select either User or Groups to display the appropriate list.
 - g. Type one or more characters for the beginning of the user or group names to search for.
 - h. Click Search. After a brief delay, the matching names are displayed.
 - i. Click Accept. The Site Preferences page opens again, with the new user or group name listed for the role under Allowed Access.
 - j. Add more access roles as appropriate.
 - k. Click **Apply**.
 - l. Make sure you have mapped just created Access Role to appropriate metastore security profile.

Copy CDROM Contents to Target Machine

1. Mount CDROM device to a folder on target machine and copy the contents to the staging folder.

The following table describes the BPF release software contents found on the CDROM.

Folder/File		Description
{root}	BPF_Installation_Guide.pdf	Electronic copy of this Installation Guide document.
	version.txt	Contains BPF build version information.
admin/		Contains the target files for BPF Explorer, which is installed and executed from an administrative Windows desktop.
	filenet_bpf_explorer_setup.exe [Windows version]	BPF Explorer setup package.
documentation/		Standard documentation for BPF and its related components in the form of a Web site.
	BPF_help/	Directory that contains the BPF help. You can read the help from this directory, or copy and deploy/add it on an application server as a Web site.
	BPF_help.war	Compressed version of the BPF Help that is required for installation on IBM WebSphere® application servers.
	version.txt	File that identifies the product software version associated with the BPF help, the documentation and Java™ reference documentation build numbers, and the build date.
	readme.htm	
misc/		This folder contains sample code and Starter Solution demos.
	solutions/	This folder contains library of sample configurations. The subdirectories below are different configuration templates.
	base/config/	Base configuration
	BPF_base.xml	Metastore base configuration
	ce_base.xml	CE base configuration
	qcreate_base.xml	Base workflow queue configuration
	case_management/	Case Management sample configuration
	CaseManagement.pep	The workflow map
	qcreate_cm.xml	CM workflow queue configuration

Folder/File		Description
	bp8_cm.xml	BPF CM Metastore manifest
	ce_cm.xml	CE CM manifest
	Auth For Work.doc JaneGibbonsReceipts.tif ExpenseForm.xls Master Agreement.pdf	Sample documents
	p8LeftLogOnBar.JPG logon_logo.gif	Web application logo and splash screen
	components/	
	workplace/Bp8ViewActions.jsp	P8 Workplace Integration Servlet extensions and sample configurations
	wfutil/	BPF wfutil program files
setup/		This folder contains the BPF Web Application Installer files.
	BPF_installer.jar	Installer JAR file
	AIXfilenet_BPF_setup.exe	IBM AIX® BPF Web Application setup package
	HPUXfilenet_BPF_setup.exe	HPUX BPF Web Application setup package
	SOLARISfilenet_BPF_setup.exe	SOLARIS BPF Web Application setup package
	WINDOWSfilenet_BPF_setup.exe	Windows BPF Web Application setup package
	BPF_silent_input.txt	Silent Installation Resource File.
SQL/		Contains BPF Metastore SQL Scripts. In some cases, there is a prerequisite to update one or more of the database schemas. These scripts are typically executed by a site DBA.
	Step0.oracle.Bp8.Metabase.1.0.SQL Step1.oracle.Bp8.Metabase.1.0.SQL Step2.oracle.Bp8.Metabase.1.0.SQL Step3.oracle.Bp8.Metabase.1.0.SQL	Oracle version
	Step1.mssql.Bp8.Metabase.1.0.SQL Step2.mssql.Bp8.Metabase.1.0.SQL Step3.mssql.Bp8.Metabase.1.0.SQL	Microsoft® SQL version

Make Staging Folder Accessible

The staging folder needs to be accessible from the various servers. The table below identifies which servers require access to specific sub folders under the staging folder.

Server	Folder
{bpf admin workstation}	{staging folder}/misc {staging folder}/admin
{meta data server}	{staging folder}/sql
{web application server}	{staging folder}/misc {staging folder}/setup

1. Share the original staging folder or copy the staging folder to other servers as indicated above (using ftp or some other tool of your choice).
2. If a copy is performed to other servers, mark down on the worksheet for **{staging folder}** the additional staging folders created.

Grant Access to Process Engine Database

Grant the appropriate database role membership. See the “Process Engine User “on the prerequisite worksheet.

Create JDBC DataSource – BPF Metastore

NOTE The XA driver type is not supported.

Create DataSource

Create the JDBC DataSource as follows:

BEA WebLogic/Microsoft SQL Server

1. Log into BEA WebLogic console using IE:
<http://{web application server}:7001/console>.
2. Configure connection pool:
 - a. Select **Services > JDBC > Connection pools**.
 - b. Click **Configure a new JDBC Connection Pool....**
 - c. Select Database Type: **MS SQL Server**.
 - d. Select Database Driver: ***BEA's MS SQL Server Driver (Type 4) Versions: 7.0,2000**
 - e. Click **Continue**.
 - f. Determine the **{meta connection pool}** name and record on your worksheet. Suggested name: **Bp8MetadataPool**.
 - g. Select Name: **{meta connection pool}**.
 - h. Enter Database name: **{meta database}**.
 - i. Enter Host name: **{meta data server}**
 - j. Enter Port: **1433**.

- k. Enter Database user name: **{meta user}**
- l. Enter Database password: **{meta password}**
- m. Click **Continue**.
- n. Select the **Test Driver Configuration**.

You should receive the Connection successful message.

- o. Select **Create** and **Deploy**.
3. Create JDBC DataSource:
- a. Select **Services > JDBC > DataSources**.
 - b. Select **Configure a new JDBC DataSource....**
 - c. Determine the **{meta datasource}** name and record on your worksheet. Suggested name: **Bp8MetadataDS**.
 - d. Enter name: **{meta datasource}**.
 - e. Enter JNDI name: **{meta datasource}**.
- NOTE** The DataSource name and the DataSource JNDI name must be the same.
- f. Enter Honor Global Transactions: **selected**.
 - g. Enter Emulate Two-Phase commit: **unselected**.
 - h. Click **Continue**.
 - i. Select **{meta connection pool}**.
 - j. Select **Continue**.
 - k. Select **Create**.

BEA WebLogic/Oracle

- 1. Log into BEA WebLogic console using IE:
<http://{web application server}:7001/console>.
- 2. Configure Connection Pool:
- 3. Select **Services > JDBC > Connection pools**.
 - a. Click **Configure a new JDBC Connection Pool....**
 - b. Select Database Type: **Oracle**.
 - c. Select Database Driver: **BEA's Oracle Driver (Type 4)**
 - d. Click **Continue**.
 - e. Determine the **{meta connection pool}** name and record it on your worksheet. Suggested name: **Bp8MetadataPool**.
 - f. Select Name: **{meta connection pool}**.
 - g. Enter Database name: **{meta database}**.
 - h. Enter Host name: **{meta data server}**
 - i. Enter Port: 1521 (default).
 - j. Enter Database user name: **{meta user}**

- k. Enter Database password: **{meta password}**
- l. Click **Continue**.
- m. Modify **Properties** > **SID** if necessary.
- n. Select the Test Driver Configuration.

You should receive the Connection Successful message.

- o. Select **Create** and **Deploy**.
4. Create JDBC DataSource:
- a. Select **Services** > **JDBC** > **DataSources**.
 - b. Select **Configure a new JDBC DataSource....**
 - c. Determine the **{meta datasource}** name and record on your worksheet. Suggested name: **Bp8MetadataDS**.
 - d. Enter name: **{meta datasource}**.
 - e. Enter JNDI name: **{meta datasource}**.
- NOTE** The DataSource name and the DataSource JNDI name must be the same.
- f. Enter Honor Global Transactions: **selected**.
 - g. Enter Emulate Two-Phase commit: **unselected**.
 - h. Click **Continue**.
 - i. Select **{meta connection pool}**.
 - j. Select **Continue**.
 - k. Select **Create**.

IBM WebSphere/Oracle

- 1. Logon to WebSphere Administrative Console: **http://{web application server}:9060/ibm/console**.
- 2. Create JDBC Provider as follows:
 - a. Record Oracle JDBC Driver as **{meta connection pool}** on worksheet.
 - b. Click on **Resources** > **JDBC Providers**.

Skip these sub-steps if **{meta connection pool}** already exists. Otherwise, do the following:

- c. Click **New**.
- d. Select the database type: **Oracle**.
- e. Select the provider type: **{meta connection pool}**.
- f. Select the implementation type: **Connection pool DataSource**.
- g. Click **Next**.
- h. Record the Class path as the **{class path}** on the worksheet.
- i. Click **Apply**.
- j. Save changes to master configuration.

- k. Click on **Environment** > **WebSphere Variables**.
 - l. Verify that any environment variables used in **{class path}** is set correctly.
 3. Create Initial JDBC DataSource:
 - a. Click on **Resources** > **JDBC Providers**.
 - b. Click on the appropriate provider: **{meta connection pool}**.
 - c. Click **DataSources** under Additional Properties.
 - d. Click **New**.
 - e. Enter the Name for the DataSource. Record this name on your worksheet as **{meta datasource}**.
 - f. Enter JNDI name: **{meta datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- g. Enter Description: **{meta datasource}**.
 - h. Enter URL : **JDBC:oracle:thin:@{meta data server}:1521:{meta database sid}**.

NOTE If URL does not work for any reason try: **JDBC:oracle:thin@{TNS Descriptor}**.

For example:

```
JDBC:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=p8demo35)(PORT=1521))))(CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=Bp8.Metastore)))
```

- i. Click **Apply**.
 - j. Save changes to master configuration.
 4. Create Authentication Entry as follows:
 - a. Click on **Resources** > **JDBC Providers**.
 - b. Click on the appropriate provider: **{meta connection pool}**.
 - c. Click **DataSources** under Additional Properties.

NOTE Do not select DataSources (Version 4).
 - d. Click **{meta datasource}**.
 - e. Click **J2EE Connector Architecture (J2C) authentication data entries** under Related Items.
 - f. Click **New**.
 - g. Enter Alias name. Enter on your worksheet as **{meta authentication name}**.
 - h. Enter User ID: **{meta user}**.
 - i. Enter Password: **{meta password}**.
 - j. Click **Apply**.
 - k. Save changes to master configuration.
 5. Set JDBC DataSource Authentication:
 - a. Click on **Resources** > **JDBC Providers**.

- b. Click on the appropriate provider: **{meta connection pool}**.
 - c. Click **DataSources** under Additional Properties.
 - d. Click **{meta datasource}**.
 - e. Select **Component-managed authentication alias: {meta authentication name}**.
 - f. Click **Apply**.
 - g. Save changes to master configuration.
6. Test the connection:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{meta connection pool}**.
 - c. Click **DataSources** under Additional Properties.
 - d. Select the checkbox for **{meta datasource}**.
 - e. Click **Test Connection**.

A success message should be displayed.

IBM WebSphere/SQL Server

1. Logon to the WebSphere Administrative Console:
<http://{web application server}:9060/ibm/console>.
2. Create JDBC Provider:
 - a. Click on **Resources > JDBC Providers**.

Skip these sub-steps if **{meta connection pool}** already exists. Otherwise, do the following:

- b. Click **New**.
 - c. Select the database type: **SQL Server**.
 - d. Select the provider type: **{meta connection pool}**.
 - e. Select the implementation type: **Connection pool DataSource**.
 - f. Click **Next**.
 - g. Click **Apply**.
 - h. Save changes to master configuration.
3. Create Initial JDBC DataSource:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{meta connection pool}**.
 - c. Click **DataSources** under Additional Properties.

NOTE Do not select DataSources (Version 4).
 - d. Click **New**.
 - e. Enter the name for the DataSource. Suggested name: **Bp8MetadataDS**. Record this name on your worksheet as **{meta datasource}**.

- f. Enter JNDI name: **{meta datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- g. Enter Description: **{meta datasource}**.
- h. Enter Database name: **{meta database}**.
- i. Enter Server name: **{meta data server}**.
- j. Click **Apply**.
- k. Save changes to master configuration.

4. Create Authentication Entry:

- a. Click on **Resources > JDBC Providers**.
- b. Click on the appropriate provider: **{meta connection pool}**.
- c. Click **DataSources** under Additional Properties.
- d. Click **{meta datasource}**.
- e. Click **J2EE Connector Architecture (J2C) authentication data entries** under Related Items.
- f. Click **New**.
- g. Enter Alias name: **{meta authentication name}**.
- h. Enter User ID: **{meta user}**.
- i. Enter Password: **{meta password}**.
- j. Click **Apply**.
- k. Save changes to master configuration.

5. Set JDBC DataSource Authentication:

- a. Click on **Resources > JDBC Providers**.
- b. Click on the appropriate provider: **{meta connection pool}**.
- c. Click **DataSources** under Additional Properties.
- d. Click **{meta datasource}**.
- e. Select **Component-managed authentication alias: {meta authentication name}**.
- f. Click **Apply**.
- g. Save changes to master configuration.

6. Test the connection:

- a. Click on **Resources > JDBC Providers**.
- b. Click on the appropriate provider: **{meta connection pool}**.
- c. Click **DataSources** under Additional Properties.
- d. Select the Checkbox for **{meta datasource}**.
- e. Click **Test Connection**.

A success message should be displayed.

IBM Websphere/DB2

BPF metastore is only supported with MS SQL Server and Oracle Database. Metastore database on DB2® is not supported in this release.

JBOSS/SQL Server

1. Create DataSource entry.

- a. In the JBOSS directories, copy **msSQL-ds.xml** from **...\docs\examples\jca** to **...\server\default\deploy** (if it does not already exist).
- b. In the **...\server\default\deploy\msSQL-ds.xml** file, add the information below under **<datasources>**. Replace worksheet items appropriately. For example, replace **{meta datasource}** with **Bp8MetadataDS**.

```
<datasources>
  <local-tx-datasource>
    <jndi-name>{meta datasource}</jndi-name>
    <connection-url>
      JDBC:jtds:SQLserver://{meta data
server}:1433;DatabaseName={meta database}
    </connection-url>
    <driver-class>net.sourceforge.jtds.JDBC.Driver</driver-class>
    <user-name>{meta user}</user-name>
    <password>{meta password}</password>
    <metadata>
      <type-mapping>MS SQLSERVER2000</type-mapping>
    </metadata>
  </local-tx-datasource>
</datasources>
```

2. Place driver in lib directory:

- a. Download jtds-1.0.2.jar from SourceForge.net (<http://sourceforge.net>).
- b. Place the jar file in **...\server\default\lib**.

JBOSS/Oracle

1. Create DataSource entry.

- a. In the JBOSS directories, copy **oracle-ds.xml** from **...\docs\examples\jca** to **...\server\default\deploy** (if it does not already exist).
- b. In the **...\server\default\deploy\oracle-ds.xml** file, add the information below under **<datasources>**.

Replace worksheet items appropriately. For example, replace **{meta datasource}** with **Bp8MetadataDS**.

```
<datasources>
```



```
<local-tx-datasource>
  <jndi-name>{meta datasource}</jndi-name>
  <connection-url>
    JDBC:oracle:thin:@{meta data server}:1521:{meta database}
  </connection-url>
  <driver-class>oracle.jdbc.driver.OracleDriver</driver-class>
  <user-name>{meta user}</user-name>
  <password>{meta password}</password>
</local-tx-datasource>
</datasources>
```

2. Place driver in lib directory.
 - a. Download [ojdbc14.jar](#) from Oracle.
 - b. Place the jar file in `...\server\default\lib`.

Oracle Application Server/SQL Server

1. Start the Oracle Application Server and from the Oracle Admin Console, create a unique OC4J Instance to use with your BPF application (*assuming you do not already have one created for this purpose*).

CAUTION: Do not share this instance with Workplace, BPF or any other application using common XML parsing jar APIs otherwise you might encounter XML/XSL errors in Workplace integration with BPF or within BPF due to the class loader implementation used by OAS.)

2. Click the **OC4J Instance** you created.
3. Click **Administration** tab.
4. Click **DataSources**.
5. Click **Create** button.
6. Enter the following information for MetaStore DataSource:
 - a. Name: Enter the name of the **{meta data source}**: for example, Bp8MetadataDS
 - b. Data Source Class: **com.evermind.sql.DriverManagerDataSource**
 - c. **JDBCURL:jdbc:datadirect:sqlserver://<database-ServerName>:<database-port>;DatabaseName=<databaseName>**
 - d. JDBC Driver: **com.ddtek.jdbc.sqlserver.SQLServerDriver**
 - e. Username: **{meta user}**
 - f. Under option **Use Cleartext Password**, Select Password: **Password {meta user password}**.
 - g. Location: **{meta data source}**: for example, Bp8MetadataDS
 - h. Transactional(XA) Location: **{meta data source}**: for example, Bp8MetadataDS
 - i. EJB Location: **{meta data source}**: for example, Bp8MetadataDS
7. Click Apply to create the data source.

Oracle Application Server/Oracle

1. Click the **OC4J Instance** you previously created.
2. Click **Administration** tab.
3. Click **Data Sources**.
4. Click **Create** button.
5. Enter the following information for Metastore DataSource:
 - a. Name: Enter the name of the **{meta data source}**: for example, Bp8MetadataDS
 - b. Data Source Class: **com.evermind.sql.DriverManagerDataSource**
 - c. JDBC URL: **jdbc:oracle:thin:@//<database-Servername>:<database-port>/<Metastore database SID>**
 - d. JDBC Driver: **oracle.jdbc.driver.OracleDriver**
 - e. Username: **{meta user}**
 - f. Under option **Use Cleartext Password**, Select Password: **Password {meta user password}**.
 - g. Location: **{meta data source}**: for example, Bp8MetadataDS
 - h. Transactional(XA) Location: **{meta data source}**: for example, Bp8MetadataDS
 - i. EJB Location: **{meta data source}**: for example, Bp8MetadataDS
6. Click **Apply** to create the data source.

Create JDBC DataSource – Process Engine

Create DataSource

BEA WebLogic/Microsoft SQL Server

1. Log into BEA WebLogic console using IE: **http://{web application server}:7001/console**.
Configure connection pool as follows:
 - a. Select **Services > JDBC > Connection pools**.
 - b. Click **Configure a new JDBC Connection Pool....**
 - c. Select Database Type: **MS SQL Server**.
 - d. Select Database Driver: ***BEA's MS SQL Server Driver (Type 4) Versions: 7.0,2000**
 - e. Click Continue.
 - f. Determine the {pe connection pool} name and record on your worksheet. Suggested name: Bp8ProcessPool.
 - g. Enter Name: {pe connection pool}.
 - h. Enter Database name: {pe database}.
 - i. Enter Host name: {pe data server}
 - j. Enter Port: 1433.
 - k. Enter Database user name: {pe user}

- l. Enter Database password: {pe password}
- m. Click Continue.
- n. Select the Test Driver Configuration.

You should receive the Connection successful message.

- o. Select **Create** and **Deploy**.
2. Create JDBC DataSource:
 - a. Select **Services > JDBC > DataSources**.
 - b. Select **Configure a new JDBC DataSource....**
 - c. Determine the {pe datasource} name and record on your worksheet. Suggested name: **Bp8ProcessDS**.
 - d. Enter name: {pe datasource}.
 - e. Enter JNDI name: {pe datasource}.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- f. Enter Honor Global Transactions: **selected**.
- g. Enter Emulate Two-Phase commit: **unselected**.
- h. Click **Continue**.
- i. Select {pe connection pool}.
- j. Select **Continue**.
- k. Select **Create**.

BEA WebLogic/Oracle

1. Log into BEA WebLogic console using IE: **http://{web application server}:7001/console**.
2. Configure Connection Pool:
 - a. Select **Services > JDBC > Connection pools**.
 - b. Click **Configure a new JDBC Connection Pool**.
 - c. Select Database Type: **Oracle**.
 - d. Select Database Driver: **BEA's Oracle Driver (Type 4)**
 - e. Click **Continue**.
 - f. Determine the {pe connection pool} name and record on your worksheet. Suggested name: **Bp8ProcessPool**.
 - g. Enter Name: {pe connection pool}.
 - h. Enter Database name: {pe database}.
 - i. Enter Host name: {pe data server}
 - j. Enter Port: **1521**.
 - k. Enter Database user name: {pe user}
 - l. Enter Database password: {pe password}

- m. Click **Continue**.
- n. Modify **Properties** > **SID** if necessary.
- o. Select the Test Driver Configuration.

You should receive the Connection Successful message.

- p. Select **Create** and **Deploy**.
3. Create JDBC DataSource:
- a. Select **Services** > **JDBC** > **DataSources**.
 - b. Select **Configure a new JDBC DataSource....**
 - c. Determine the **{pe datasource}** name and record on your worksheet. Suggested name: **Bp8ProcessDS**.
 - d. Enter name: **{pe datasource}**.
 - e. Enter JNDI name: **{pe datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- f. Enter Honor Global Transactions: **selected**.
- g. Enter Emulate Two-Phase commit: **unselected**.
- h. Click **Continue**.
- i. Select **{pe connection pool}**.
- j. Select **Continue**.
- k. Select **Create**.

IBM WebSphere/Oracle

- 1. Logon to WebSphere Administrative Console: **http://{web application server}:9060/ibm/console**.
- 2. Create JDBC Provider:
 - a. Record Oracle JDBC Driver as **{pe connection pool}** on worksheet.
 - b. Click on **Resources** > **JDBC Providers**.
Skip this sub-step if **{pe connection pool}** already exists.
Otherwise, do the following:
 - c. Click on **Resources** > **JDBC Providers**.
 - d. Click **New**.
 - e. Select the database type: **Oracle**.
 - f. Select the provider type: **{pe connection pool}**.
 - g. Select the implementation type: **Connection pool DataSource**.
 - h. Click **Next**.
 - i. Record the Class path as the **{class path}** on the worksheet.
 - j. Click **Apply**.
 - k. Save changes to master configuration.

- I. Click on **Environment** > **WebSphere Variables**.
 - m. Verify that any environment variables used in **{class path}** is set correctly.
 3. Create Initial JDBC DataSource as follows:
 - a. Click on **Resources** > **JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under Additional Properties.
 - d. Click **New**.
 - e. Enter the Name for the DataSource. Suggested name: **Bp8ProcessDS**. Record this name on your worksheet as **{pe datasource}**.
 - f. Enter JNDI name: **{pe datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- g. Enter Description: **{pe datasource}**.
 - h. Enter URL :
JDBC:oracle:thin:@{pe data server}:1521:{pe database sid}.

NOTE If URL does not work for any reason try:

JDBC:oracle:thin@{TNS Descriptor}.

For example:

```
JDBC:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=p8demo35)(PORT=1521)))(CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=Bp8.Metastore)))
```

- i. Click **Apply**.
 - j. Save changes to master configuration.
 4. Create Authentication Entry as follows:
 - a. Click on **Resources** > **JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under Additional Properties.
 - d. Click **{pe datasource}**.
 - e. Click **J2EE Connector Architecture (J2C) authentication data entries** under Related Items.
 - f. Click **New**.
 - g. Enter Alias name. Suggested name: **Bp8ProcessAlias**. Enter on worksheet as **{pe authentication name}**.
 - h. Enter User ID: **{pe user}**.
 - i. Enter Password: **{pe password}**.
 - j. Click **Apply**.
 - k. Save changes to master configuration.
 5. Set JDBC DataSource Authentication as follows:
 - a. Click on **Resources** > **JDBC Providers**.

- b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Click **{pe datasource}**.
 - e. Select **Component-managed authentication alias: {pe authentication name}**.
 - f. Click **Apply**.
 - g. Save changes to master configuration.
6. Test the connection as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Select the Checkbox for **{pe datasource}**.
 - e. Click **Test Connection**.

A success message should be displayed.

IBM WebSphere/SQL Server

1. Logon to the WebSphere Administrative Console:
<http://{web application server}:9060/ibm/console>.
2. Create JDBC Provider as follows:
 - a. Click on **Resources > JDBC Providers**.

Skip this sub-step if **{pe connection pool}** already exists.
Otherwise, do the following:

- b. Click **New**.
 - c. Select the database type: **SQL Server**.
 - d. Select the provider type: **{pe connection pool}**.
 - e. Select the implementation type: **Connection pool DataSource**.
 - f. Click **Next**.
 - g. Click **Apply**.
 - h. Save changes to master configuration.
3. Create Initial JDBC DataSource as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Click **New**.
 - e. Enter the name for the DataSource **{pe datasource}**. Suggested name: **Bp8ProcessDS**. Record this name on your worksheet as **{pe datasource}**.
 - f. Enter JNDI name: **{pe datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- g. Enter Description: **{pe datasource}**.
 - h. Enter Database name: **{pe database}**.
 - i. Enter Server name: **{pe data server}**.
 - j. Click **Apply**.
 - k. Save changes to master configuration.
4. Create Authentication Entry as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Click **{pe datasource}**.
 - e. Click **J2EE Connector Architecture (J2C) authentication data entries** under **Related Items**.
 - f. Click **New**.
 - g. Enter Alias name **{pe authentication name}**. Suggested name: **Bp8ProcessAlias**. Record this name on your worksheet as **{pe authentication name}**.
 - h. Enter User ID: **{pe user}**.
 - i. Enter Password: **{pe password}**.
 - j. Click **Apply**.
 - k. Save changes to master configuration.
5. Set JDBC DataSource Authentication as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Click **{pe datasource}**.
 - e. Select **Component-managed authentication alias: {pe authentication name}**.
 - f. Click **Apply**.
 - g. Save changes to master configuration.
6. Test the connection as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the appropriate provider: **{pe connection pool}**.
 - c. Click **DataSources** under **Additional Properties**.
 - d. Select the Checkbox for **{pe datasource}**.
 - e. Click **Test Connection**.

A success message should be displayed.

IBM Websphere/DB2

1. Logon to the WebSphere Administrative Console:
<http://{web application server}:9060/ibm/console>.

2. Create JDBC Provider as follows:

- a. Click on **Resources** > **JDBC Providers**.

Skip this sub-step if **{pe connection pool}** already exists.
Otherwise, do the following:

- b. Click **New**.
- c. Select the database type: **SQL Server**.
- d. Select the provider type as '**DB2 Universal JDBC Driver Provider**'.
- e. Select the implementation type: **Connection pool DataSource**.
- f. Click **Next**.
- g. Click **Apply**.
- h. Save changes to master configuration.

3. Create Initial JDBC DataSource as follows:

- a. Click on **Resources** > **JDBC Providers**.
- b. Click on the appropriate provider '**DB2 Universal JDBC Driver Provider**'
- c. Click **DataSources** under Additional Properties.
- d. Click **New**.
- e. Enter the name for the DataSource **{pe datasource}**. Suggested name: **Bp8ProcessDS**.
Record this name on your worksheet as **{pe datasource}**.
- f. Enter JNDI name: **{pe datasource}**.

NOTE The DataSource name and the DataSource JNDI name must be the same.

- g. Enter Description: **{pe datasource}**.
- h. Enter Database name: **{pe database}**.
- i. Enter Server name: **{pe data server}**.
- j. Click **Apply**.
- k. Save changes to master configuration.

4. Create Authentication Entry as follows:

- a. Click on **Resources** > **JDBC Providers**.
- b. Click on the provider '**DB2 Universal JDBC Driver Provider**'
- c. Click **DataSources** under **Additional Properties**.
- d. Click **{pe datasource}**.
- e. Click **J2EE Connector Architecture (J2C) authentication data entries** under **Related Items**.
- f. Click **New**.

- g. Enter Alias name **{pe authentication name}**. Suggested name: **Bp8ProcessAlias**. Record this name on your worksheet as **{pe authentication name}**.
 - h. Enter User ID: **{pe user}**.
 - i. Enter Password: **{pe password}**.
 - j. Click **Apply**.
 - k. Save changes to master configuration.
5. Set JDBC DataSource Authentication as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the provider '**DB2 Universal JDBC Driver Provider**'
 - c. Click **DataSources** under **Additional Properties**.
 - d. Click **{pe datasource}**.
 - e. Select **Component-managed authentication alias: {pe authentication name}**.
 - f. Click **Apply**.
 - g. Save changes to master configuration.
6. Test the connection as follows:
 - a. Click on **Resources > JDBC Providers**.
 - b. Click on the provider '**DB2 Universal JDBC Driver Provider**'
 - c. Click **DataSources** under **Additional Properties**.
 - d. Select the Checkbox for **{pe datasource}**.
 - e. Click **Test Connection**.

A success message should be displayed.

JBOSS/SQL Server

1. Create DataSource entry:

In the JBOSS directories,
copy **msSQL-ds.xml**
from **...\docs\examples\jca**
to **...\server\default\deploy** (if it does not already exist).

In the **...\server\default\deploy\msSQL-ds.xml** file,
add the following under **<datasources>**.

Replace worksheet items appropriately.

For example, replace **{pe datasource}** with **Bp8MetadataDS**.

```
<datasources>
  <local-tx-datasource>
    <jndi-name>{pe datasource}</jndi-name>
    <connection-url>
      JDBC:jtds:SQLserver://{pe data server}:1433;DatabaseName={pe
database}
```

```
</connection-url>
<driver-class>net.sourceforge.jtds.JDBC.Driver</driver-class>
<user-name>{pe user}</user-name>
<password>{pe password}</password>
<metadata>
    <type-mapping>MS SQLSERVER2000</type-mapping>
</metadata>
</local-tx-datasource>
</datasources>
```

2. Place driver in lib directory

- a. Download **jtds-1.0.2.jar** from SourceForge.net (<http://sourceforge.net>).
- b. Place the jar file in **...\\server\\default\\lib**.

JBOSS/Oracle

1. Create DataSource entry:

In the JBOSS directories,
copy **oracle-ds.xml**
from **...\\docs\\examples\\jca**
to **...\\server\\default\\deploy** (if it does not already exist).

In the **...\\server\\default\\deploy\\oracle-ds.xml** file, add the information below under **<datasources>**. Replace worksheet items appropriately. For example, replace **{pe datasource}** with **Bp8MetadataDS**.

```
<datasources>
    <local-tx-datasource>
        <jndi-name>{pe datasource}</jndi-name>
        <connection-url>
            JDBC:oracle:thin:@{pe data server}:1521:{pe database}
        </connection-url>
        <driver-class>oracle.jdbc.driver.OracleDriver</driver-class>
        <user-name>{pe user}</user-name>
        <password>{pe password}</password>
    </local-tx-datasource>
</datasources>
```

2. Place driver in lib directory.

- a. Download **JDBC14.jar** from Oracle.
- b. Place the jar file in **...\\server\\default\\lib**.

Oracle Application Server/SQL Server

1. Click the **OC4J Instance** you previously created.
2. Click **Administration** tab.

3. Click **Data Sources**.
4. Click **Create** button.
5. Enter the following information for PE DataSource:
 - a. Name: Enter the name of the **{pe datasource}**: for example, Bp8ProcessDS
 - b. Data Source Class: **com.evermind.sql.DriverManagerDataSource**
 - c. **JDBCURL:jdbc:datadirect:sqlserver://<database-ServerName>:<database-port>;DatabaseName=<databaseName>**
 - d. JDBC Driver: **com.ddtek.jdbc.sqlserver.SQLServerDriver**
 - e. Username: **{pe user}**
 - f. Under option **Use Cleartext Password**, Select Password: **Password {pe password}**.
 - g. Location: **{pe datasource}**: for example, Bp8ProcessDS
 - h. Transactional(XA) Location: **{pe datasource}**: for example, Bp8ProcessDS
 - i. EJB Location: **{pe datasource}**: for example, Bp8ProcdeessDS
6. Click **Apply** to create the data source.

Oracle Application Server/Oracle

1. Click the **OC4J Instance** you previously created.
2. Click **Administration** tab.
3. Click **Data Sources**.
4. Click **Create** button.
5. Enter the following information for PE DataSource:
 - a. Name: Enter the name of the **{pe datasource}**: for example, Bp8ProcessDS
 - b. Data Source Class: **com.evermind.sql.DriverManagerDataSource**
 - c. **JDBC URL: jdbc:oracle:thin:@//<database-Servename>:<database-port>/<PE database SID>**
 - d. JDBC Driver: **oracle.jdbc.driver.OracleDriver**
 - e. Username: **{pe user}**
 - f. Under option **Use Cleartext Password**, Select Password: **Password {pe password}**.
 - g. Location: **{pe datasource}**: for example, Bp8ProcessDS
 - h. Transactional(XA) Location: **{pe datasource}**: for example, Bp8ProcessDS
 - i. EJB Location: **{pe datasource}**: for example, Bp8ProcdeessDS
6. Click **Apply** to create the data source.

Update Process Engine Database Views

SQL Server

No action required.

Oracle

Currently there is a case sensitivity issue with Oracle database views in P8 3.5: Database views need to be manually adjusted after modifying workflow queue definitions.

1. Find views.

In Oracle Enterprise Manager:

Find **{PE Database} > Schema > F_SW > Views**.

Find the views for all queues in the isolated region in question. These views have names that adhere to the following naming convention: "VWVQ" + <IsolatedRegionNumber> + "_" + <QueueName>. **NOTE** It is not necessary to update the other views for logs or rosters, and so on. Only the queues used by the BPF Web Application need to be updated.

2. Create SQL statements. For each view do the following:

- a. Right-click: **Show Object DDL**.
- b. **Ctrl+A, Ctrl+C**: Put DDL contents in **Notepad** (for each view).
- c. Put a semi-colon after each DDL statement.

3. Execute SQL statements as follows:

- a. Replace double-quotes (") with nothing for all SQL statements.
- b. Execute statements in Oracle SQL Worksheet.

DB2

The BPF Web Application does not require double quotes in Process Engine Database Views. Database Views need to be manually adjusted after modifying workflow queue definitions. For example, the following view script should be modified to remove double quotes.

Original SQL Script:

```
CREATE VIEW VWVQ1_Inbox AS SELECT F_WobNum, F_WorkSpaceId, F_Locked,
F_LockMachine, F_LockUser, F_LockTime, F_LastUser, F_BoundUser,
F_BoundMachine, F_Tag, F_UniqueId, F_OperationId, F_WorkClassId,
F_EnqueueTime, F_CreateTime, F_InstrSheetId, F_WorkOrderId,
F_TimeOut "F_TimeOut", F_Subject "F_Subject", F_Overdue "F_Overdue",
F_StepName "F_StepName", Bp8CaseID "Bp8CaseID", F_UF006 "Priority",
F_UF007 "DocumentType", F_UF008 "ReceivedDate", F_UF009 "Rejected",
F_UF010 "SendToHost", F_UF011 "Expired", F_UF012 "Bp8CaseType",
F_UF013 "AccountNumber", F_UF014 "CompanyName" FROM F_SW.VWQueue1_115
WHERE F_Locked < 2 AND F_QueueWPClassId = 1
```

Modified SQL Script:

```
CREATE VIEW VWVQ1_Inbox AS SELECT F_WobNum, F_WorkSpaceId, F_Locked,  
F_LockMachine, F_LockUser, F_LockTime, F_LastUser, F_BoundUser,  
F_BoundMachine, F_Tag, F_UniqueId, F_OperationId, F_WorkClassId,  
F_EnqueueTime, F_CreateTime, F_InstrSheetId, F_WorkOrderId,  
F_TimeOut F_TimeOut, F_Subject F_Subject, F_Overdue F_Overdue,  
F_StepName F_StepName, Bp8CaseId Bp8CaseId, F_UF006 Priority,  
F_UF007 DocumentType, F_UF008 ReceivedDate, F_UF009 Rejected,  
F_UF010 SendToHost, F_UF011 Expired, F_UF012 Bp8CaseType,  
F_UF013 AccountNumber, F_UF014 CompanyName FROM F_SW.VWQueue1_115  
WHERE F_Locked < 2 AND F_QueueWPClassId = 1
```

Install and Configure BPF Explorer and Metastore

Install BPF Explorer

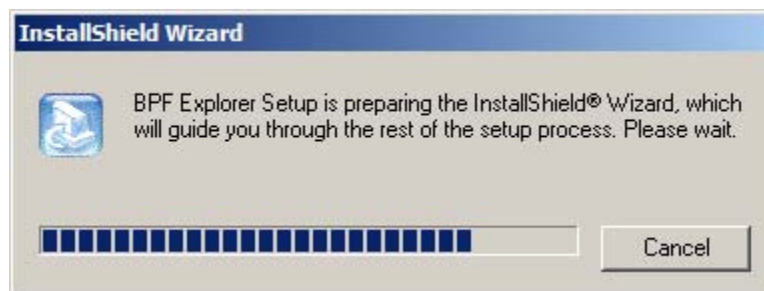
Execute `{staging folder}\admin\filenet_BPF_explorer_setup.exe` to run the setup.

NOTES

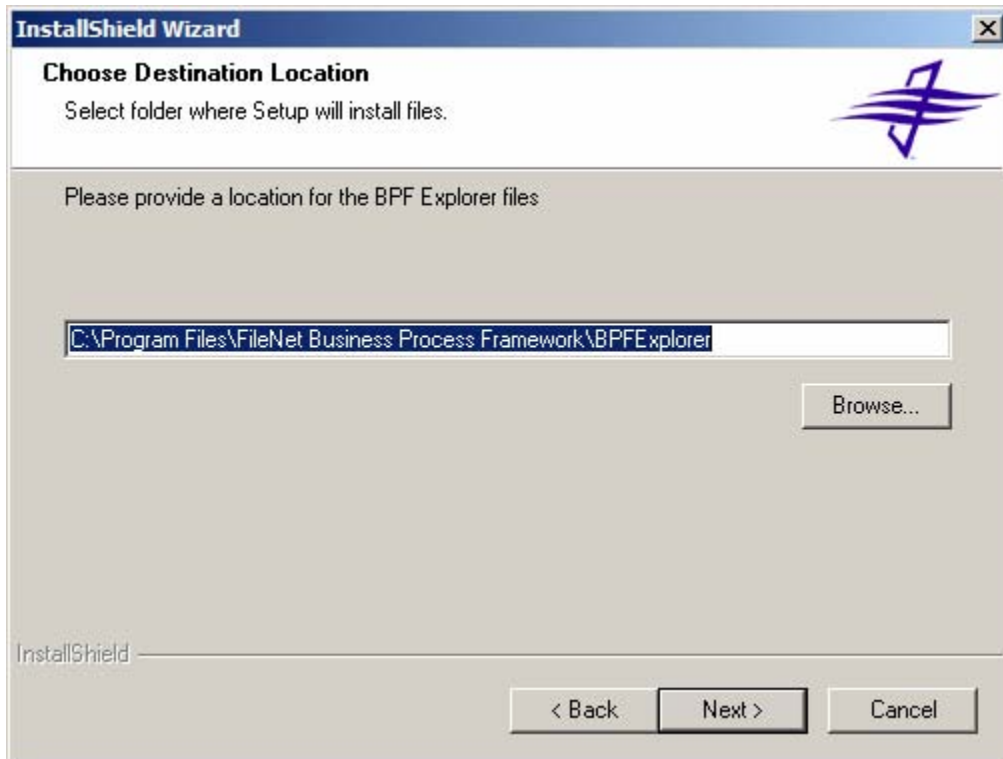
- The setup assumes BPF Explorer is to access only one metastore. Instructions for configuring BPF Explorer for multiple metastores are provided in the next step.
- BPF versions are numbered in this format: {major}.{minor}.{build number}. For example: 3.5.1. The version number shown by Windows for the various BPF Explorer binaries (such as **Bp8Explorer.dll**) have an extra zero in it; for example: 3.5.0.2. The correct version number is shown in the Product Name property.
- If BPF Explorer is installed on a desktop with no CE client libraries, CE integration is disabled. The CE client libraries are installed automatically with FileNet Enterprise Manager. But it is also possible to install just the CE client libraries without installing FileNet Enterprise Manager. Consult your installation documentation for CE for more details.

For both Microsoft SQL Server and Oracle

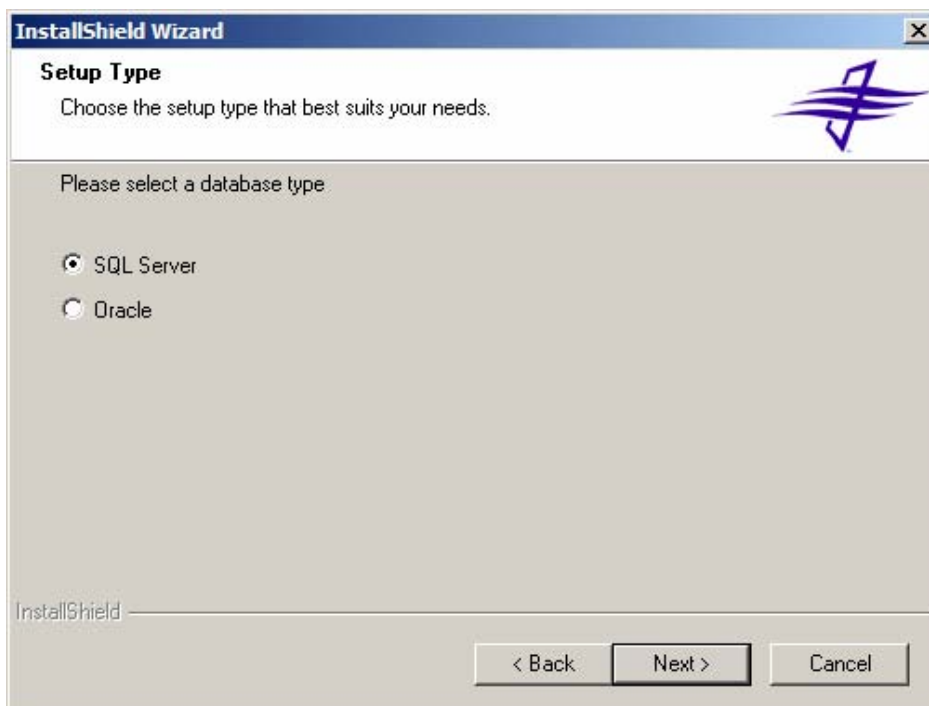
When the BPF Explorer setup program is run, the following InstallShield wizard screens is displayed:



The default location for the BPF Explorer files is shown in the following screenshot. Although this is the suggested location, you can override it.



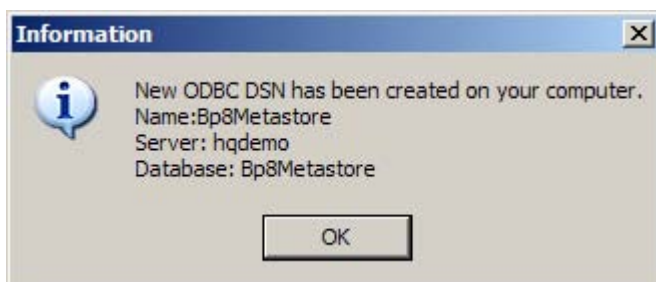
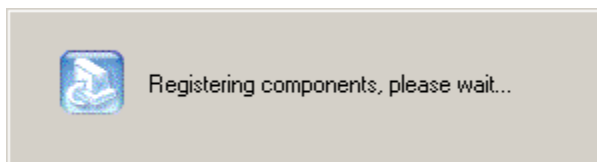
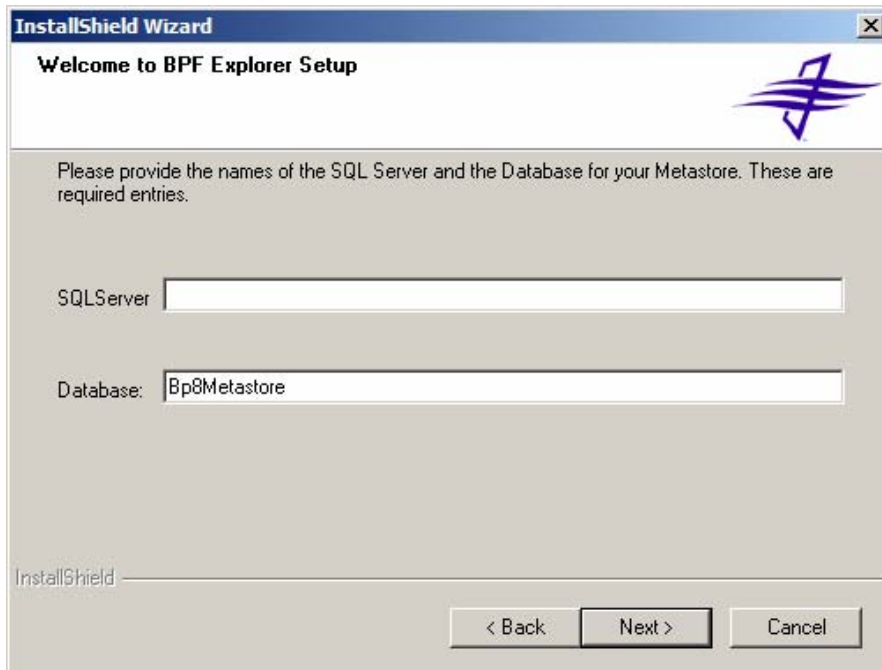
Select the appropriate database type:



If Microsoft SQL Server is selected

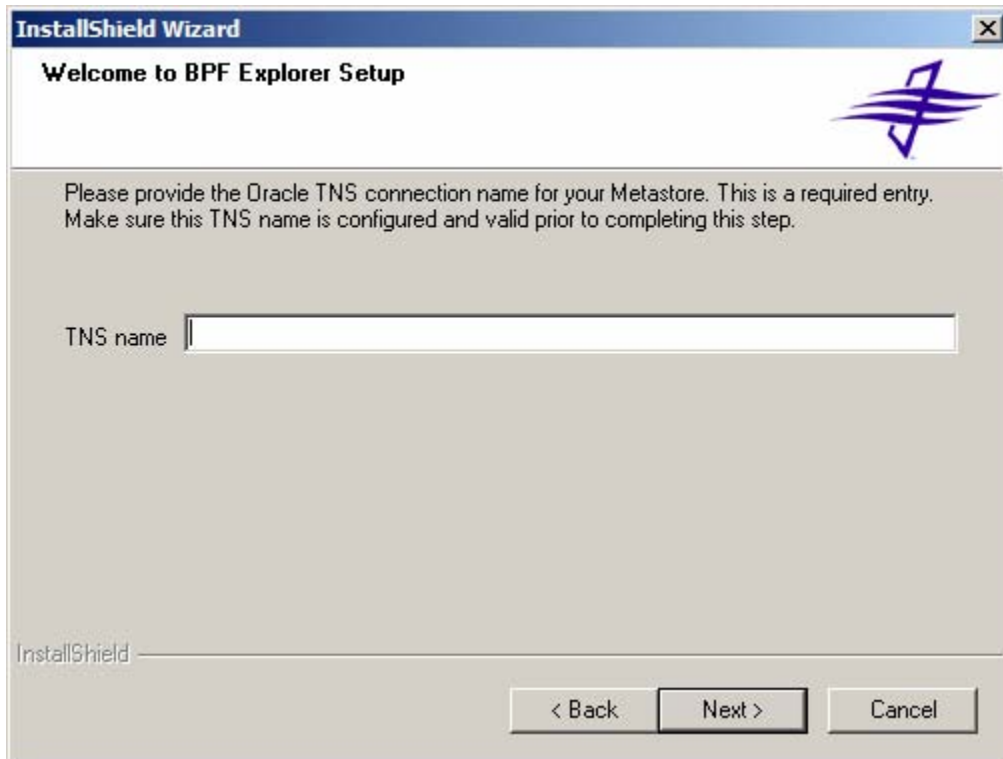
Enter the following variables from your worksheet into the following InstallShield screen:

- SQLServer: {meta data server}
- Database: {meta database}



If Oracle is selected

Enter the TNS name for the {meta database}. The TNS name should be created and tested before the BPF Explorer install.



InstallShield Wizard

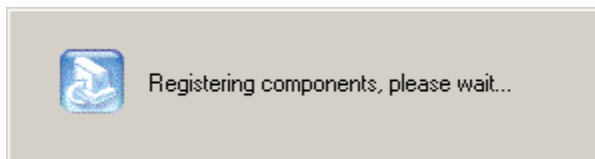
Welcome to BPF Explorer Setup

Please provide the Oracle TNS connection name for your Metastore. This is a required entry. Make sure this TNS name is configured and valid prior to completing this step.

TNS name

InstallShield

< Back Next > Cancel



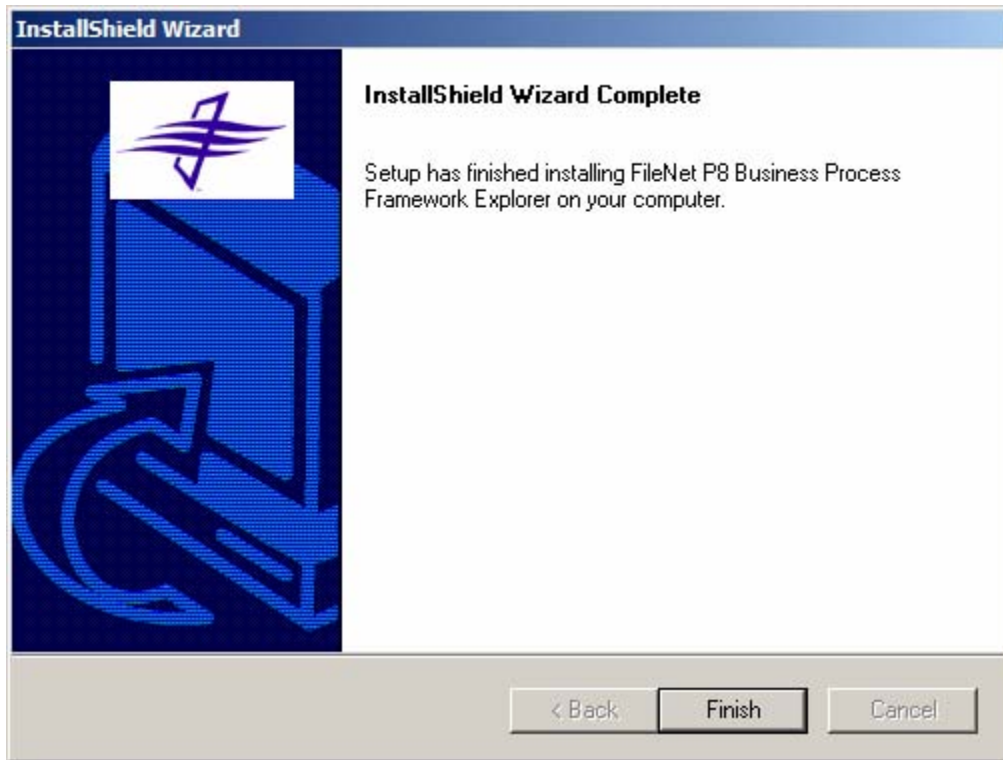
Information

New ODBC DSN has been created on your computer.
Name: Bp8Metastore
Server: BPFdata_PSD1PEDB
Database: BPFdata_PSD1PEDB

OK

Completing the BPF Explorer Installation

The following screen is displayed when the installation is complete:



Create BPF Metastore

Create BPF Metastore database as follows:

Microsoft SQL Server

1. If the meta database name **{meta database}** is different than the default value 'Bp8Metastore', perform the following steps to edit the Step1 script to reflect your meta database name. Otherwise skip this step.
 - a. Open the following file in the editor of your choice:
{staging folder}\SQL\Step1.msSQL.Bp8.Metabase.1.0.SQL
 - b. Search for 'Bp8Metastore' text and replace with your meta database name **{meta database}**.
 - c. Save the file.

NOTE Execute Step 1 only when you are performing a new installation of the BPF Application. This step can be skipped if you are upgrading the BPF application.

2. If Microsoft SQL Server is installed on a drive other than **C:** or in a path other than

C:\Program Files\Microsoft SQL Server

errors occur in the CREATE DATABASE statement in **Step1.msSQL.Bp8.Metabase.1.0.SQL** and you must perform the following steps to edit the Step1 script to reflect the true path of your actual Microsoft SQL Server install directory. Otherwise skip this step.

- a. Open the following file in the editor of your choice:

{staging folder}\SQL\Step1.msSQL.Bp8.Metabase.1.0.SQL

- b. Search for the following SQL statement text and replace the sections in bold with the correct path for the install directory of Microsoft SQL Server on your machine.

```
CREATE DATABASE [Bp8Metastore] ON (NAME = N'Bp8Metastore_dat', FILENAME =  
N'c:\Program Files\Microsoft SQL Server\MSSQL\data\Bp8Metastore.mdf', SIZE = 5,  
FILEGROWTH = 10%) LOG ON (NAME = N'Bp8Metastore_log', FILENAME = N'c:\Program  
Files\Microsoft SQL Server\MSSQL\data\Bp8Metastore.ldf', SIZE = 5, FILEGROWTH =  
10%)
```

- c. Save the file.
3. Open SQL Query Analyzer:
Start menu > Programs > Microsoft SQL Server > Query Analyzer.
4. Logon using the **{meta admin user}** and **{meta admin password}**.
 - a. Select **Master Database** from the combo box on tool bar.
 - a. Select File / Open... **{staging folder}\SQL\Step1.msSQL.Bp8.Metabase.1.0.SQL**
5. Select **Query > Execute.**

Oracle

1. Verify the following prerequisites before starting the installation process:
 - Oracle database exists (can be created using the Oracle Database Configuration Assistant).
 - Oracle listener for database exists (can be created using the Oracle Net Configuration Assistant).
 - Net Service Name for database exists (can be created using the Oracle Net Configuration Assistant).
 - Able to logon to database and run scripts (by using Oracle SQL Plus Worksheet).
2. Determine from the customer DBA if it is preferable to use a supplied BPF script (called Step0) to create a new tablespace and the necessary BPF users, or if they would prefer to install into an existing database configuration. To execute the Step0 script, follow the sub-steps below, otherwise skip this step.
 - a. Locate the **Step0** Script:
{staging folder}\SQL\Step0.oracle.Bp8.Metabase.1.0.SQL.
 - b. Modify the **Step0** Script for the customer's environment. In particular, the following might need to be modified: Data file location. (Should point to the appropriate database directory.)

NOTE By default the user logon **Bp8** (with password **Bp8**) is created with read/write access to the BPF Metastore. Record the appropriate information on your worksheet as **{meta user}** and **{meta password}**.

By default the **BPF_DATA tablespace** is created. Record the appropriate name as the **{meta database}** on your worksheet.
3. Grant the appropriate privileges to the **{meta admin user}**. See the "Database Administrative User" on the Prerequisite worksheet.

4. Execute the following scripts using **{meta admin user}**:
 - **{staging folder}\SQL\Step0.oracle.Bp8.Metabase.1.0.SQL**
 - **{staging folder}\SQL\Step1.oracle.Bp8.Metabase.1.0.SQL**

The scripts should execute without errors. If there are errors you might need to review the script for incorrect references.

NOTE Execute Step 0 and Step 1 only when you are installing new BPF Application. These steps could be skipped if you are upgrading BPF application.

DB2

Not supported for BPF Meta database.

Load BPF Metastore

Load data into the BPF Metastore database as follows:

Microsoft SQL Server

1. Open the following: **Start menu > Programs > Microsoft SQL Server > Query Analyzer**.
 - a. Logon using the **{meta admin user}**.
 - b. Execute Step2 and Step3 scripts.
 - i. Select the **{meta database}** if not already selected (in combo box on tool bar).
 - ii. Select **File... Open... {staging folder}\SQL\Step2.msSQL.Bp8.Metabase.1.0.SQL**
 - iii. Select **Query... Execute**.
 - iv. Select **File... Open ... {staging folder}\SQL\Step3.msSQL.Bp8.Metabase.1.0.SQL**
 - c. Select **Query... Execute**.
2. Assign Password

The scripts create user **Bp8** with a **Bp8** password. Record this name on your worksheet as **{meta user}** and **{meta password}**.

You can assign a new password in this manner:

3. Open Enterprise Manager: **Start menu > Programs > Microsoft SQL Server > SQL Server Enterprise Manager**.
4. Right click on **SQL Server Group > Security > Logins > bp8**.
5. Select **Properties**.
6. Determine the **{meta password}** and record on your worksheet.
7. Enter password: **{meta password}**.
8. Click **Ok** and confirm the new password.

Oracle

1. Connect as **{meta user}**.
2. Execute the following scripts:
 - **{staging folder}\SQL\Step2.oracle.Bp8.Metabase.1.0.SQL**
 - **{staging folder}\SQL\Step3.oracle.Bp8.Metabase.1.0.SQL**

DB2

Not supported for BPF Meta database.

Import Metastore Manifest

1. Determine which manifest to use:

Base	{staging folder}\misc\base\config\BPF_base.xml
Case Management Sample Configuration	Use {staging folder}\misc\solutions\case_management\config\BPF_cm.xml
Custom	Use your own custom manifest xml file.

2. Log into BPF Explorer.
3. Select **Export** and **Import Management**.
4. Right-click for context menu: **All Tasks > Import XML Manifest**.
5. Click **Yes: Confirm loss of current configuration**.
6. Select your manifest.
7. Click **No: User information is not to be preserved**.
8. If you are importing a manifest from a BPF system where the Workflow User ID values in PE are different from those in the environment where the BPF system was created, you should update the **WF_USER_ID** column in the **USERS** table in the Metastore by setting all rows to NULL. In this way, BPF automatically interrogates PE for the correct values for these users in your environment. Otherwise, BPF assumes that existing values are correct, causing problems in the Web Application whereby a user who has opened a Case receives warnings that the Case is locked by another user even though this is not actually the case. To reset the **WF_USER_ID** column, execute the following SQL statement against the Metastore:

```
update users set wf_user_id=null
```

If you are importing a manifest that was created in the same environment (a backup, for example), then you can skip this step, as the Workflow User ID values in PE should still be the same.

Edit Metastore Settings

1. Start the application by clicking **Start Menu > Programs > FileNet Business Process Framework > BPF Explorer**
2. Login using **{meta user}** and **{meta password}**.

3. Edit the following settings:

Setting	Value
Application Settings > System-wide Settings > Process Engine Router URL	{pe router url} NOTE The router name is case sensitive.
Application Settings > System-wide Settings > Content Engine Object Store Name	{os display name}
Application Settings > Web Application > Workplace Integration Servlet URL	{workplace url} Language references: * http://p8demo30:7001/Workplace/ This example indicates that the URL http://p8demo30:7001/Workplace/ is to be used for all languages. Different URLs can be specified for particular languages; for example: {en-us http://p8demo30:7001/WorkplaceEn/ } {ru http://p8demo30:7001/WorkplaceRu/ } The language designations are the industry-standard designations used in web browsers.
Workflow Configuration > Queues	Change the object names for queues listed in this section to correspond to the isolated region in use (as determined by the router specified in the Application Settings > System-wide Settings > Processing Engine Router URL). For example, if 26 is the isolated region, the object name for the Case Management queue would be "f_sw.VWVQ26_CaseManagement." Change or view a queue's object name by right clicking on the queue in question and selecting Properties.
Workflow Configuration > Queue Filters (for Process Engine implementations using SQL Server only)	Verify that the "NOLOCK" option is utilized in all queue filter SQL queries. For example: <code>SELECT COUNT(UserID) FROM Users WITH (NOLOCK) WHERE Username LIKE 'smith'.</code> This option is necessary to reduce or eliminate deadlock contention. Change or view a queue filter's SQL query by right clicking on the queue filter in question and selecting Properties.
Workflow Configuration > Queue Filters (for Process Engine implementations using Oracle only and DB2)	Verify that the "NOLOCK" option is <i>not</i> utilized in all queue filter SQL queries. This syntax is not valid for Oracle. Change or view a queue filter's SQL query by right clicking on the queue filter in question and selecting Properties.

Setting	Value
Miscellaneous > Inbasket Filters > Company Name (for Oracle implementations using the Case Management Sample Application manifest only)	Change the Company Name regular template to be: UPPER(CompanyName) LIKE UPPER('%PARAM1%') Change or view the Company Name regular template by right-clicking on Company Name, selecting Properties, and clicking on Expression within the Regular area.
Miscellaneous > Inbasket Filters > Account Number (for Oracle implementations using the Case Management Sample Application manifest only)	Change the Account Number regular template to be: UPPER(AccountNumber) LIKE UPPER('%PARAM1%') Change or view the Account Number regular template by right-clicking on Account Number, selecting Properties, and clicking on Expression within the Regular area.

Define Metastore Roles

Define roles within BPF Explorer.

Click on **User and Access Information > Roles**.

These roles correspond to LDAP groups or Workplace access roles depending on Metastore settings.

Further linking information is provided on the role properties screen in BPF Explorer.

Configure BPF Explorer For Multiple Metastores

This step can be skipped if BPF Explorer is to access only one BPF Metastore.

By default BPF Explorer accesses the metastore specified during the BPF Explorer installation. If configured for multiple metastores in the manner specified below, BPF Explorer presents a dropdown menu of metastores to the user as part of the BPF Explorer login.

Find the Windows registry information that controls metastore access:

1. Open the registry editor: **Start menu > Run. Enter regedit. Press OK.**
2. Find the following key: **My Computer\HKEY_LOCAL_MACHINE\SOFTWARE\FileNet Business Process Framework**. Under this key there should be a **Common** key.

For each metastore do the following:

- a. Create an ODBC connection for the metastore: **Start menu > Programs > Administrative Tools > DataSources (ODBC)**.
- b. Select the **System DSN** tab.
- c. Select **Add**.

NOTE An ODBC connection already exists for the metastore specified during BPF Explorer setup.

- d. In the registry editor export the common metastore settings:
- e. Click on **Common**.
- f. Select **Registry > Export Registry File**.

3. Change the following in the exported registry file:

- Key name. For example, change **HKEY_LOCAL_MACHINE\SOFTWARE\FileNet Business Process Framework\Common** to **HKEY_LOCAL_MACHINE\SOFTWARE\FileNet Business Process Framework\Metastore1**. The key name determines the name of the metastore as shown to the user in the logon dropdown menu. In the above example "Metastore1" would appear as one of the metastore choices.
- **DATABASE_CONNECTION_STRING**. Change the DSN to reference your ODBC DSN. **NOTE** This value is used by the WFImport.exe utility. It requires that both UID and PWD be present as the WFImport.exe utility has no ability to ask for this information as user input at runtime. We do not regard this as a security risk, however, since WFImport.exe is a tool that is typically used only during the development phase of a project. The WFImport.exe should use ODBC on both Oracle and MSSQL configurations. That is the only supported connectivity type for this utility.
- **BP8_EXPLORER_DATABASE_CONNECTION_STRING**. Change the DSN to reference your ODBC DSN. **NOTE** This value should be configured to use ODBC on Microsoft SQL Server and OLEDB on Oracle. Issues have been known to occur with Oracle ODBC drivers and it has been determined that, on Oracle platforms, OLEDB should be used for **BP8_EXPLORER_DATABASE_CONNECTION_STRING** and ODBC for **DATABASE_CONNECTION_STRING**.

4. Import the edited registry file: **Registry > Import Registry File**.

NOTE Do not delete **HKEY_LOCAL_MACHINE\SOFTWARE\FileNet Business Process Framework\Common**.

Install and Configure the BPF Web Application

Running the BPF Web Application Installer (GUI)

Before running the BPF Web Application Installer program, Content Engine, Process Engine, and Application Engine should all be running and operational. The following steps launch InstallShield Wizard used to install the BPF Web Application. This user interface prompts for the site-specific information needed to install the BPF Web Application. Refer to your completed BPF Prerequisite Worksheet for the information needed.

The steps for installation are:

1. Start the BPF Setup wizard:

- **AIX** - Navigate to `/<staging folder>/setup/` and execute `AIXfilenet_BPF_setup.bin`.
- **HP-UX** - Insert and mount the BPF CD. Navigate to `/<staging folder>/setup/` and execute `HPUXfilenet_BPF_setup.bin`.
- **Solaris** - Insert and mount the BPF CD. Navigate to `/<staging folder>/setup/` and execute `SOLARISfilenet_BPF_setup.bin`.
- **Windows** - Insert the BPF CD. Navigate to `<staging folder>\setup\` and execute `WINDOWSfilenet_BPF_setup.exe`.

Respond to the setup wizard prompts.

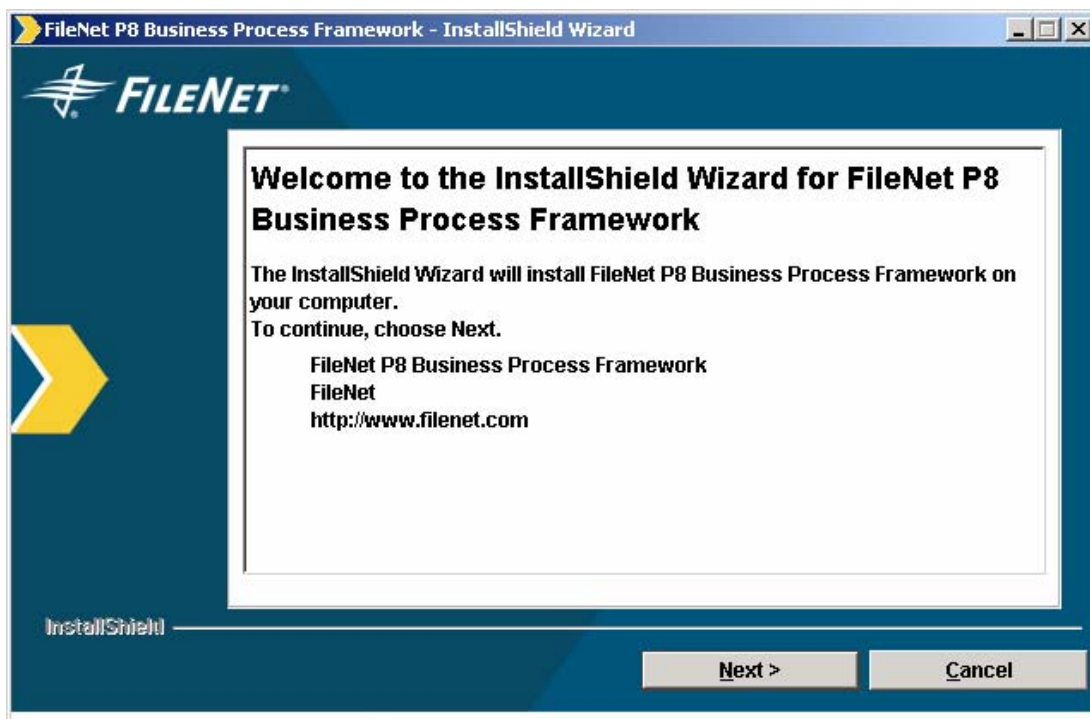


Figure 1--Welcome Screen

- Click **Next**.
The License Agreement screen appears.

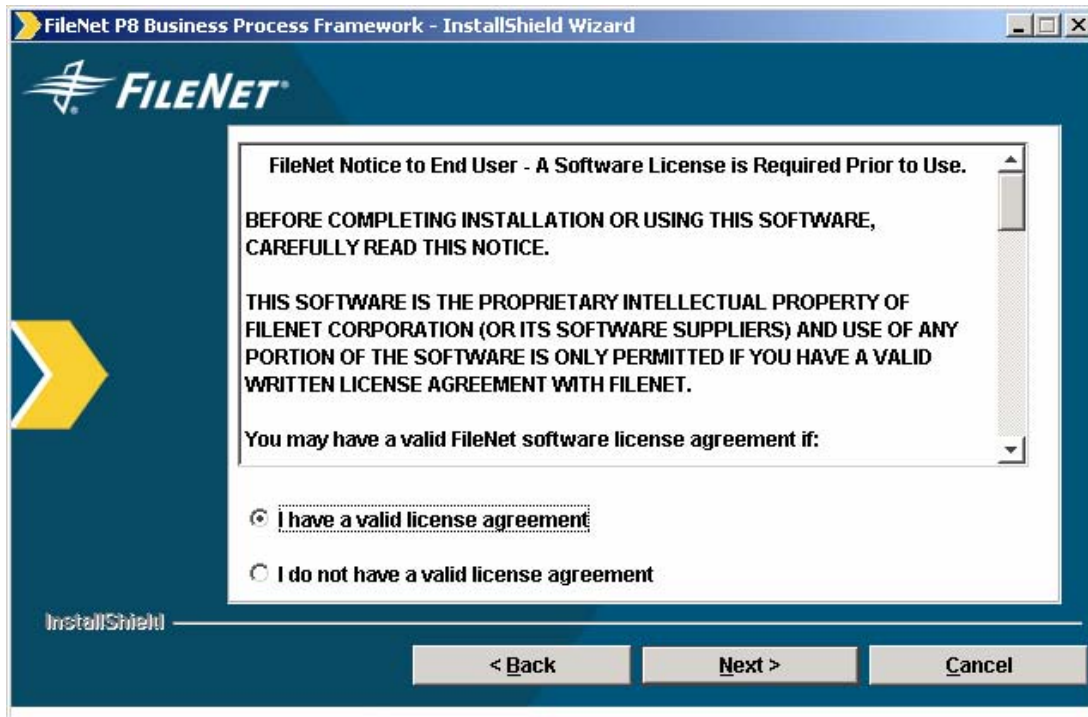


Figure 2--License Agreement Screen

- Review and accept the FileNet End User Software License Agreement, and click **Next**.
The Custom Vs Typical Installation screen appears.

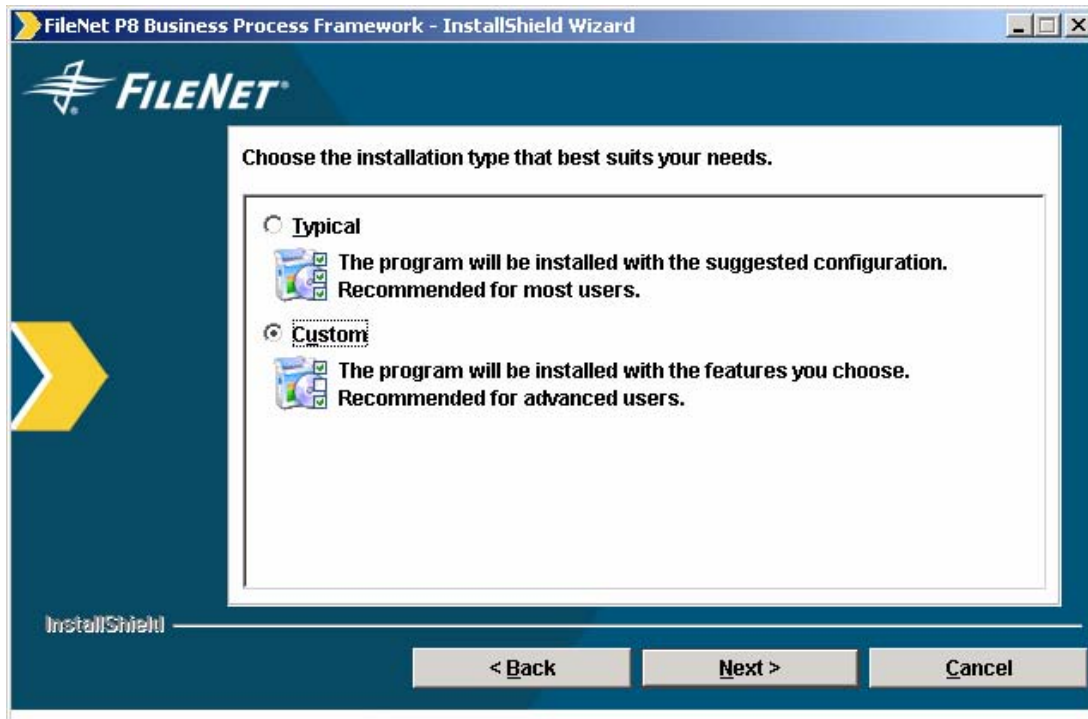


Figure 3--Custom Vs Typical Installation Screen

4. Choose either a typical or custom installation based on what best suits the needs of the environment being installed.

Typical

When using the Typical option, the system assumes that the following items are to be automatically installed.

- BPF Web Application
- BPF Operations - Component Manager Component
- Case Management Sample Application

NOTE When performing a new installation on a development system, the Typical option should be used as there is not yet a custom application to install or deploy, and the Case Management Sample application is used to test that BPF is fully functional.

Custom

The Custom option allows the installer to individually select the components that should be installed. This is helpful when you need to:

- Re-install a specific component that failed
- Perform a BPF version upgrade (and preserve existing configuration), see the Upgrade section of this document for more information.
- Perform an installation with custom configuration files.

5. Select the installation type, and click **Next**.

If you selected a Custom Installation the following screen appears:

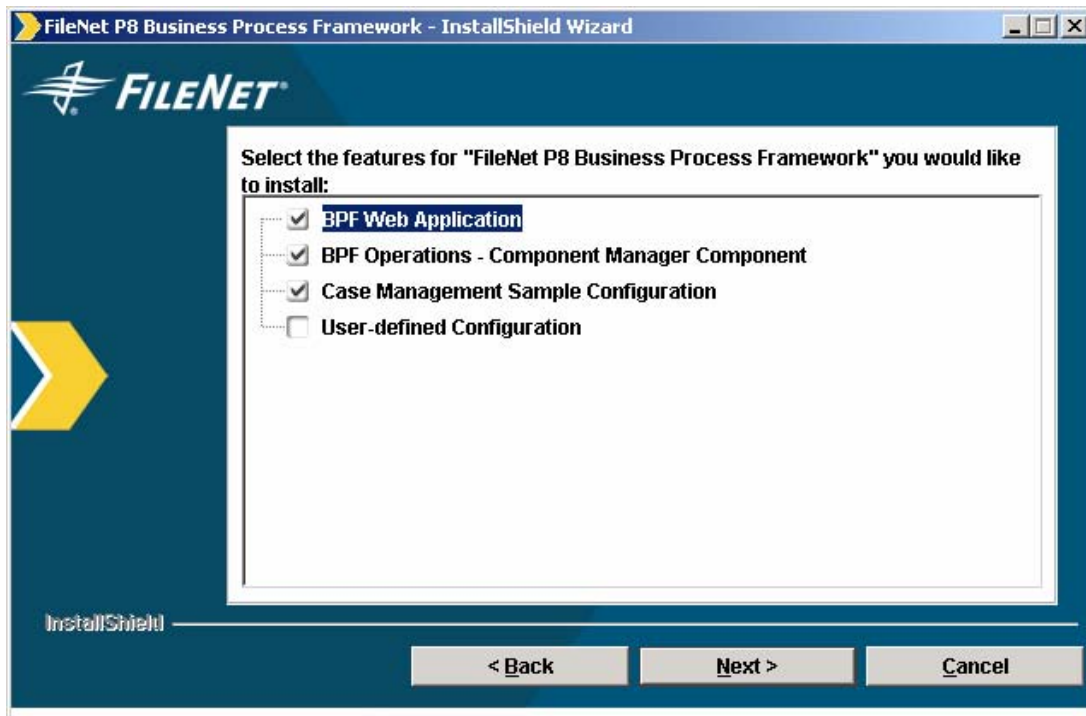


Figure 4—Custom Installation Feature Selection Screen

There are four check boxes on this screen. Three boxes are already checked. These three options are equivalent to performing the 'Typical' option. You can choose any combination of boxes to customize your installation. When you click next, you are presented with options related to the boxes that are checked.

BPF Web Application

If selected, the BPF Web Application is installed. The BPF Web Application is a user interface that provides access to work by users. The BPF Web Application's user interface is highly configurable and is generated dynamically based on a user's role. Depending upon install choice made in subsequent installer screens, you get WAR file or EAR file or exploded folder format under install location.

BPF Operations – Component Manager Component

If selected, the BPF Operations Java Adapter for P8 Component Integrator is installed. BPF Operations is a P8 Component Integrator component that allows manipulating BPF Case object from a workflow component step.

Case Management Sample Configuration

If selected, the BPF Case Management same configuration files are copied to the BPF system being installed. This includes the Case Management Sample Application Content Engine Manifest, the PEP files, the Isolated Region Manifest.

NOTE You are changing the configuration associated with the BPF environment and could potentially be overriding an existing configuration.

User-defined Configuration

If selected, you are prompted to supply site-specific configuration files as well as a location for custom code files to be copied into the BPF environment.

NOTE You are changing the configuration associated with the BPF environment and could potentially be overriding an existing configuration.

See following three screenshots for User-defined configuration choices. If User-defined Configuration is not selected, you can skip to Step 7, the Directory Name screen.

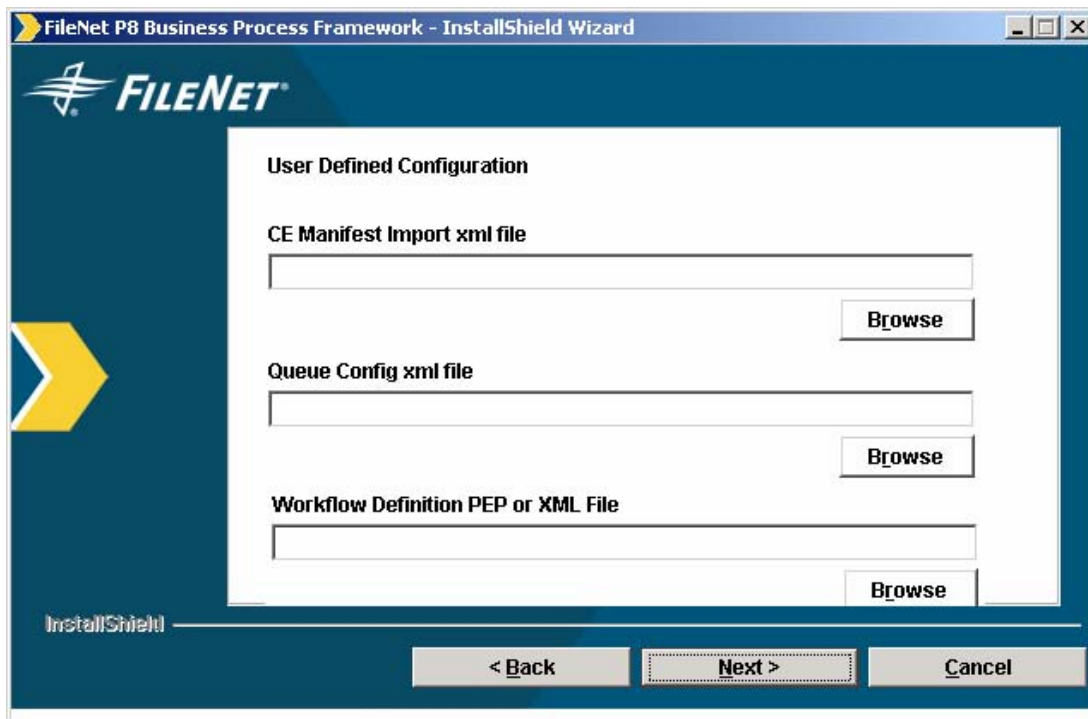


Figure 5—User Defined Configuration Screen

6. Enter path information to the Custom CE Manifest Import XML file, the Custom Queue Config XML file, and the Custom Workflow Definition PEP Or XML File.

NOTE This screen appears only if you selected User-defined Configuration.

7. Once all fields are populated, Click **Next**.

The custom code screen appears.

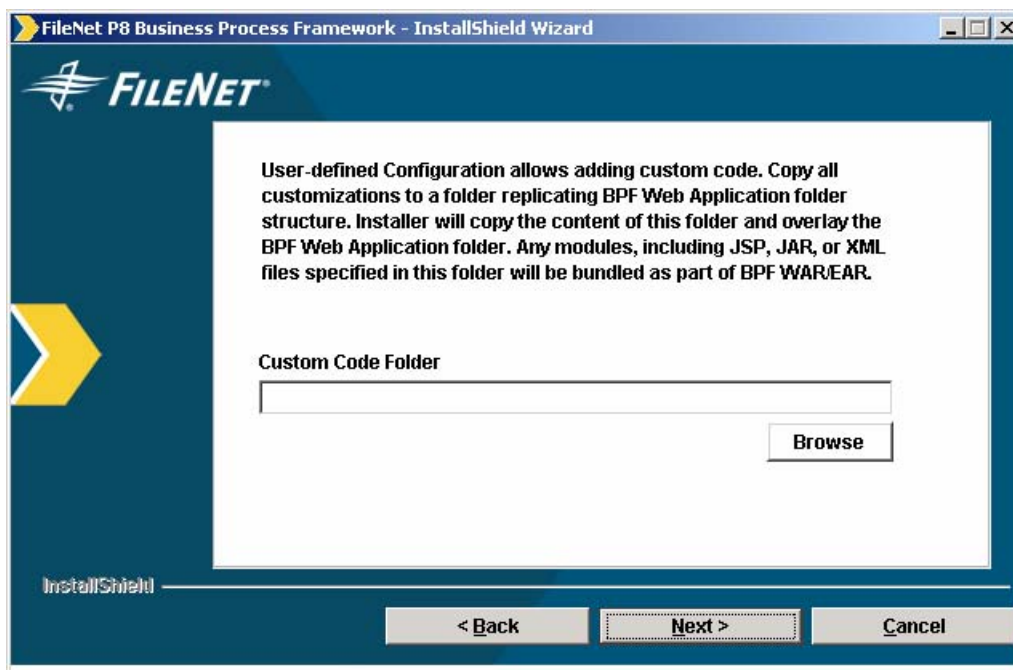


Figure 6—Custom Code Folder Screen

This entry allows you to identify custom code that you wish to deploy with BPF. It requires that you have already created a folder that contains the custom code, and that your custom code folder structure exactly replicates the BPF Web Application folder structure. If you do not have any custom code to install you can leave this field empty.

During the installation the contents of the custom code folder overlays the BPF Web Application folder, and this is why it is mandatory that they have the same folder structure. Any modules, including JSP, JAR, or XML files specified in the "Custom Code" folder is bundled as part of BPF WAR/EAR.

NOTE This screen appears with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

8. Enter the path to custom code folder, if applicable. Click **Next** to continue.

The Directory Name screen will appear.

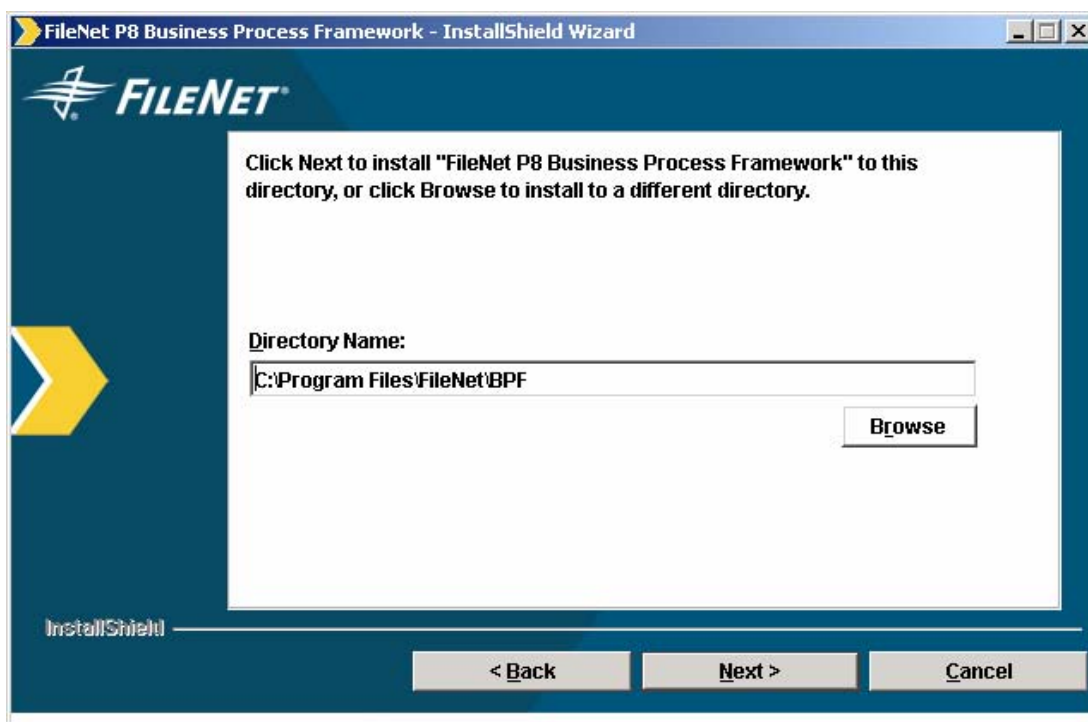


Figure 7—Directory Name Screen

9. You can enter or browse to the location where you want to install the BPF software or accept the following default locations:
 - UNIX - /opt/FileNet/BPF
 - Windows - C:\Program Files\FileNet\BPF
10. Click **Next**.

The Select target Web Application Server Type screen will appear.

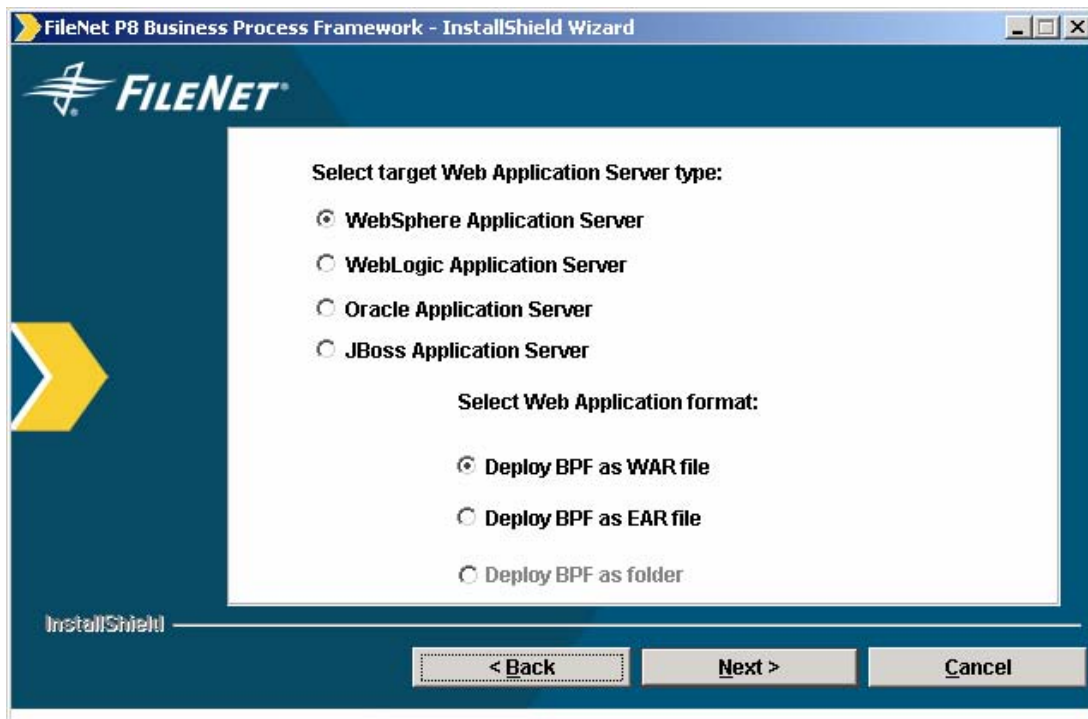


Figure 8—Select target Web Application Server Type Screen

Based on the Web Application Server type selected, the following deployment options will be provided. Not all deployment options are available for all Web Application Server Types. Depending on the Web Application Server Type selected, some of the deployment options will be disabled.

NOTE This screen will only appear if you checked BPF Web Application feature from **Custom Installation Feature Selection Screen**.

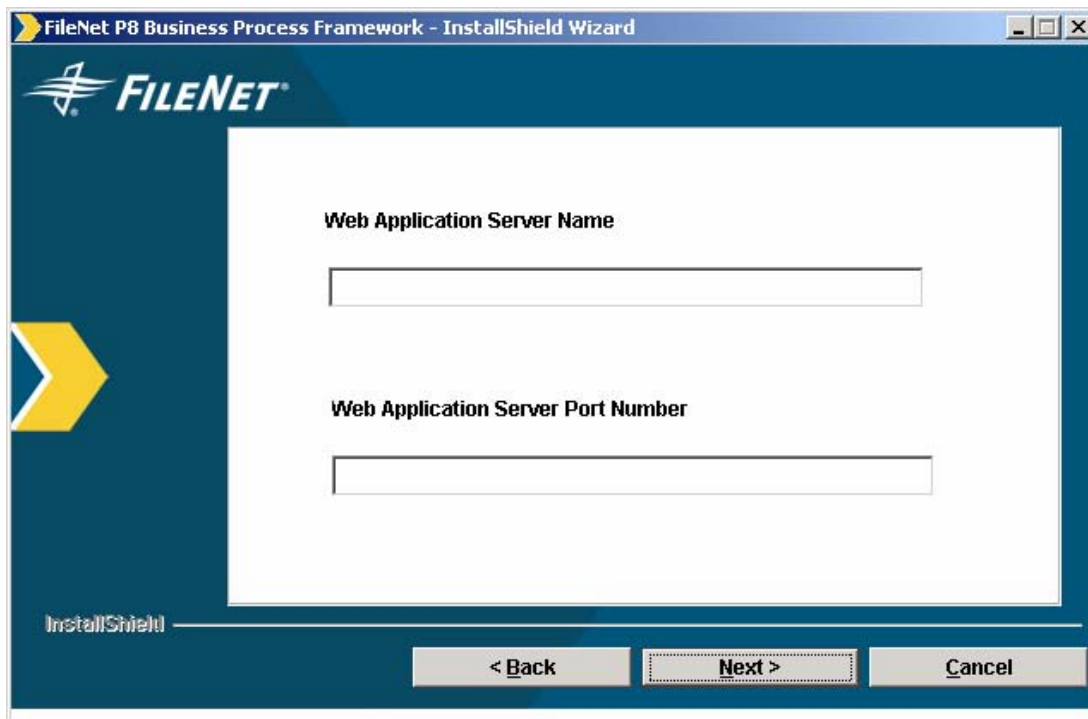
The following combinations are valid:

- Deploy BPF as WAR file (available for WebSphere, Oracle Application Server, or JBOSS)
- Deploy BPF as EAR file (available for WebSphere only)
- Deploy BPF as folder (available for WebLogic, or JBOSS)

11. Check the radio buttons that match your deployment preference, and click **Next**.

The Web Application Server Identification screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

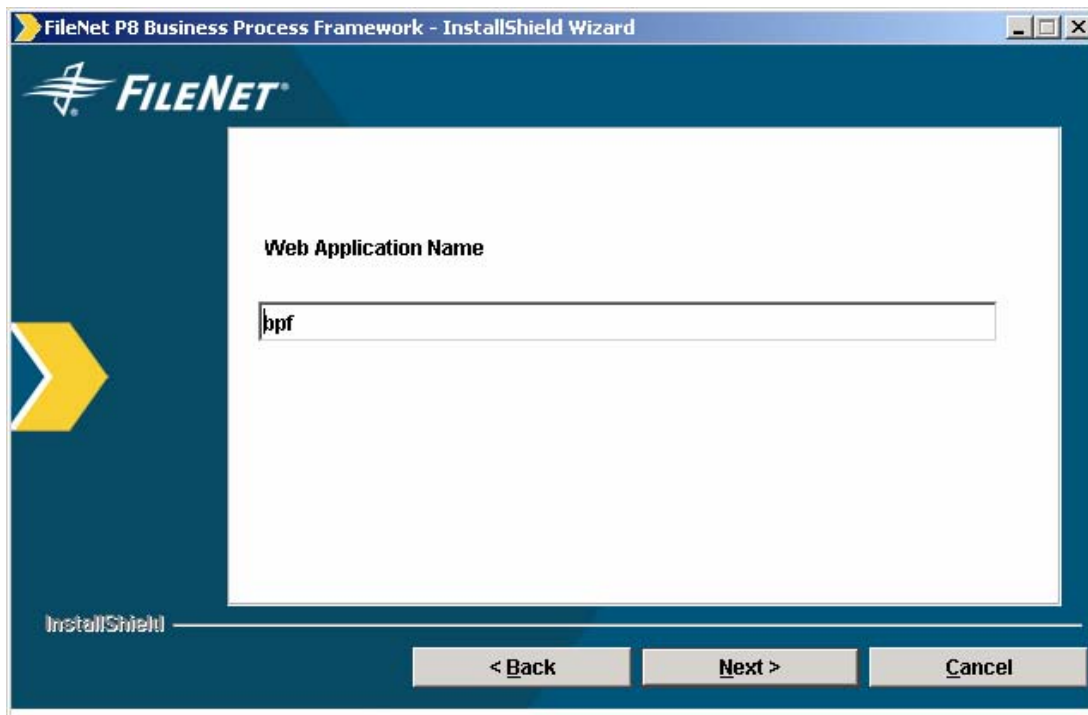


The screenshot shows the 'FileNet P8 Business Process Framework - InstallShield Wizard' window. The title bar includes the FileNet logo and the text 'FILENET®'. The main content area has a dark blue background with a yellow arrow pointing right. It contains two text input fields: 'Web Application Server Name' and 'Web Application Server Port Number'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a dashed border.

Figure 9—Web Application Server Identification screen

12. Enter the Web Application Server Host Name **{web application server}** and the Web Application Server Port Number **{web port}**, and click **Next**.

The Web Application Name screen will appear.

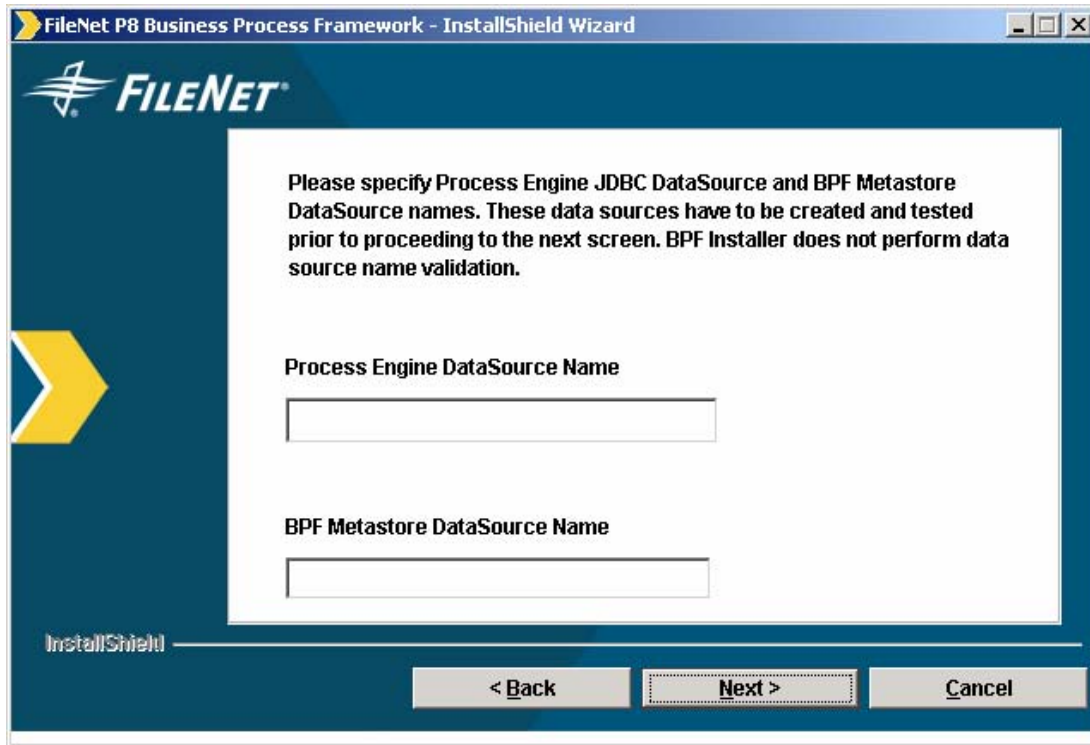


The screenshot shows the 'FileNet P8 Business Process Framework - InstallShield Wizard' window. The title bar includes the FileNet logo and the text 'FILENET®'. The main content area has a dark blue background with a yellow arrow pointing right. It contains one text input field labeled 'Web Application Name' with the text 'bpf' entered. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Figure 10—Web Application Name Screen

13. Enter the Web Application Name. This becomes the file name for the deployment file or folder created by the Installer (example bpf.war). Click **Next** to continue.

The DataSource Information screen will appear.



The screenshot shows a window titled "FileNet P8 Business Process Framework - InstallShield Wizard". The window has a blue header with the FileNet logo. The main content area is white and contains the following text: "Please specify Process Engine JDBC DataSource and BPF Metastore DataSource names. These data sources have to be created and tested prior to proceeding to the next screen. BPF Installer does not perform data source name validation." Below this text are two text input fields. The first field is labeled "Process Engine DataSource Name" and the second field is labeled "BPF Metastore DataSource Name". At the bottom of the window, there is a status bar with the text "InstallShield" and three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

Figure 11—DataSource Information Screen

In this step, the DataSources have to be created and tested prior to proceeding to next screen. These should have been previously created and tested in the Environment Configuration section. BPF Installer will not perform DataSource name validation.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

14. Provide the Process Engine JDBC DataSource name **{pe datasource}** and the BPF Metastore DataSource name **{meta datasource}**, and then click **Next**.

The Administrator Logon and Password Information screen will appear.

FileNet P8 Business Process Framework - InstallShield Wizard

FILENET

Please specify administrative user logon and password. This information will be used during installation time to import BPF related configuration to Process and Content Engine

User Name

Password

InstallShield

< Back Next > Cancel

Figure 12—Administrator Logon and Password Information screen

The LDAP server logon and password, {ce admin user} and {ce admin password}, should be entered here. They will be used to login to Content Engine and Process Engine in order to import manifest and transfer work flow definition to Process Engine.

15. Provide the required information and click **Next**.
The Content Engine Java API Configuration screen will appear.

FileNet P8 Business Process Framework - InstallShield Wizard

FILENET

Content Engine Java API Configuration

Content Engine Server Name

Content Engine Apache HTTP Port Number

Content Engine Object Store Symbolic Name

InstallShield

< Back Next > Cancel

Figure 13—Content Engine Java API Configuration screen

The Content Engine information you provide here will be used to update the “**WcmApiConfig.properties**” file in BPF Web Application.

16. Provide the requested information, and click **Next**.
The Workplace Location screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

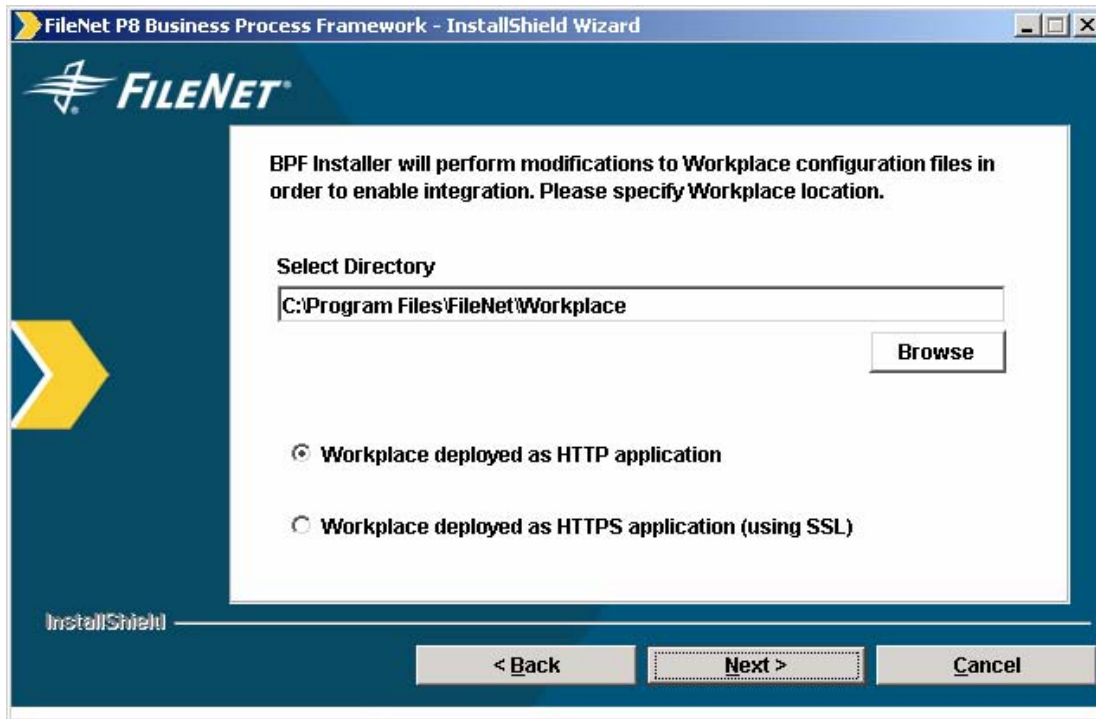


Figure 14—Workplace Location Screen

17. Enter or select the Workplace folder directory, select either HTTP or HTTPS, and click **Next**.
The Router Location Screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

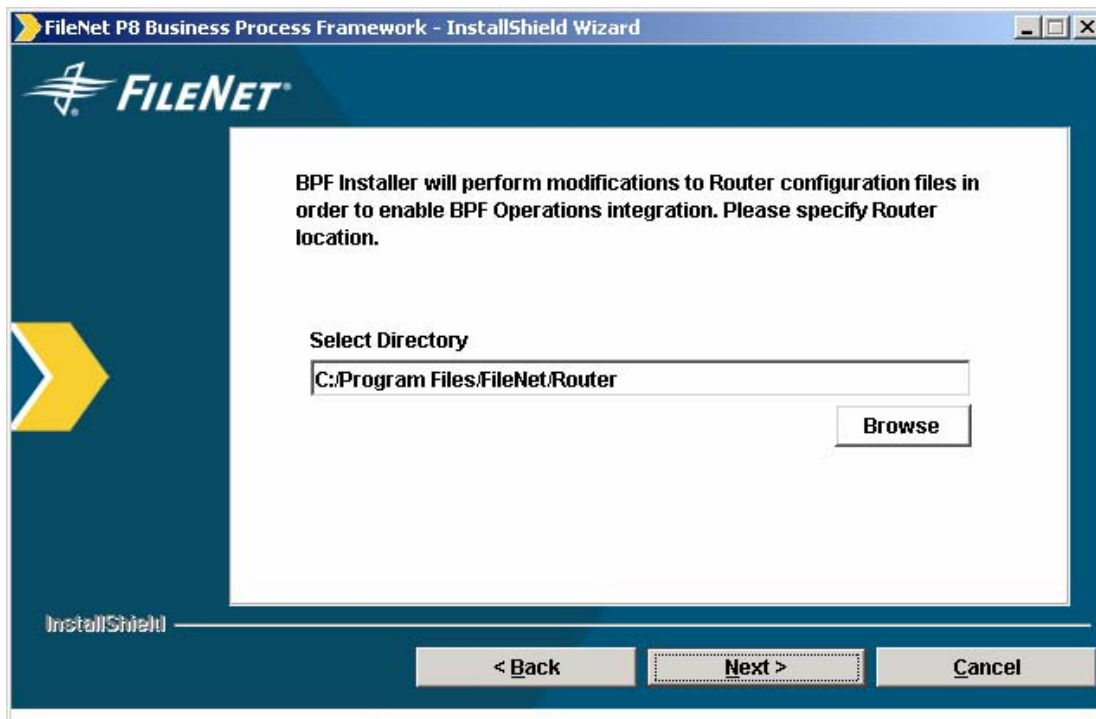


Figure 15—Router Location Screen

18. Enter or select the Router Configuration directory, and click **Next**.
The Application Engine User Security Screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Operations feature is checked.

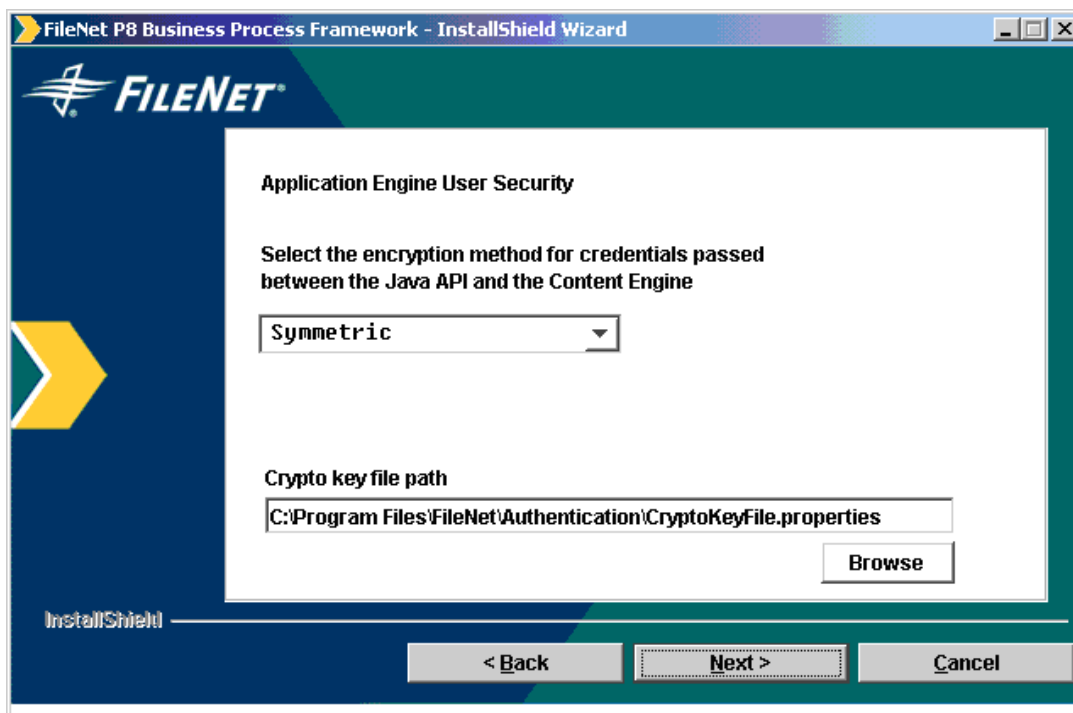


Figure 16—Application Engine User Security Screen

The Application Engine information you provide here will be used to update the "**WcmApiConfig.properties**" file in BPF Web Application.

19. Provide Application Engine user security information as follows:

NOTE Setting Clear encoding for `CredentialsProtection/UserToken` will result in nuisance logins from AE/Workplace and should be avoided. For practical purposes, Symmetric encoding should be used under all circumstances.

- a. Select credentials protection, the encryption method to protect user logon credentials passed between Application Server and the Content Engine:
 - Clear encoding - encodes credentials using base 64 encoding.
 - Symmetric encryption - uses cryptography keys to encrypt and decrypt user credentials.
 - BPF Installer program will update "`CredentialsProtection/UserToken=Symmetric or Clear`" entry in the BPF "**WcmApiConfig.properties**" file.
- b. Enter the crypto key file path. This path should point to the same file as Workplace. BPF Installer will update the entry in the "**WcmApiConfig.properties**" file.

20. Click **Next**.

The User Token Security screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

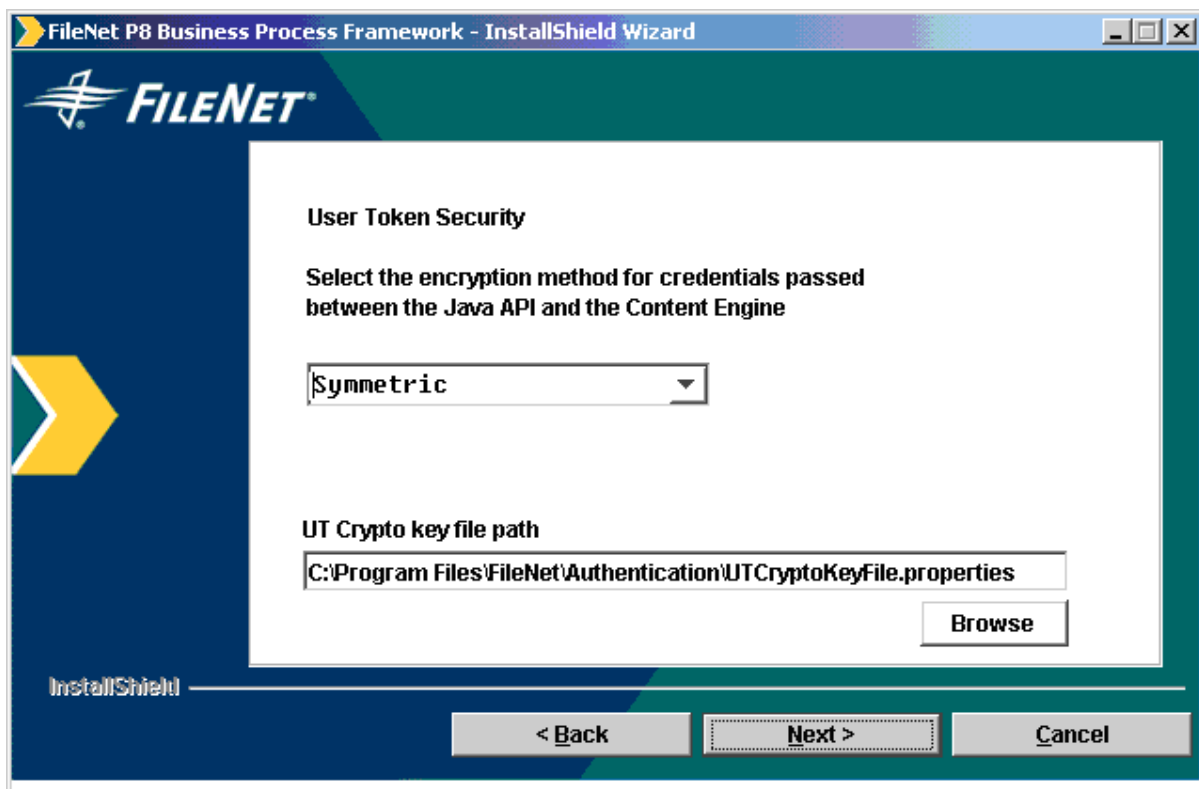


Figure 17—User Token Security Screen

The Application Engine information you provide here will be used to update the "**WcmApiConfig.properties**" file in BPF Web Application.

21. Provide Application Engine user security information as follows:

- a. Select credentials protection, the encryption method to protect user logon credentials passed between Application Server and the Content Engine:

NOTE Setting Clear encoding for `CredentialsProtection/UserToken` will result in nuisance logins from AE/Workplace and should be avoided. For practical purposes, Symmetric encoding should be used under all circumstances.

- Clear encoding - encodes credentials using base 64 encoding.
- Symmetric encryption - uses cryptography keys to encrypt and decrypt user credentials.
- BPF Installer program will update
"`CredentialsProtection/UserToken=Symmetric` or `Clear`" entry in the BPF "**WcmApiConfig.properties**" file.

- b. Enter the crypto key file path. This path should point to the same file as Workplace. BPF Installer will update the entry in the "**WcmApiConfig.properties**" file.

22. Click **Next**.

The Application Engine Router Configuration Screen will appear.

The screenshot shows a window titled "FileNet P8 Business Process Framework - InstallShield Wizard". Inside, there's a blue header with the FileNet logo. The main area is titled "Application Engine Router Configuration". It contains three text input fields: "Application Engine Server Name" with "localhost", "Application Engine Router Port Number" with "32771", and "Application Engine Router Name" with "vwrouter". At the bottom, there are three buttons: "< Back", "Next >" (highlighted with a dashed border), and "Cancel".

Figure 158—Application Engine Router Configuration Screen

Information you provide here will be used to import the workflow definition and copy queue definition to the Application Engine.

23. Enter the Application Engine Router information requested, and click **Next**.

The Documentation Server URL screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

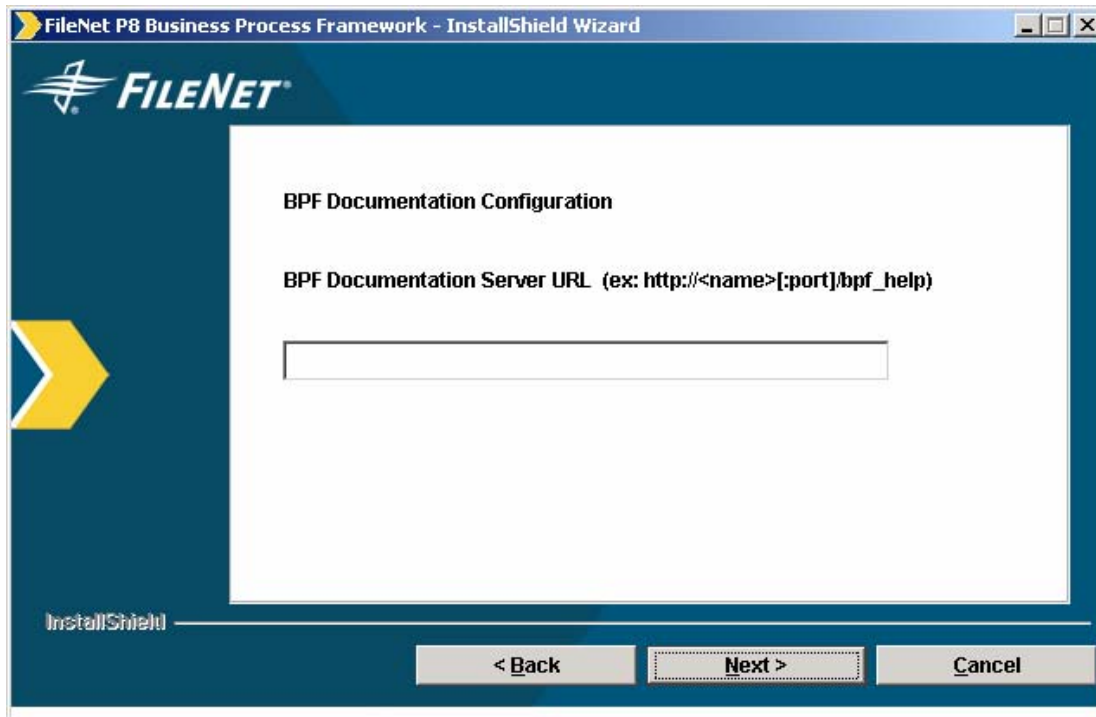


Figure 169—Documentation Server URL Screen

NOTE In this step, your entry must be in the following format:

`http://<docserver:port#>/<BPF_help>/`

where:

docserver is the name of the Java web server.

port# is the port number.

BPF_help is the root folder of the documentation website.

24. Enter the Documentation Server URL, which is where the BPF Documentation is installed, then click **Next**.

The Upload and Download Directory screen will appear.

NOTE This screen will appear with Typical Installation Feature. With **Custom Installation Feature Selection** this screen will appear only if BPF Web Application feature is checked.

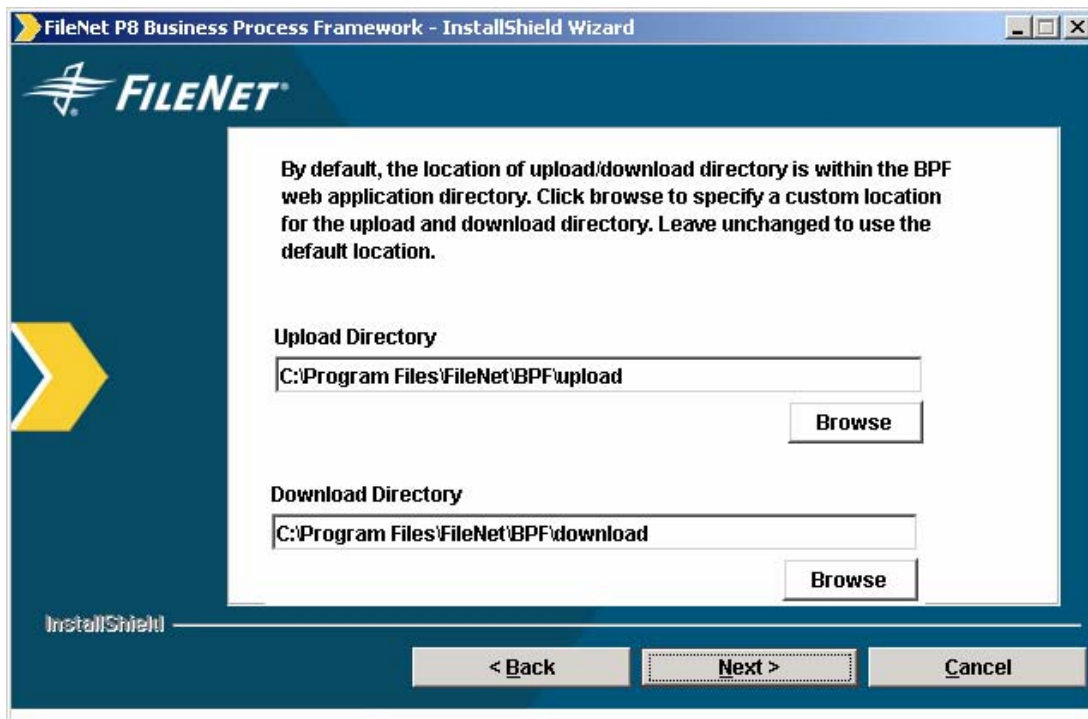


Figure 20—Upload and Download Directory Screen

25. Configure the Upload and Download Directory configuration as follows:

- a. Select the Upload Directory.

(The Upload Directory is the directory used by BPF Web Application to store temporary copies of files uploaded to BPF. Leave the default option or browse for a directory to hold the temporary upload files.)

- b. Select the Download Directory.

(The Download Directory is the directory used by BPF Web Application to store temporary copies of files downloaded from BPF. Leave the default option or browse for a directory to hold the temporary download files.)

Click **Next**.

The Product Install Summary screen will appear.

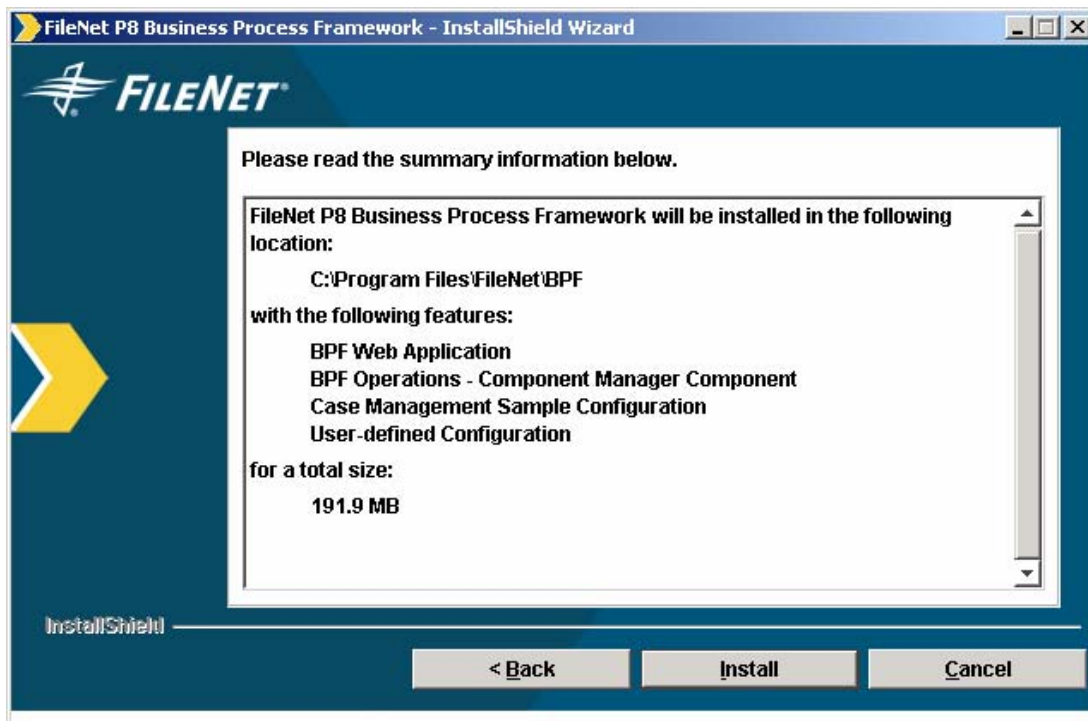


Figure 17—Product Install Summary Screen

26. Verify the target installation location and features to be installed and click **Install** to begin the installation process. FileNet P8 Business Process Framework will be installed in the location shown.

During BPF Web Application installation, the following progress bar will be displayed to indicate installation progress. Wait until the installation process is complete.

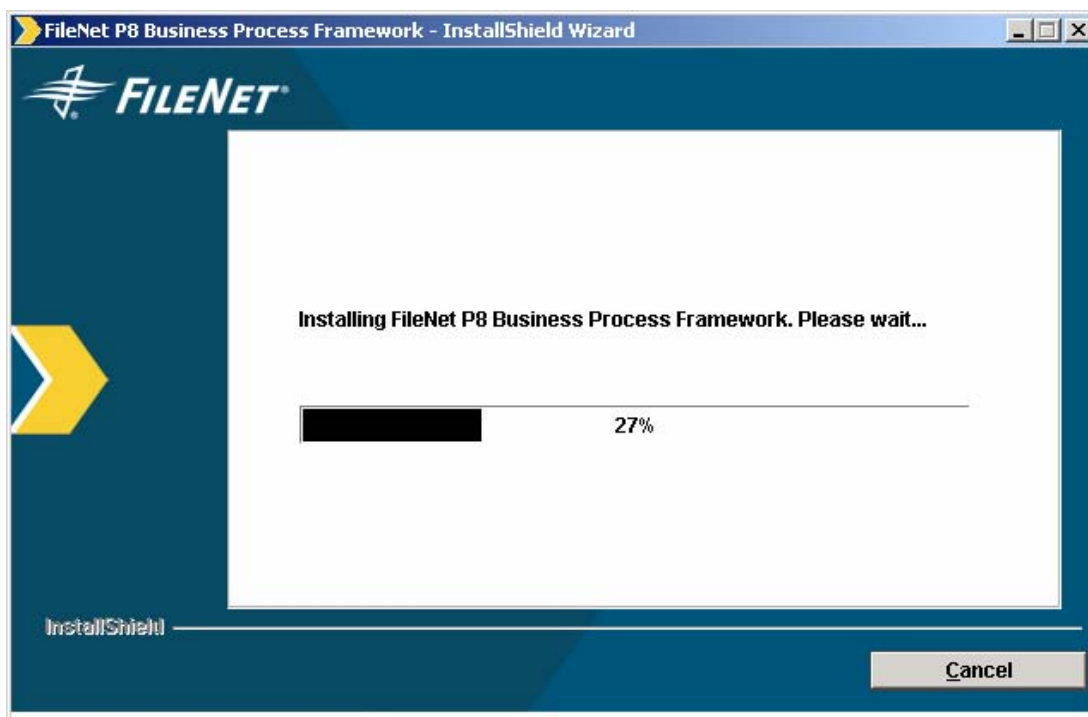


Figure 18—Installation Progress Screen

The Product Install Completion screen will appear.

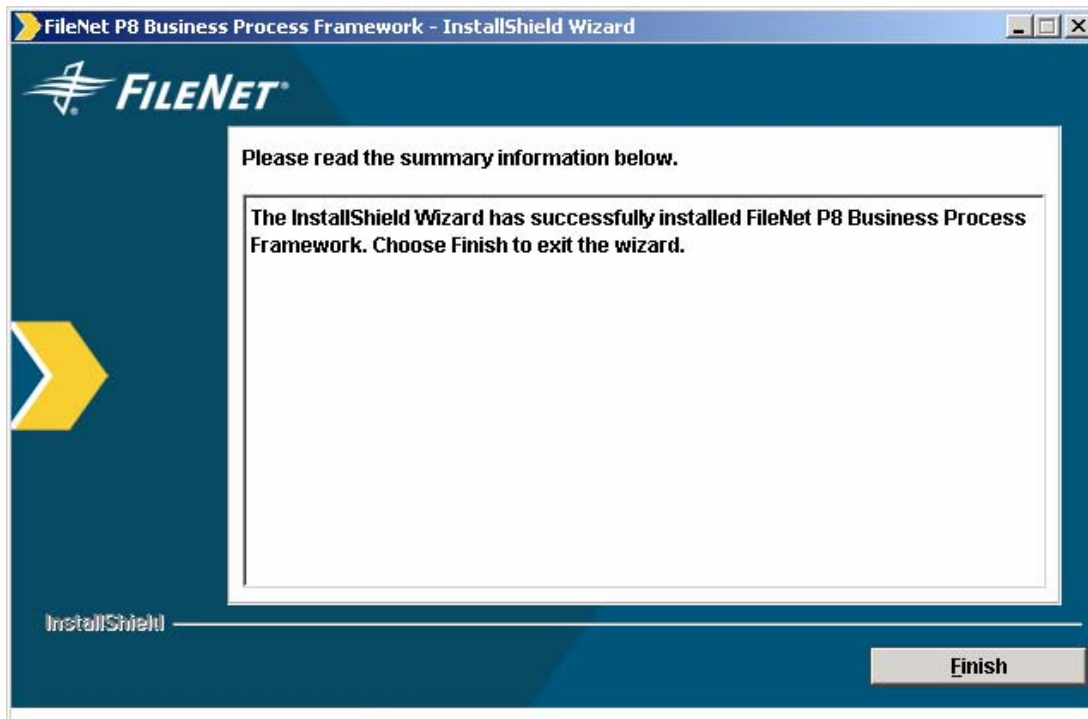


Figure 19—Product Install Completion Summary Screen (with no errors)

When the installation is complete, a summary screen is displayed which indicates the outcome of the installation process. If all components were successfully installed without error, you will receive the above message.

If some components of the installation failed to install, the summary message will reflect the specific components that did not install. Refer to the following sections which describes these errors, the potential reason they did not install, and how install them manually.

Select **Finish** to complete the installation.

Verify that all software has been installed by checking the install folders with the table below:

Folder/File		Description
{root}		
web/		Contains BPF Web Application EAR or WAR or Exploded folder format files. Web Application file format will depend upon the choices made while installing BPF Web Application.
bpfops/		BPF Operation Component package.
_uninstaller/		Uninstaller binary. Uninstaller binary will be used to uninstall BPF Web Application if required.
_jvm/		Do not delete this folder. Uninstaller binary will use java run time program from this folder to uninstall BPF Web Application if required.

Folder/File		Description
	BPFInstaller.log	Installer log file.
	BPFInstallerAnt.log	Installer creates this file to log output of Java Programs executed from installer binary in order to import BPF specific configuration to CE/PE.
	logs/	This folder contains 'bpf_donot_delete.jar' file. This JAR file contains temporary files used by installer to execute various java programs. Ignore it if install process was successful.

Running the BPF Web Application Installer (Silent)

You can install and configure BPF silently.

Windows

1. Log on to a Windows machine as a user who is a member of the local Administrators group.
2. Insert the BPF installation CD in the CD drive.
3. Copy the file BPF_silent_input.txt from the BPF installation CD to a local directory.
4. Open BPF_silent_input.txt in the local directory with any text editor, edit it according to the instructions in the file itself, and save your edits.
5. Open a DOS command-prompt window.
6. Change your current directory to the BPF installation CD directory.
7. Execute the following command, where E: is the drive assigned to the CD, and <response_file_path> is the directory path to BPF_silent_input.txt:

E:\WINDOWS\filenet_bpf_setup.exe -options "<response_file_path>\BPF_silent_input.txt" -silent

NOTE Although the command above spans more than one line, type it without carriage returns.

Check the file BPFInstaller.log, located in the <BPF install path> directory, to see if any errors occurred during the installation.

UNIX

Perform the following instructions to modify the BPF silent-install response file and launch the silent BPF install on a UNIX (AIX, HP-UX, or Solaris) machine.

1. Log on to a UNIX machine as a user with write access to the /bin directory and read, write, and execute access to the directory where you plan to install.
2. Mount the BPF installation CD in the CD drive.
3. Copy the file BPF_silent_input.txt to a local directory.
4. Open BPF_silent_input.txt in the local directory with any text editor, edit it according to the instructions in the file itself, and save your edits.

5. Change your current directory to the BPF installation CD directory.
6. Execute the following command
**<directory of CD media>/<platform>setup.bin -options
"<response_file_path>/BPF_silent_input.txt" -silent with these substitutions:**
7. Check the file BPFInstaller.log, located in the <BPF install path>, to see if any errors occurred during the installation.
8. Verify that all software has been installed by checking the install folders with the table below:

Folder/File		Description
{root}		
web/		Contains BPF Web Application EAR or WAR or Exploded folder format files. Web Application file format will depend upon the choices made while installing BPF Web Application.
bpfops/		BPF Operation Component package.
_uninstaller/		Uninstaller binary. Uninstaller binary will be used to uninstall BPF Web Application if required.
_jvm/		Do not delete this folder. Uninstaller binary will use java run time program from this folder to uninstall BPF Web Application if required.
	BPFInstaller.log	Installer log file.
	BPFInstallerAnt.log	Installer creates this file to log output of Java Programs executed from installer binary in order to import BPF specific configuration to CE/PE.
	logs/	This folder contains 'bpf_donot_delete.jar' file. This JAR file contains temporary files used by installer to execute various java programs. Ignore it if install process was successful.

Troubleshooting Errors Identified during Installation

GUI Mode

During the automatic installation process, there are connections to various system components to import and configure data and parameters. If any errors occur during the installation process, (for example if the CE server is not responding) the installer will continue to install other components and will show error messages when the installation completes, as in the example below.

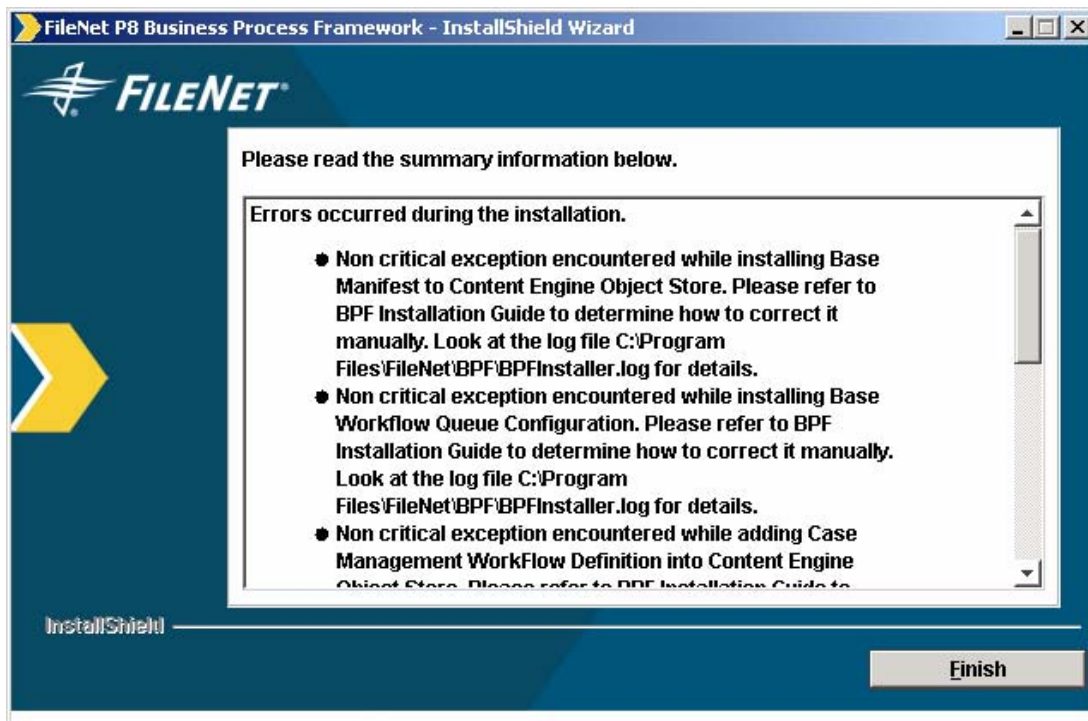


Figure 20—Product Install Completion Summary Screen (with Errors)

The following tables summarize the errors that can occur in the automated installation process. It includes the general cause of the problem, and a pointer to the specific section, located under the heading “Troubleshooting” in this document, which describe how to manually install the step that did not install.

Silent Mode

Search for Error key word from “BPFInstaller.log” file. The following table summarizes the errors that can occur in the Silent installation process. It includes the general cause of the problem, and a pointer to the specific section, located under the heading “Troubleshooting” in this document, which describe how to manually install the step that did not install.

Error In Base Manifest or Case Management Manifest

Error Message	Problem	Solution
Non-critical exception encountered while installing Base Manifest to Content Engine Object Store.	The Content Engine Base Manifest was not imported.	Refer to Import Content Engine Base Objects.

Non-critical exception encountered while installing Case Management Manifest to Content Engine Object Store.	The Content Engine Case Management Manifest was not imported.	Refer to Import Content Engine Solution-Specific Objects .
--	---	--

Error In Custom Objects Import In Content Engine

Error Message	Possible Problem	Solution
Non-critical exception encountered while installing Custom Manifest to Content Engine Object Store.	The custom CE manifest import XML file was not imported.	Use Enterprise Manager to import it manually. Refer to the FileNet P8 Platform documentation for the import procedure details.

Error In Base Or Solution Specific Workflow Object Creation

Error Message	Possible Problem	Solution
Non-critical exception encountered while installing Base Workflow Queue Configuration.	Certain base and solution specific workflow objects were not created. This might happen if the PE server was not responding.	Create Base Workflow Object manually.
Non-critical exception encountered while installing Case Management Workflow Queue Configuration.	This might happen if the PE server was not responding.	Create Solution Specific Workflow Object manually.

Error In Custom Workflow Object Creation

Error Message	Possible Problem	Solution
Non-critical exception encountered while installing custom Workflow Queue Configuration.	An error occurred during custom workflow object creation regarding the custom CE manifest import XML file.	Refer to the FileNet P8 Platform documentation to create workflow object manually.

Error In Updating Solution Specific Process Map

Error Message	Possible Problem	Solution
Non-critical exception encountered while installing Case Management Workflow Transfer.	An error occurred while installing the case management process map.	Refer to Update Process Map .

Error In Updating Custom Process Map

Error Message	Possible Problem	Solution
Non-critical exception encountered while installing Custom Workflow Transfer.	An error occurred while installing the Custom Workflow Transfer process map.	Refer to the FileNet P8 Platform documentation to create process map manually.

Error In Updating Taskman Policy File

Error Message	Possible Problem	Solution
Non-critical exception encountered while updating application engine taskman policy file.	The taskman policy file in router folder was not updated.	Refer Edit Taskman Policy.

Error In Updating Taskman Login Configuration

Error Message	Possible Problem	Solution
Non-critical exception encountered while updating application engine taskman login configuration.	The taskman login configuration in router folder in AE installation folder was not updated.	Refer to Edit Taskman Login Configuration.

Error In Updating vwtaskman.xml File

Error Message	Possible Problem	Solution
Non critical exception encountered while updating vwtaskman.xml.	The vwtaskman.xml configuration in router folder in AE installation folder was not updated.	Manually update vwtaskman.xml .

Error In Updating taskman.properties File

Error Message	Possible Problem	Solution
Non critical exception encountered while updating taskman.properties.	<p>The taskman.properties configuration in router folder in AE installation folder was not updated.</p> <p>This might happen if provided Application Engine information was not correct.</p>	Manually update taskman.properties .

Error In Updating Workplace Integration Files

Error Message	Possible Problem	Solution
Non critical exception encountered while copying Bp8ViewActions.jsp to Workplace or updating Actions.xml, infopages.xml, Integration.xml.	The Workplace files for BPF were not updated.	Manually update Workplace files per instructions in the section entitled, Workplace Integration.

BPF Deployment

Deploy BPF Web Application

This step registers BPF as a Web Application with the Web server.

IBM WebSphere 6.0

NOTE Do **NOT** change the class loader mode from the default PARENT_FIRST setting. Changing this to PARENT_LAST prevents BPF from working.

1. Install BPF Web Application (WAR or EAR) as follows:
 - a. Verify that the app_name.war or app_name.ear file was created before you continue.
 - b. From the WebSphere Administrative Console, expand Applications.
 - c. Click **Install New Application**.

The "Preparing for the application installation" dialog opens.

(If the Administrative Console is running locally) Select Local Path and browse to the location of the app_name.war or app_name.ear file created by the setup program.

The default path is:

UNIX - /opt/FileNet/BPF/web/

Windows - C:\Program Files\FileNet\BPF\web\

NOTE Do not enter the machine name.

(If the Administrative Console is remote) Select Remote File System and enter the fully-qualified path to the app_name.war or app_name.ear file.

NOTE Do not enter the machine name.

2. Enter BPF and click **Next** to proceed to deploying a new application.
 - a. Enter the context root as follows:

NOTE The context root is the name of the application you log in to using the web interface, for example, http://<WebApplicationServerName>:<port#>/<Context Root>.
 - b. On the "Preparing for the application installation" screen, leave the defaults, and click **Next**.
 - c. On the "Application Security Warning" screen, click **Continue**.
 - d. At "Install New Application", Step 1, specify the application name. Enter BPF, or the name you chose to call the application, click **Next**.
 - e. At "Install New Application", Step 2, Map modules to servers, specify the WebServer you are planning to use. Check BPF and click **Next**.
 - f. At "Install New Application", Step 3, Map Virtual Hosts for Web Modules, check BPF, keep the default virtual host (default_host), and click **Next**.
 - g. At "Install New Application", Step 4, verify your configuration and click **Finish**.
 - h. Once the configuration is saved, click **Save to Master Configuration**.

3. Stop and restart the application server, (and restart the HTTP server, if installed).
4. Start the Enterprise Application as follows:
 - a. From the Administrative Console, expand Applications.
 - b. Click Enterprise Application to the left of the BPF (or whatever you named it) application, and click **Start**.

BEA WebLogic 8.1.X

1. Start the application server.
2. From the WebLogic Server Console, <mydomain>, expand Deployments, and click **Web Application Modules**.
3. Click **Deploy a new Web Application Module**.
4. From the right pane of the WebLogic Server Console, browse to and select the radio button for the BPF folder in the <path to folder location>.

The default path is:

UNIX - /opt/FileNet/BPF/web/

Windows - C:\Program Files\FileNet\BPF\web\

5. Click **Target Module** and select BPF.
6. Verify that the Name field has the value BPF.
7. Click **Deploy**.

NOTE To verify that the deployment was successful, expand Web Applications. The web application BPF will be listed.

JBOSS

NOTE If you are running JBOSS as a service, make sure that the following directory path is included as a parameter in the command issued to the java service executable:

```
"-Djava.endorsed.dirs=%JBOSS_ENDORSED_DIRS%"
```

where JBOSS_ENDORSED_DIRS environment variable is set to =
%JBOSS_HOME%\lib\endorsed

BPF installed as folder

1. On the JBOSS server, copy the **{web application name}** folder
from: <BPF_Install_Path>/web/
to: <JBOSS_HOME>/server/default/deploy/
2. Append the extension ".war" to the **{web application name}** folder copied under
<JBOSS_HOME>/server/default/deploy/:
 <JBOSS_HOME>/server/default/deploy/{web application name}.war
3. Start the application server.

BPF installed as WAR

1. On the JBOSS server, copy the **{web application name}.war**
from: `<BPF_Install_Path>/web/`
to: `<JBOSS_HOME>/server/default/deploy/`
2. Start the application server.

Oracle Application Server/SQL Server

JVM memory setting

1. Start the Oracle Application Server.
2. From the Oracle Admin Console, select the **OC4J Instance** you previously created.
 - a. In the OC4J admin window that opens, click **Administration**.
 - b. Under Instance properties, click **Server properties**.
 - c. Under Command Line Options, edit the **Java Options** field.

Set your JVM memory settings by appending a minimum (`-Xms<value>m`) and maximum (`-Xmx<value>m`) value to the entries in the field.

CAUTION: By default the Oracle Xmx entry is set to 256 Mb. This is too small to successfully deploy the BPF application. Oracle recommends setting the Xmx entry to 512 Mb. For more information, see the *Oracle® Application Server Administrator's Guide, chapter J.3.2.5 Problems Deploying Large OC4J Applications*.

- d. Click **Apply** to apply the settings.
 - e. When prompted, click **Yes** to restart your OC4J server instance.
 - f. Click **OK** to close the confirmation window.
3. After the restart, from the console, verify that your HTTP server has been started. If not, start it now.

SQL Server JDBC Driver jar files

NOTE Only DataDirect Type4 JDBC driver for SQL Server is supported in Oracle Application Server.

1. Copy the following three jar files into **C:\ORACLE_HOME\j2ee\OC4JInstance\applib** directory of your OC4J instance.
 - sqlserver.jar
 - util.jar
 - base.jar

Deploy and configure the BPF application.

1. In the console, select the **OC4J Instance** where you want to deploy the war file.
2. Select the **Applications** tab.
3. Click **Deploy War File**.
4. Browse to and select the **BPF application .war file** from `<BPF_Install_Path>/web/` folder.
5. Provide an **Application Name** (for example, bpf).

6. Provide a map to **URL value** (for example, /bpf).
7. Click **Deploy**.
8. Once the application successfully deploys, click **OK**.

Class loading settings

After deployment, you must set the **OC4J instance** to allow for the loading of local classes first.

1. In the console, click the **OC4J instance** you created.
2. Click **Applications**.
3. Under Deployed Applications, click the **BPF application link** (or the application name specified during deployment).
4. Under Web Modules, click **bpf**.
5. Under Administration, click **Advanced Properties**.
6. Use the *Edit orion-web.xml* field to enable class loading by un-commenting the following line:

```
<web-app-class-loader search-local-classes-first="true" include-war-manifest- classpath="true" />
```
7. Click **Apply** to save the changes.
8. When prompted, click **Yes** to restart your OC4J server instance.
9. Click **OK** to close the confirmation window.

Deploy BPF Help

IBM WebSphere

1. Install BPF Help as follows:

From the WebSphere administrative console,

- a. Click on **Applications > Enterprise Applications > {web BPF name}**.
- b. Look at the Application binaries field. Record the path as {web BPF install path} on your worksheet. For example: \${APP_INSTALL_ROOT}/bp8demo35Node01Cell.
- c. Click on **Applications > Enterprise Applications > Install**.
- d. Specify path for Local file system: {staging folder}/documentation/BPF_help.war.
- e. Enter Context Root: {web BPF help name}.
- f. Press **Next** or **Continue** until Install New Application screen is reached.
- g. Enter the following:
 - i. Directory to install Application: {web BPF install path}.
 - ii. Application Name: {web BPF help name}.
(For example: BPF Help. Record from your worksheet.)
- h. Click **Next** or **Continue** until final step is reached.
- i. Click **Finish**. (A success message should be displayed.)

- j. Click **Save to Master Configuration**.
- k. Click **Save**.
2. Confirm that BPF Help functional as follows:
 - a. From the WebSphere administrative console under **Applications > Enterprise Applications**:
 - i. Check-mark {web BPF help name}.
 - ii. Click **Start**.
 - b. Invoke help: **http://{web application server}:9080/{web BPF help name}**.

BEA WebLogic

1. Install BPF Help as follows:

From the WebLogic administrative console:

 - a. Click **Deployments > Web Application Modules**.
 - b. Click **Deploy a new Web Application Module**.
 - c. Click **Upload your files**.
 - d. Browse... for {staging folder}/documentation/BPF_help.war.
 - e. Click **Upload**.
 - f. Select BPF_help.war and click **Target Module**.
 - g. Enter Name: {web BPF help name}.
(Record on your worksheet.)
 - h. Click **Deploy**.
2. Confirm BPF Help is functional as follows:
 - a. Invoke help: **http://{web application server}:7001/{web BPF help name}**.

JBOSS

1. Copy the help directory
from: {staging folder}\documentation\BPF_help
to: JBOSS directory ..\server\default\deploy.
2. Rename help directory
from: JBOSS directory ..\server\default\deploy\BPF_help
to: JBOSS directory ..\server\default\deploy\{web BPF help name}.war
3. Restart JBOSS
4. Confirm BPF help is functional by invoking:
{application server}:8080/{web BPF help name}

Oracle Application Server

1. In the console, select the **OC4J Instance** where you want to deploy the war file.
2. Select the **Applications** tab.
3. Click **Deploy War File**.

4. Browse to {staging folder}/documentation/BPF_help.war.
5. Provide an **Application Name** {web BPF help name}.
6. Provide a map to **URL value** (for example, /bpf_help).
7. Click **Deploy**.
8. Once the application successfully deploys, click **OK**.

Configure BPF Operations

The JDBC DataSource configuration and roster configuration file (bp8_config.xml) is distributed inside the bp8ciops.jar file.

Set the following XML elements as indicated:

- User: {meta user}
- Password: {meta password}
- Database: {meta database}
- Server: {meta data server}

NOTE The appropriate <JDBC> section might need to be uncommented for your database. Furthermore, because XML parser errors can occur when using BPF_Operations with Oracle if the JDBC node for MSSQL is just commented out, the node for MSSQL should be *deleted altogether* from the bp8_config.xml file contained in bp8ciops.jar.

Oracle

- Set the DBType to Oracle.
- Download classes12.jar from Oracle web site and copy it under {install.home}/bp8ciops/lib folder
- Add classes12.jar and sqlJDBCdriver_stub.jar to vwtaskman.xml in the following manner.
 - a. Start the AE router (using routercmd).
 - b. Stop the Component Manager (in the AE Router).
 - c. Go to the Required Libraries tab.
 - d. Add classes12.jar and sqlJDBCdriver_stub.jar library listed above.

Microsoft SQL Server

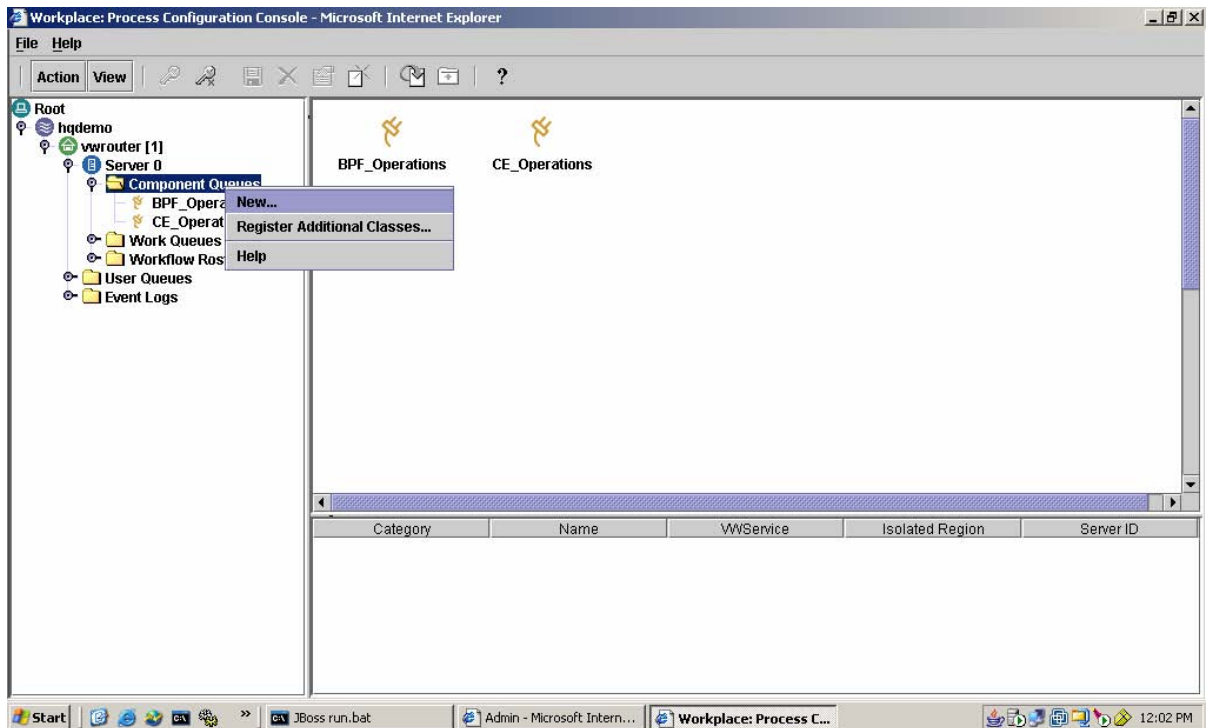
- Set the DBType to msSQL.
- Download jtds-0.8.jar JAR from SourceForge.net (<http://sourceforge.net>) and copy it under {install.home}/bp8ciops/lib folder
- Add jtds-0.8.jar and oracleJDBCdriver_stub.jar to vwtaskman.xml in the following manner.
 - a. Start the AE router (using routercmd).
 - b. Stop the Component Manager (in the AE Router).
 - c. Go to the Required Libraries tab.
 - d. Add jtds-0.8.jar and oracleJDBCdriver_stub.jar library listed above.

DB2

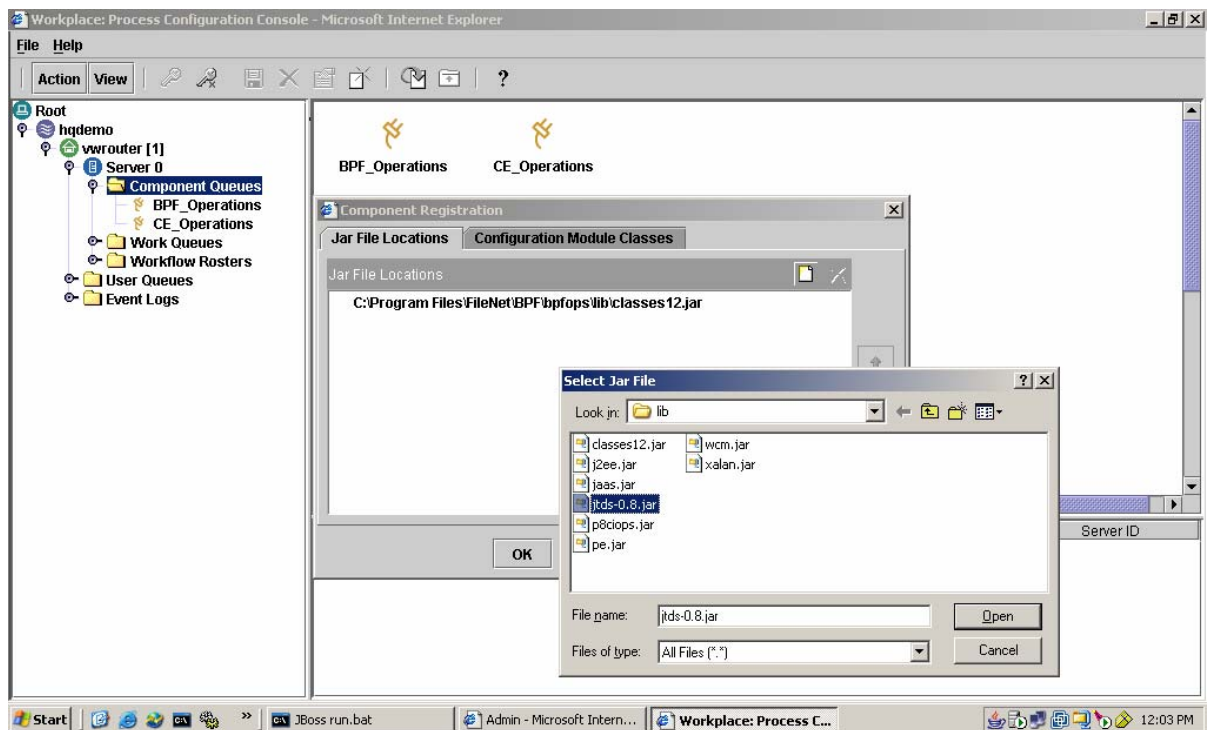
Not supported for BPF Meta database.

Edit BPF Operations Component Queue

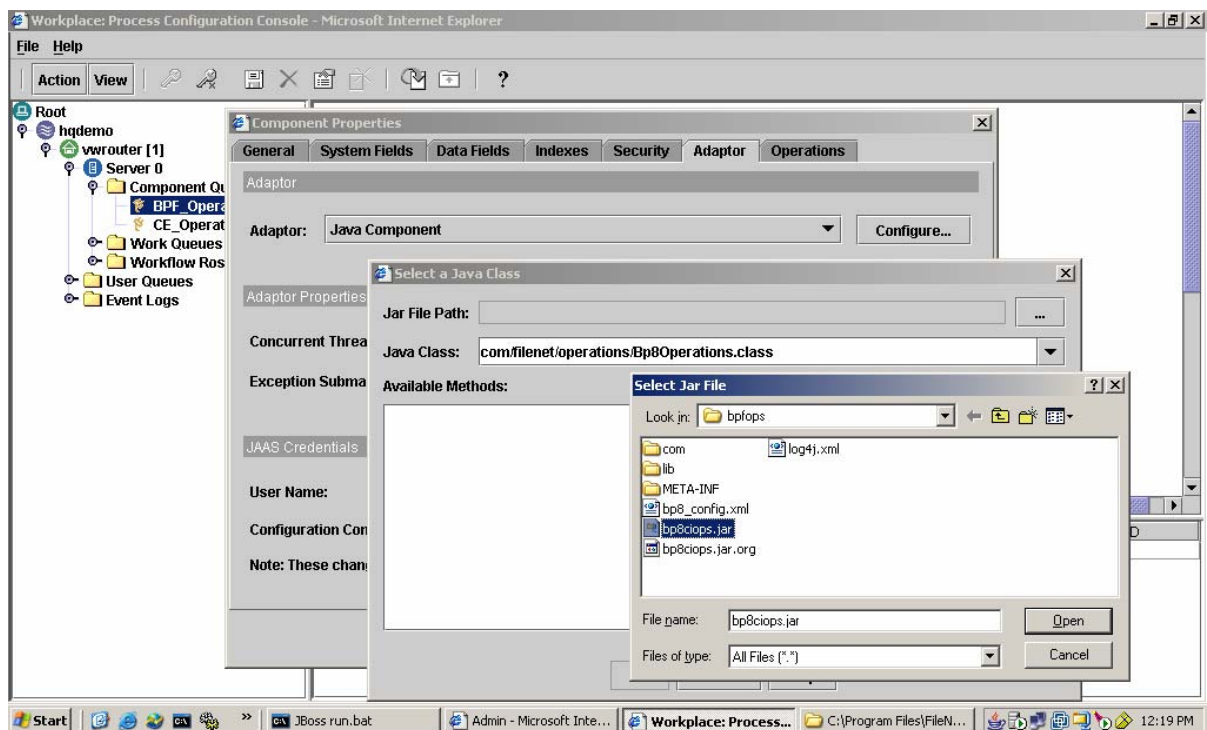
1. Run **P8 Workplace > Admin > Process Configuration Console**, right-click on the router icon for your Isolated Region and choose **Connect**.
2. Open the **Server** node for your PE Server, right-click on the **Component Queues** node, and select the **Register Additional Classes...** menu item from the resulting context menu.



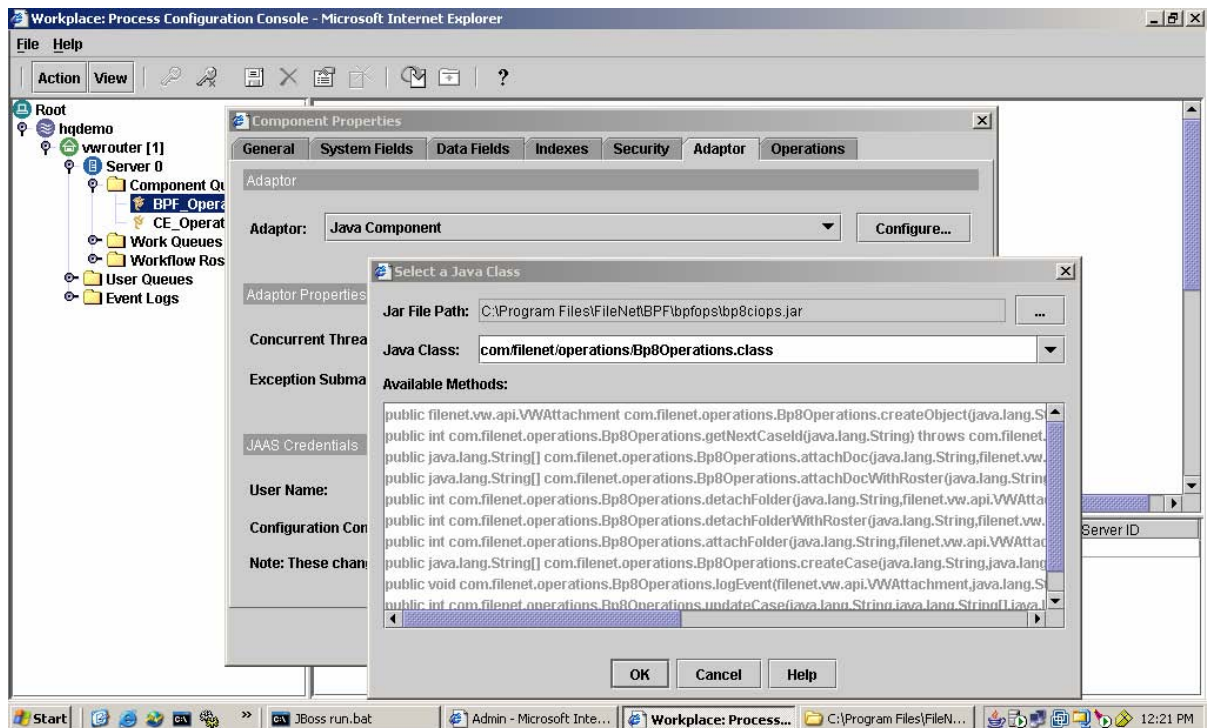
3. Using the **Jar File Locations** tab on the resulting **Component Registration** dialog that appears, navigate to the **classes12.jar** and **jtids-0.8.jar** files used by **BPF_Operations** and add them. Then click **OK**.



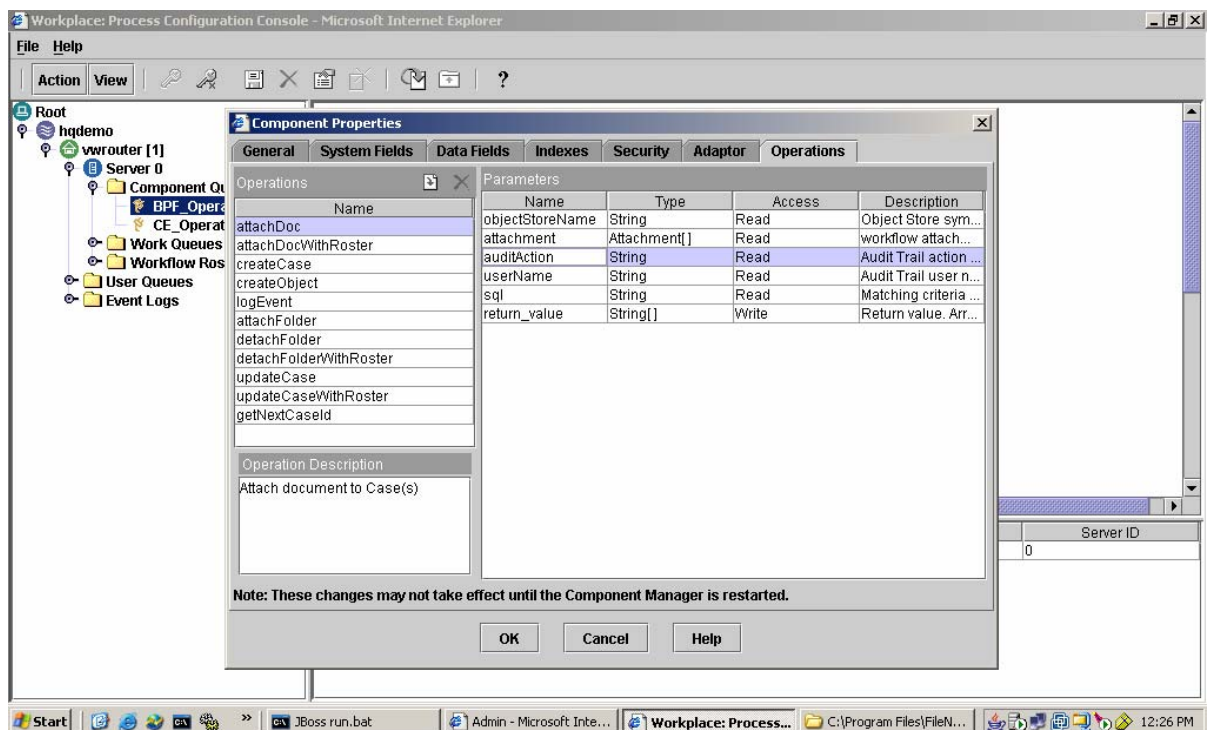
- Now right-click on the **BPF_Operations** component queue node and select **Properties...** from the context menu. Then click on the **Adaptor** tab of the resulting property page dialog. Make sure that **Java Component** is selected in the **Adaptor** dropdown, then click on the **Configure...** button (ignoring any error regarding class introspection), navigate to the **bp8ciops.jar** file that **BPF_Operations** is using and select it.



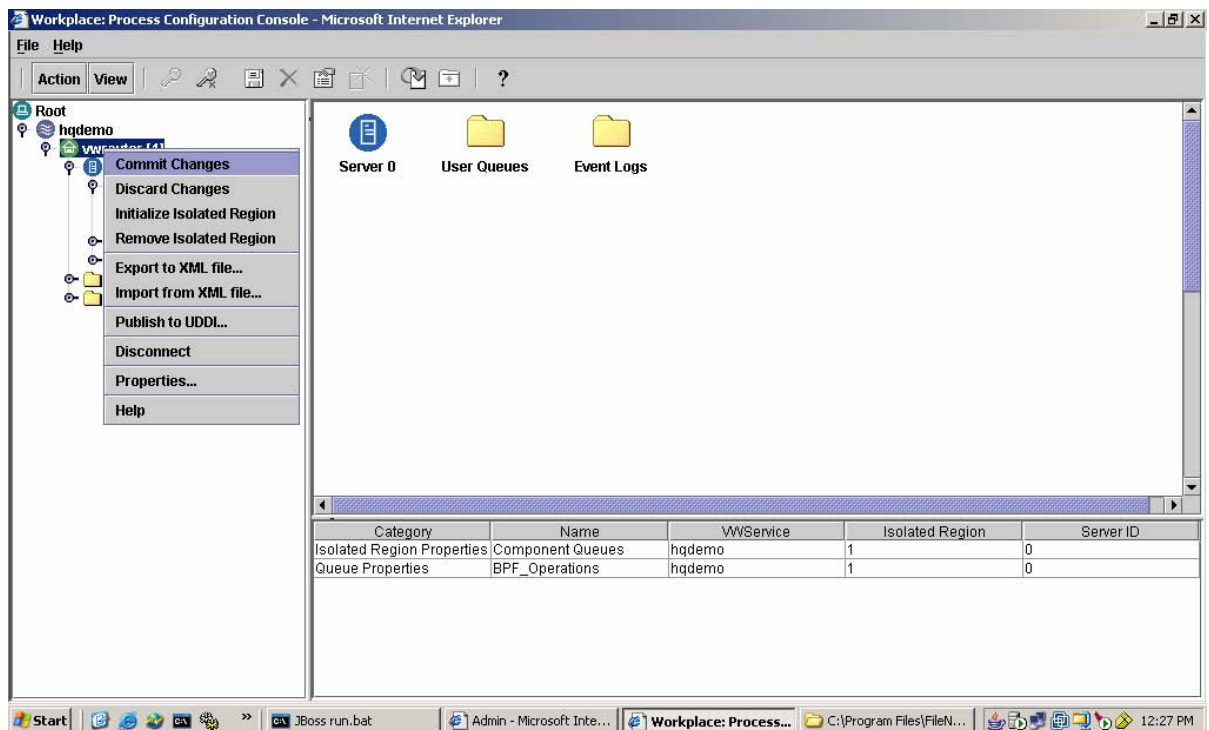
- You will now see a list of all of the available public methods in exposed by the **Bp8Operations** class. Make whatever changes are required (noting that you will not be able to remove methods once they have been exposed and configured). Then click **OK**.



- To configure individual operations that have been exposed here, click on the **Operations** tab next. Make whatever changes are required, then click **OK**.



- Commit your changes to isolated region by right-clicking on your router node and selecting **Commit Changes** from the context menu.



- Start **Process Task Manager > Component Manager**.
- Start **Process Task Manager > Component Manager > BPF_Operations**.

NOTE See [BPF Operations Logging Modification](#) for the various logging options.

Verify BPF Operations Component

Start the FileNet P8 Platform Task Manager and verify that the BPF Operations component is started in Component Manager.

Configuration Tasks

Configure Stored Searches

Configure custom object type searches for Case search.

NOTE Search templates need to be configured and stored in the CE repository in order for Search and Attach Document tool to function.

Simple Search Configuration

1. Using Enterprise Manager, create a folder for holding search templates and stored searches.
For example: Object Stores > {os display name} > Root Folder > BPF > Searches.
9. Using Search Designer (invoked from Workplace), create a search template.
For example:
 - a. Object Stores tab: Select {os display name}.
 - b. Object Types tab: Check mark Custom Object.
 - c. Object Types tab: Click **Update Subclass**.
 - d. Object Types tab: Under View, select **Editable**.
 - e. Object Types tab: Under Object Subclass, select the appropriate child class of **Bp8Case** (for the Case Management sample application, this would be Case Management).
 - f. Search Criteria tab: Under View, select **Editable**.
 - g. Search Criteria tab: Under Property, select **Bp8CaseID**.
 - h. Search Criteria tab: Under Operator, select "is equal to"
 - i. From menu: **File > Add New...**
 - j. Browse for your search folder.
 - k. Enter Document Title: BPF Case ID Search.
 - l. Click **Next**.
 - m. Click **Finish**.
10. Using Enterprise Manager, get the GUID for the folder containing the search templates. (This is achieved by right-clicking on the folder in question, selecting Properties, selecting the Properties tab, selecting All Properties as the filter, and copying the Property Value for the ID property. Save the GUID to a temporary file).
11. Find **{BPF Root}\WEB-INF\Toolbar.xml**.
 - a. Find the item section that starts with
`<Item Caption='Search' Name='Search' SearchMode='no'>`
 - b. Within that item section find the `<Action>` section with the "invokeWorkplaceObject" call. The first parameter in the "invokeWorkplaceObject" is a GUID.
 - c. Substitute the current GUID with the GUID for your search folder. **NOTE** If the invokeWorkplaceObject method is used to invoke versionable content in CE (for example, if you choose to configure it to point to an actual Search Template or other document rather than a Folder in which Searches are stored), you will need to change the GUID value here whenever a new version of the content is created. Otherwise, invokeWorkplaceObject will continue to invoke the old (original) version.
 - d. Save the changes.

12. Restart the BPF Web Application within the Web Application server.
13. Test the Search functionality when you log onto BPF (in later steps).

Set Content Engine Security

BPF Installer imports BPF specific data model files to the object store. After you have imported the required data model files to the object store, you must set the following security permissions as indicated below.

NOTE LDAP role groups refer to the LDAP groups that correspond to BPF Metastore roles.

NOTE Restart the content engine application server after applying following permissions on BPF specific classes and objects.

Groups	Security Permission Sets	Default Instance Security Permission Sets
Object Stores Realm (Top-level EM root node)		
Administrative users or groups	Full Control	
#AUTHENTICATED-USERS (or LDAP role groups)	Use stores and services	
{os display name} Root Node		
Administrative users or groups	Full Control	
#AUTHENTICATED-USERS (or LDAP role groups)	Use Object Store	
{os display name} > Other Classes > Custom Object • Bp8Object		
Administrative users or groups	Full Control	Full Control
LDAP role groups	Modify Properties	Modify Properties
{os display name} > Other Classes > Custom Object > Bp8Object • Bp8Attachment • Bp8AuditLogItem • Bp8Case and subclasses NOTE Each subclass can have different LDAP role groups assigned.		
NOTE If changing security on the object store with the object instances is already present, apply the Default Instance Security to existing instances of the classes listed above.		
Administrative users or groups	Full Control	Full Control
LDAP role groups	Modify Properties	Modify Properties

Groups	Security Permission Sets	Default Instance Security Permission Sets
{os display name} > Root Folder > BPF <ul style="list-style-type: none"> Bp8Settings object instance [search for id = B4DF1A0E-CB28-4979-B34B-F997F9E30E3D] NOTE This is the object instance, not the Bp8Settings class.		
Administrative users or groups	Full Control	
LDAP role groups	Modify Properties	
{os display name} > Root Folder > BPF <ul style="list-style-type: none"> Site Layout folder 		
Administrative users or groups	Full Control	
LDAP role groups	Modify Properties	
{os display name} > Document Class <ul style="list-style-type: none"> Document Class(es) NOTE Each document class can have different LDAP role groups assigned.		
NOTE Users should be able to create and update document properties.		
Administrative users or groups	Full Control	Full Control
LDAP role groups	Modify Properties	Modify Properties

Optional Configuration Tasks

Set Tuning Parameters

TIP Temporarily Turn Off Metadata Cache. When configuring the system, turn Metadata cache off in BPF Explorer: Application Settings > Enable Metadata cache = False.

NOTE When Metadata cache is enabled, BPF Explorer changes will take effect only after the Web Application is restarted.

Set the following parameters:

- Case ID** – Reset the Case ID back to 1 with each release or set it to a particular starting number. To make that change, locate the Settings object in the Root Folder > BPF folder in the CE repository and set the **Bp8LastCaseID** to a desired number.
- IE Cache Setting** – Set the IE cache setting to automatic on user desktops to achieve best performance. To verify or correct the browser settings, open **Tools > Internet Options > General tab > Settings** and make sure the Check for newer versions of stored pages is set to Automatically.

IBM WebSphere

Set the HTTP Connection Timeout parameter as follows:

- Increase the HTTP connection timeout from the default 5 seconds to 10 seconds or more.

2. Modify **ConnectionIOTimeout** and **ConnectionKeepAliveTimeout** parameters in WebSphere.

Changing these parameters is required to resolve timeout and xml parsing errors that might be observed on a slow or busy network connections.

3. Follow the instructions in the link:

http://www-912.ibm.com/s_dir/slkbase.NSF/c1309d212e616c9f862569ec0070adc1/b5eae9f64fa6e77286256e4e008025d3?OpenDocument

BEA WebLogic

1. Set JVM heap minimum and maximum settings to an equal number.
(This will minimize the negative performance effects of the garbage collection in java.)
2. Set the heap size to 256Mb or more on the production installation.

Index Content Engine Objects

The following properties in the CE object store need to be indexed:

Object	Index field name
Bp8Attachment	Bp8ObjectGUID
Bp8Attachment	Bp8Attachment_Bp8Case
Bp8AuditLogItem	Bp8AuditLogItem_Bp8Case
Bp8Case	Bp8CaseID

Do the following for each of the items previously listed using EM:

1. Navigate to Enterprise **Manager** > **{os display name}** > **Other Classes** > **Custom Object** > **Bp8Object**.
2. Right click on the appropriate object.
3. Select **Properties**.
4. Select **Property Definitions** tab.
5. Check the **Inherited Properties** check box.
6. Select the appropriate field name.
7. Click **Edit**.
8. Verify that the Indexed text box has value of single indexed. If not:
 - a. Click **Set/Remove** button.
 - b. Click **Set** radio button
 - c. Check **Single Indexed** checkbox.
 - d. Click **OK**.
9. Click **OK** to close properties page.

BPF Operations Logging Modification

Overview

Logging in the BPF Operations component is turned on by default using a WARNING level. The following levels are supported:

- **error** – Log errors only.
- **warning** – Log errors and warnings (default).
- **info** – Log all above and information type messages.
- **debug** – Log information on the detailed level (this option can generate large file).

By default, logging is directed to the **bp8operations** file located in the **JAVA_HOME/bin** folder. A new empty log is created at the end of each day.

Extract XML File

Extract **log4j.xml** from the **bp8ciops.jar** package using **WinZip** or another tool.

Modify XML File

Modify the following sections of the **log4j.xml** file:

- **Log File Name**

```
<param name="File" value="bp8operations.log" />
```

where value = the name and the location of the log file.

NOTE The default location of log files is the `\bin` directory of the running JVM. Be aware that usage of absolute path (including drive letter) is impossible, but any relative path from bin directory of JVM directory can be used. For example: `../../logs/bp8ciops.log`.

- **Logging Level**

```
<level value = "error" /> where value = error | warning | info | debug
```

Add XML File Back

Add the **log4j.xml** file back to **bp8ciops.jar**.

NOTE Create 'production' and 'debug' level copies of **bp8ciops.jar** to simplify management.

Restart Component Manager

The Component Manager needs to be restarted for the changes to take effect.

Installation Validation

When BPF is initially installed in a development environment, it is installed with a test application configuration called the Case Management Sample Application. This application is a pre-configured application on top of BPF that can be used to test all aspects of BPF functionality.

In order to validate that the Business Process Framework and BPF Explorer components have been installed properly and correctly integrated with FileNet Content Engine, Process Engine, and Application Engine, the following steps should be performed against the Case Management Sample Application.

1. Access BPF from the following URL: <http://{web application server}:{web port}/{web BPF name}>.
2. Logon to BPF as sue
3. Create a new Case.
4. Open the case from the Index Inbasket and enter sample case field data.
5. Attach a document to the case using the Attach Document tool.
6. Open the attached content in the Viewer.
7. Perform a BPF Case Search.
8. Perform the Action – Complete on the case, then locate the case in the Review Inbasket to make sure it was dispatched.
9. Open Layout Designer (by using the Edit Layout tool).
10. Log off BPF.
11. Logon to BPF Explorer and verify all configuration data is present.
12. In order to verify that BPF_Operations are working in Component Manager, add a new document to the *Case Management Documents* document class. It must have a DocEntryStatus value of 1, and a DocType value of 1. The subscription event will launch a workflow that will create a new case. If BPF_Operations are running, you will see a new Case in the Index Inbasket.

Troubleshooting

Integrate BPF with P8 Workplace

Edit Workplace Settings

This step applies to **[New]** installations or any time Workplace is re-deployed.

This step should also be reviewed when performing BPF upgrades.

1. Set the following preferences:

Under **Workplace > Admin > Site Preferences > General**:

- Enable custom objects: **Yes**
- Add as major version: **Yes**
- Check in as major version: **Yes**

2. Execute Workplace Integration as detailed below:

Workplace Integration

NOTES

- GUID (Example: **{5309C5AF-6D24-4BDB-BB6C-71C61E7EFC53}**)

The object GUIDs shown below are examples for referencing the Case Management class from the Case Management Sample Configuration. You need to add one or more **Bp8** Case Object GUIDs representing classes in your solution. These classes would be **Bp8Case** child classes. Use FileNet Enterprise Manager to determine the GUIDS.

- URL (Example: **<http://p8demo30:7001/BPF/Bp8Main.jsp>**)

The URLs shown below are examples and might need to be changed. Consult the FileNet P8 Platform documentation.

- Folder References: All the Workplace folder references are to the deployed instance of Workplace (the instance used by the Web server).
- This procedure assumes you have imported the following CE manifests (in previous steps):
 - The base BPF manifest
 - The Case Management manifest or some other custom manifest
- You have only imported the base BPF manifest if FileNet Enterprise Manager does not show any child classes under **Bp8Case** ({os display name} > Other Classes > Custom Object > **Bp8Object** > **Bp8Case**).

Sun Solaris

NOTE Various XML files are modified as part of the Workplace integration procedure. An editor should be used that supports UTF-8 encoding.

Remove carriage returns (^M characters) from various property and .xml files as follows:

1. Change directories to Workplace .../WEB-INF.
2. Execute the following commands:
 - `find . -name "*.properties" -exec dos2unix '{}' '{}';`
 - `find . -name "*.xml" -exec dos2unix '{}' '{}';`

AIX

NOTE Various XML files are modified as part of the Workplace integration procedure. An editor should be used that supports UTF-8 encoding.

Remove carriage returns (^M characters) from various property and .xml files as follows:

1. Change directories to Workplace .../WEB-INF.
2. Execute the following commands:
 - `find . -name "*.properties" -exec dos2aix '{}' '{}';`
 - `find . -name "*.xml" -exec dos2aix '{}' '{}';`

HP-UX

NOTE Various XML files are modified as part of the Workplace integration procedure. An editor should be used that supports UTF-8 encoding.

Remove carriage returns (^M characters) from various property and .xml files as follows:

1. Change directories to Workplace .../WEB-INF.
2. Execute the following commands:
 - `find . -name "*.properties" -exec /{Staging Folder}/dos2ux.sh '{}' '{}';`
 - `find . -name "*.xml" -exec /{Staging Folder}/dos2ux.sh '{}' '{}';`

Edit Infopages.Xml

NOTE Lower case alpha hex digit characters should not be used for the id (GUID) parameters in Actions.xml and InfoPages.xml. Due to a limitation in Workplace, specifying {92689f34-9f53-44ce-85ef-2d561e50d139} instead of {92689F34-9F53-44CE-85EF-2D561E50D139}, for example, as a GUID value in the InfoPages.xml and Actions.xml files (for the Bp8Case custom object class) will fail to work. Workplace will not pick up the value. Only upper case alpha hex digit characters should be used.

See the procedure introduction for background information. The items in italics are not entered; they are shown in the example below for context only.

Edit InfoPages.xml in Workplace...\WEB-INF as follows:

Add the following section:

```
<object key="objectInfoPages" version="3.0">
  <list key="pages">
    <object key="infoPage">
      <array key="objectTypes">
        <value>customobject</value>
```

```
        </array>
        <array key="classes">
            <value>{92689F34-9F53-44CE-85EF-2D561E50D139}</value>
        </array>
        <setting key="url">http://{web app server}:{web port}/{web BPF
name}/Bp8IntegrationServlet?_commandId=9000</setting>
        <setting key="isPopup">true</setting>
        <setting key="popupHeight">550</setting>
            <setting key="popupWidth">650</setting>
        <setting key="useToken">true</setting>
    </object>
</list>
</object>
```

NOTE The <object key="infoPage"> subsection can go at the end of the <list key="pages"> section. Search for </list>.

Edit Actions.Xml

NOTE Lower case alpha hex digit characters should **not** be used for the id (GUID) parameters in Actions.xml and InfoPages.xml. Due to a limitation in Workplace, specifying {92689f34-9f53-44ce-85ef-2d561e50d139} instead of {92689F34-9F53-44CE-85EF-2D561E50D139}, for example, as a GUID value in the InfoPages.xml and Actions.xml files (for the Bp8Case custom object class) will fail to work. Workplace will not pick up the value. Only upper case alpha hex digit characters should be used.

See the procedure introduction for background information. The items in italics are not entered; they are shown in the example below for context only.

Edit Actions.xml in Workplace...\WEB-INF. Add the following sections.

Top Level Actions

Add the following section to the <array key="topLevelActions"> section:

```
<!-- top level actions -->
<array key="topLevelActions">
    <value>openCase</value>
</array>
```

Action Definitions

Add the following section to the <list key="actionDefinitions"> section:

```
<list key="actionDefinitions">
  <object key="actionDefinition">
    <setting key="id">openCase</setting>
    <setting key="title"
localizationKey="server.Actions_xml.openInCaseQuery">Open
Case</setting>
```

```
<setting key="url">http://{web app server}:{web port}/{web BPF
name}/Bp8IntegrationServlet?_commandId=9000&id={OBJECT_ID}&o
bjectType={OBJECT_TYPE}</setting>

    <setting key="img">images/action/Launch16.gif</setting>
    <setting key="hiddenForGuests">true</setting>
    <array key="objectTypes">
        <value>customobject</value>
    </array>
    <array key="classes">
        <value>{92689F34-9F53-44CE-85EF-2D561E50D139}</value>
    </array>
    <setting key="isPopup">true</setting>
    <setting key="useToken">true</setting>
    <setting key="popupHeight">550</setting>
    <setting key="popupWidth">650</setting>
</object>
</list>
```

NOTES

- The items above in braces (such as {OBJECT_TYPE}) are to be left [As Is](#) in the XML; do not substitute actual values.
- If BPF is deployed on a web farm or in a load balancing environment, {web app server} should be pointed to the name or address of the load balancer.

Edit Integration.Xml

See the procedure introduction for background information. The items in *italics* are not entered; they are shown in the example below for context only.

Edit *Integration.xml* in *Workplace... \WEB-INF*.

Add the following section:

```
<object key = "propertyPageConfiguration" version = "3.0">
    <list key = "commands">
        <object key = "command">
            <setting key = "id">4030</setting>
            <setting key = "url">Bp8ViewActions.jsp</setting>
            <setting key = "description">View by external
request</setting>
        </object>

        <object key = "command">
            <setting key = "id">4040</setting>
            <setting key =
"url">operations/WcmCheckoutObject.jsp</setting>
```

```
        <setting key = "description">Check Out Document</setting>
    </object>

    <object key = "command">
        <setting key = "id">4050</setting>
        <setting key =
"url">operations/WcmCancelCheckout.jsp</setting>
        <setting key = "description">Cancel Checkout From
CheckoutList</setting>
    </object>

    <object key = "command">
        <setting key = "id">4060</setting>
        <setting key =
"url">wizards/WcmCheckinDocument.jsp</setting>
        <setting key = "description">Quick Check In
Document</setting>
    </object>
</list>
</object>
```

Copy Files

Copy the following files to the main folder of the deployed Workplace instance (the parent folder of WEB-INF):

- **Bp8ViewActions.jsp**

These files can be found in the {staging folder}/misc/components/Workplace folder.

Reload XML Files

Reload the XML files in Workplace.

1. Click on **Admin > Site Preferences > Refresh**.
2. Click **Reload configuration files**.

NOTE Refer to the FileNet P8 Platform documentation for further details on modifying the Actions.xml and InfoPages.xml files.

Import Content Engine Base Objects

If any error occurs during the import of the base CE objects, Installer would show an error message at the end of installation.

In such a condition use Enterprise Manager [EM] to import it manually.

Refer to the FileNet P8 Platform documentation for the import procedure details.

Base BPF Objects	{staging folder}/misc/base/config/ce_base.xml
-------------------------	--

Import Content Engine Solution-Specific Objects

If any error occurs during the import of the solution specific CE objects, the Installer will show an error message at the end of installation.

In such a condition use Enterprise Manager [EM] to Import it manually.

Refer to the FileNet P8 Platform documentation for the import procedure details.

Case Management Sample Configuration	<code>{staging folder}/misc/solutions/case_management/config/ce_cm.xml</code>
---	--

Base Or Solution-Specific Workflow Object Creation

Certain base and solution specific workflow objects were not created during the BPF Installer. To perform this manually, replace the following parameter values:

Replace Parameter Values for Base Configuration

1. Find the {XML File}. The standard XML files can be found at:
`{staging folder}/misc/base/config/`
(base: "qcreate_base.xml" solution specific "qcreate_cm.xml")
2. Locate the section in the {XML File} similar to the following:
`<Logon UserName="Administrator" Password="password"
RouterPath="rmi://localhost:32771/vwrouter"/>.`
3. Set the following parameters appropriately:
 - UserName: {pe admin user}
 - Password: {pe admin password}
 - RouterPath: Consult the FileNet P8 Platform documentation for the PE router path.
4. Copy Queue Definition File To Temporary Folder as follows:
Copy the {XML File} to the `{temp.folder}/wfutil` folder.
5. Copy Wfutil From Staging Folder To Temporary Folder as follows:
Copy the contents from `{staging folder}/misc/wfutil` to
`{temp.folder}/wfutil` folder.
6. Run Workflow Utility Script as follows:
Execute the instructions below for the wfutil utility.
This utility resides in the `{temp.folder}/wfutil` folder.
 - wfutil needs to be executed from the temporary folder.
 - An output log file named wfutil.log is created in the \logs folder and will contain the results of the wfutil execution.
 - wfutil never deletes any workflow objects. It can only update existing workflow object definitions (queue, roster, event log) or create new objects.

Sun Solaris

- a. Reset attributes: `chmod +x wfutil.sh`.
- b. Execute script: `wfutil.sh {XML File}`.
(You will see output in the command window with the status of each task being executed.)

Microsoft Windows

- a. Execute script: `wfutil.cmd {XML File}`.
(You will see output in the command window with the status of each task being executed.)

AIX

- a. Reset attributes: `chmod +x wfutil.sh`.
- b. Execute script: `./wfutil.sh {XML File}`.
(You will see output in the command window with the status of each task being executed.)

HP-UX

- a. Reset attributes: `chmod +x wfutil.sh`.
- c. Execute script: `./wfutil.sh {XML File}`. (You will see output in the command window with the status of each task being executed.)

Update Process Map

This task has been automated in BPF Installer. If any error occurs during the update of process map, Installer would show an error message at the end of installation. In such a condition, follow under mentioned steps to use update process map.

Determine which process map to use:

Standard	No process map.
Case Management Sample Configuration	Use <code>{staging folder}\misc\solutions\case_management\config\CaseManagement.pep</code> .

Bypass this step if you are using the standard process map. Otherwise, update the process map (as described below) if this is a new installation, or if your selected process map has changed.

1. Start IE and go to <http://{web application server}:{port}/Workplace>.

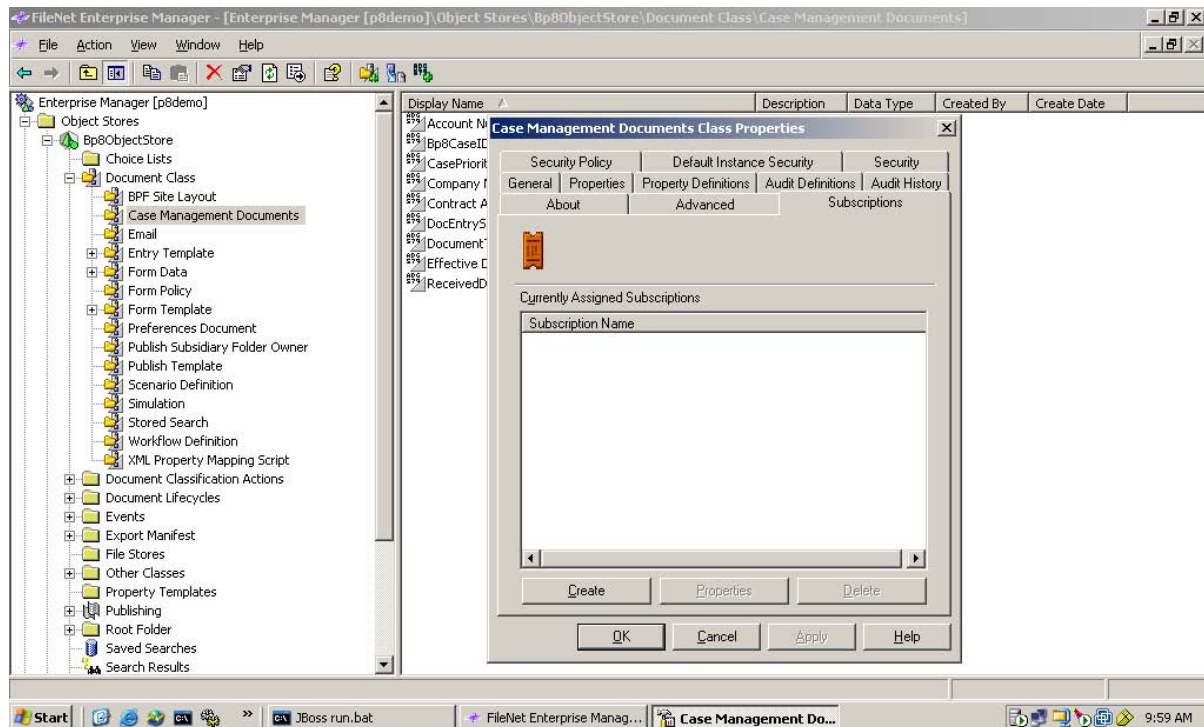
NOTE Consult your Web Application service for the correct port number.

2. Select **Author > Advanced Tools > Process Designer** from the Workplace menu.
3. Select **File > Open...** and navigate to the pep file.
4. Click **File > Validate**. (There should be no errors.)
5. Select **File > Transfer**. (Save workflow to desired folder location. Transfer should be successful.)
6. Select **File > Exit**. (Check in the workflow.)

Create Workflow Subscription on the CE Case Management Documents Document Class

Bypass this step if you are not using the standard process map (Case Management Sample Application). If you are using the Case Management Sample Application, it will be necessary to create and configure this Workflow Subscription so that the creation event for new **Case Management Documents** objects will trigger the launch of new workflows that will either create new BPF Cases (with the new document attached) or attach the new document to an existing Case (depending on values configured below).

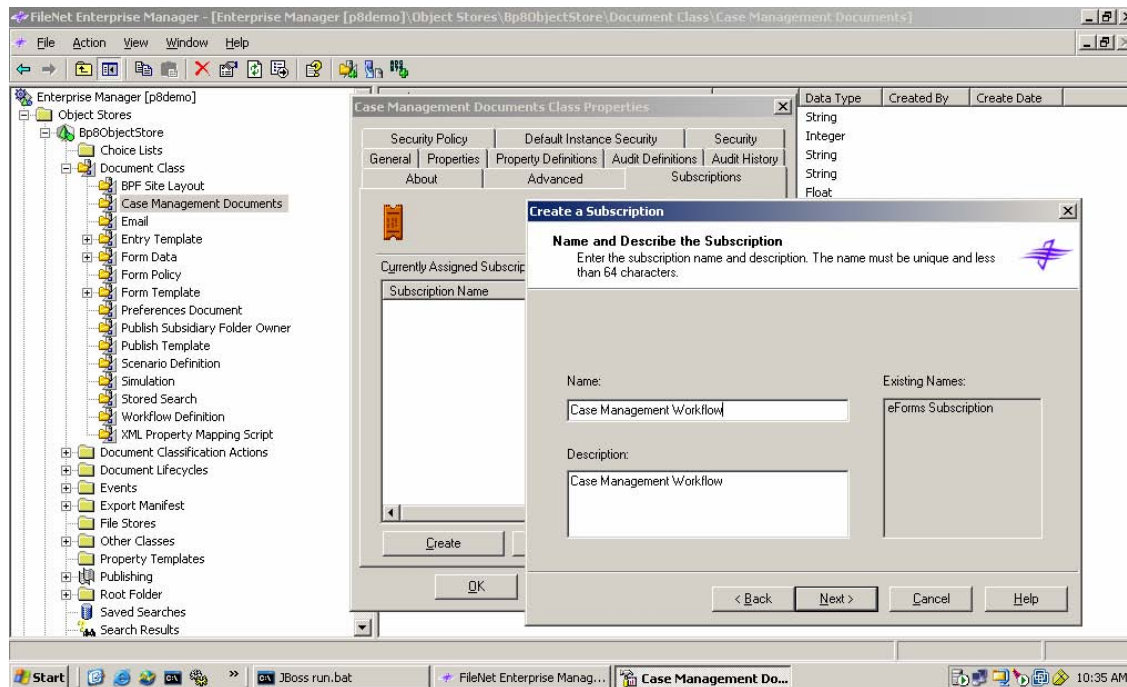
Log on to FileNet Enterprise Manager (FEM) and open the **Case Management Documents Class Properties** screen by navigating through **Object Stores > {os display name} > Document Classes > Case Management Documents**. Click on the **Subscriptions** tab and then click the **Create** button.



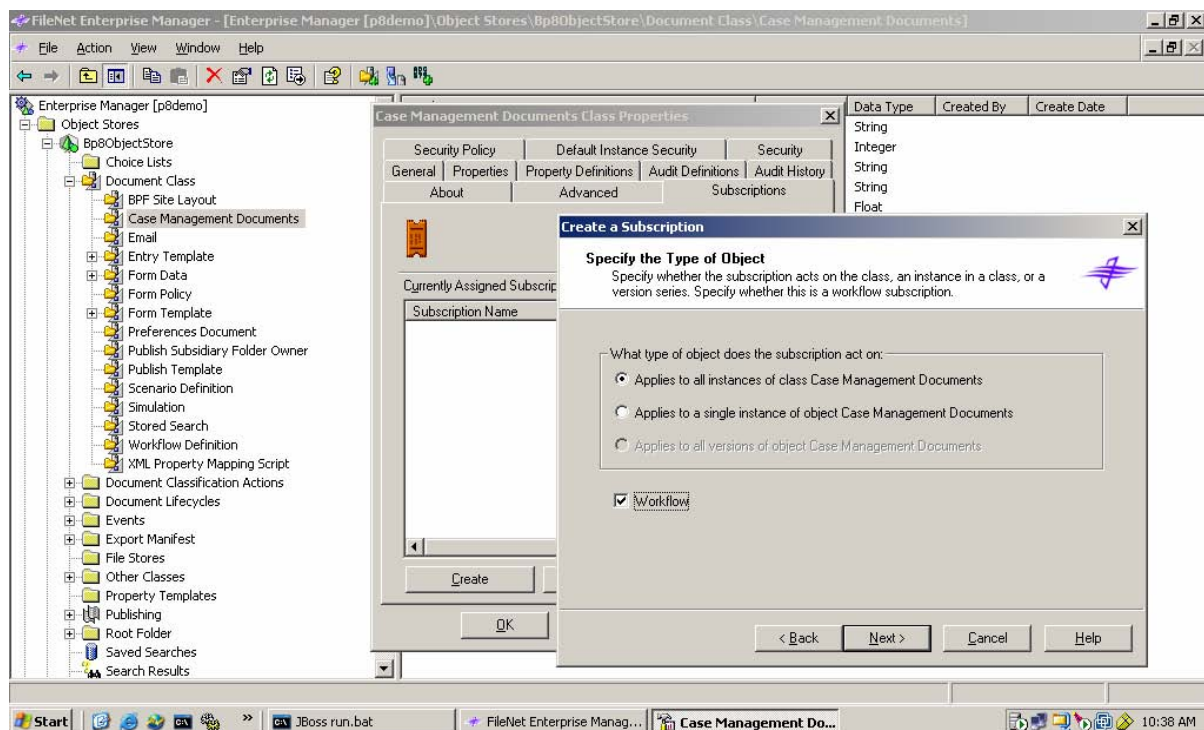
Follow the steps indicated by the Content Engine Create a Subscription Wizard. Begin by using "Case Management Workflow" for the Name and Description on the **Name and Describe the Subscription** screen. Then click the **Next** button.

IBM FileNet Business Process Framework Installation Guide

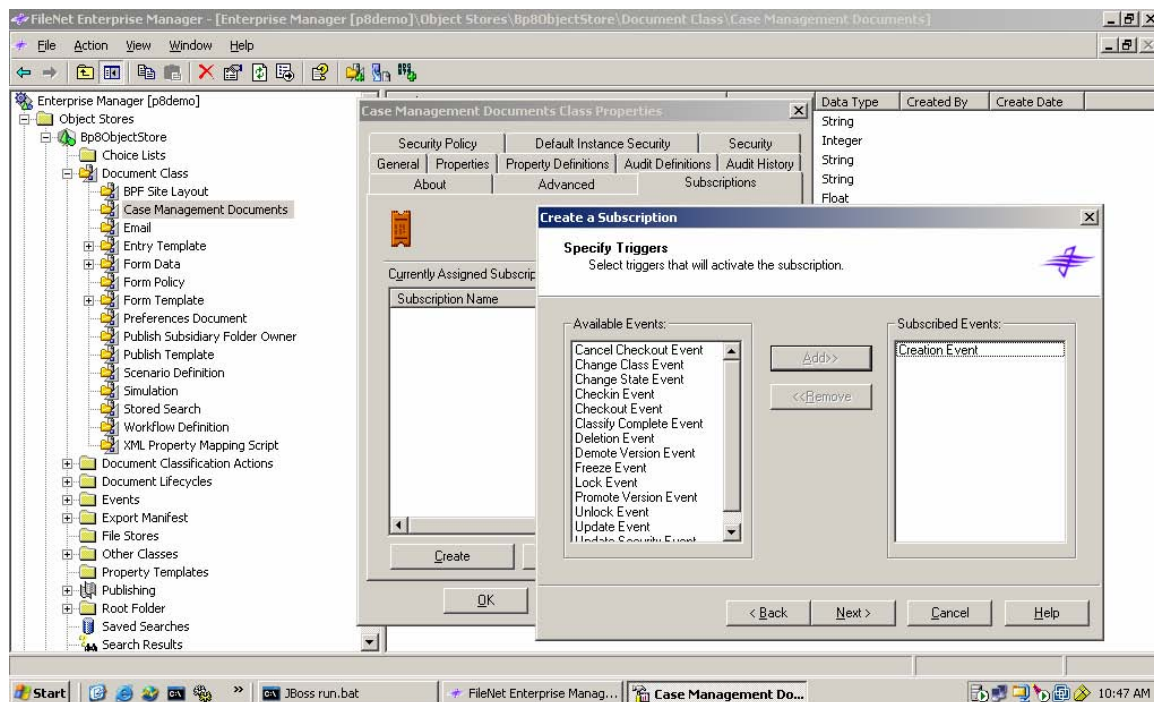
Troubleshooting



Next, on the **Specify the Type of Object** screen, click the **Applies to all instances of class Case Management Documents** radio button and make sure to check the **Workflow** checkbox. Then click the **Next** button.



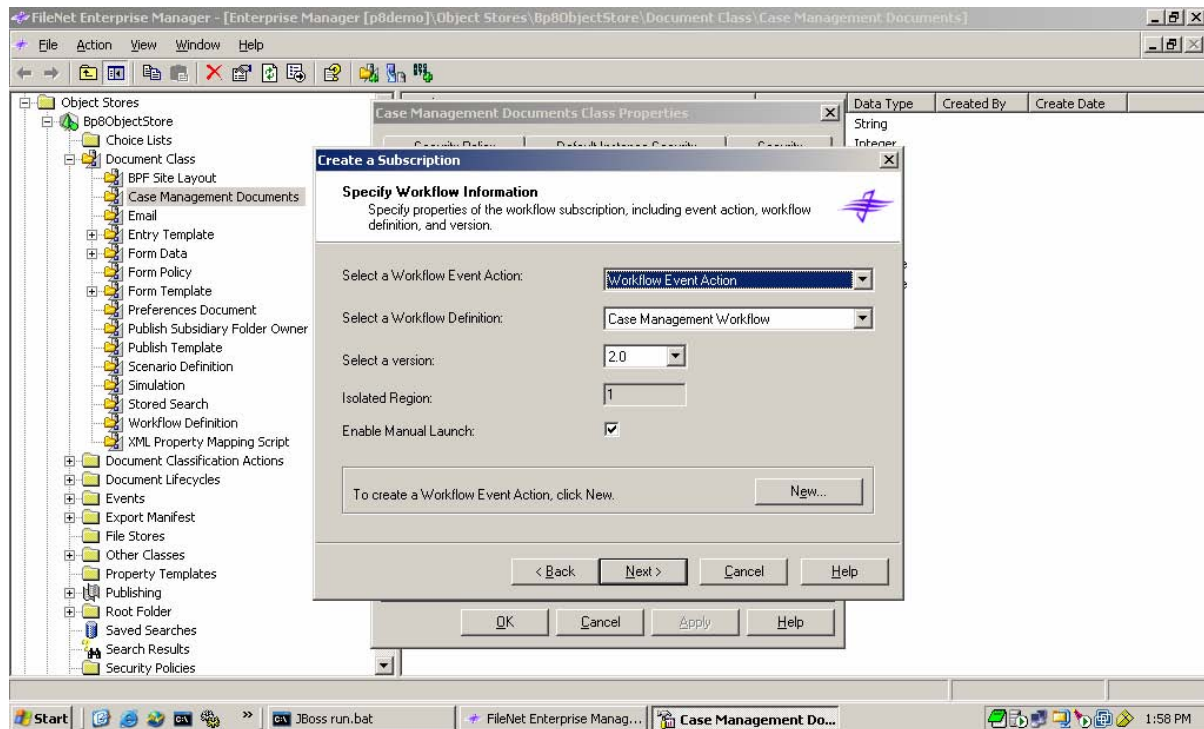
Then, on the **Specify Triggers** screen, select and highlight **Creation Event** in the list of **Available Events** on the left-hand side of the dialog, then click on the **>>** button to move it over to the list of **Subscribed Events** on the right-hand side of the dialog. Then click the **Next** button.



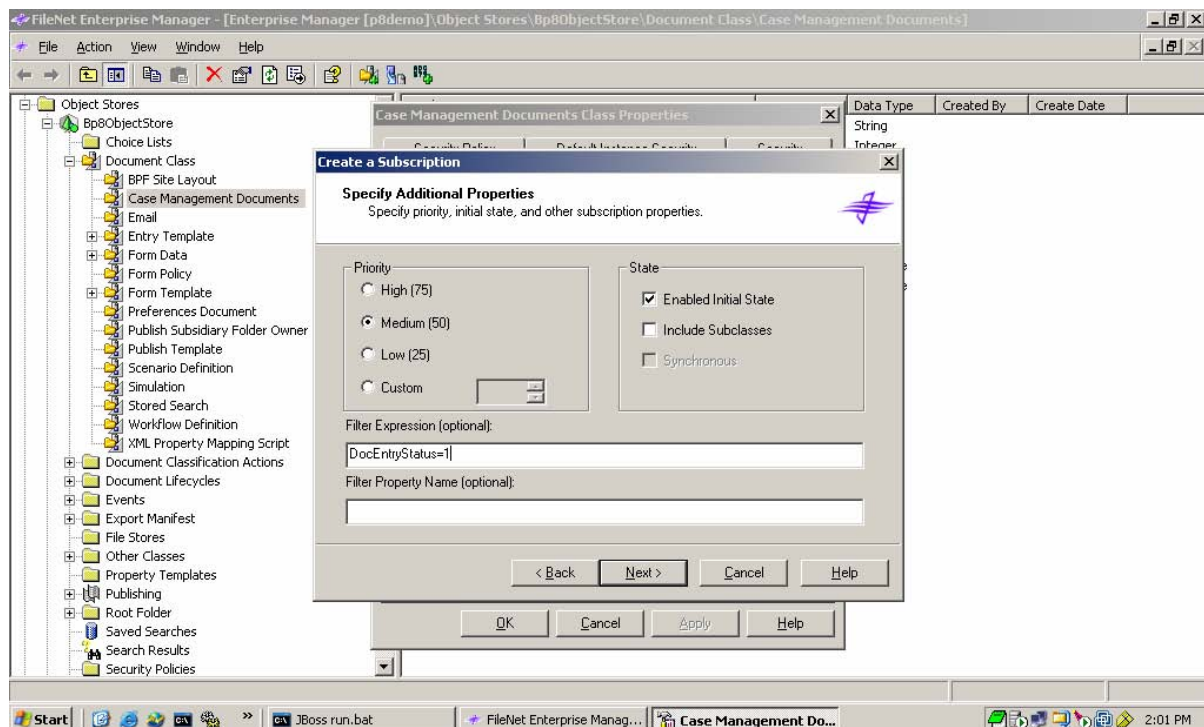
On the **Specify Workflow** Information screen that follows, leave **Workflow Event Action** selected in the first dropdown list (**Select a Workflow Event Action**) and then select **Case Management Workflow** in the second dropdown (Select a Workflow Definition). Doing this should automatically populate the third dropdown (**Select a Version**) with the number of the latest (current) version of your **Case Management Workflow**. **NOTE** Your Case Management Workflow must be saved as a **Workflow Definition** document object in your Object Store for it to appear here in the list of available Workflows. Simply transferring a Workflow Map to the Isolated Region in PE without also saving it in CE will not work. The number in the **Isolated Region** field should default to whatever is actually in use on your machine. Lastly, be sure to check the **Enable Manual Launch** checkbox before clicking the **Next** button.

IBM FileNet Business Process Framework Installation Guide

Troubleshooting



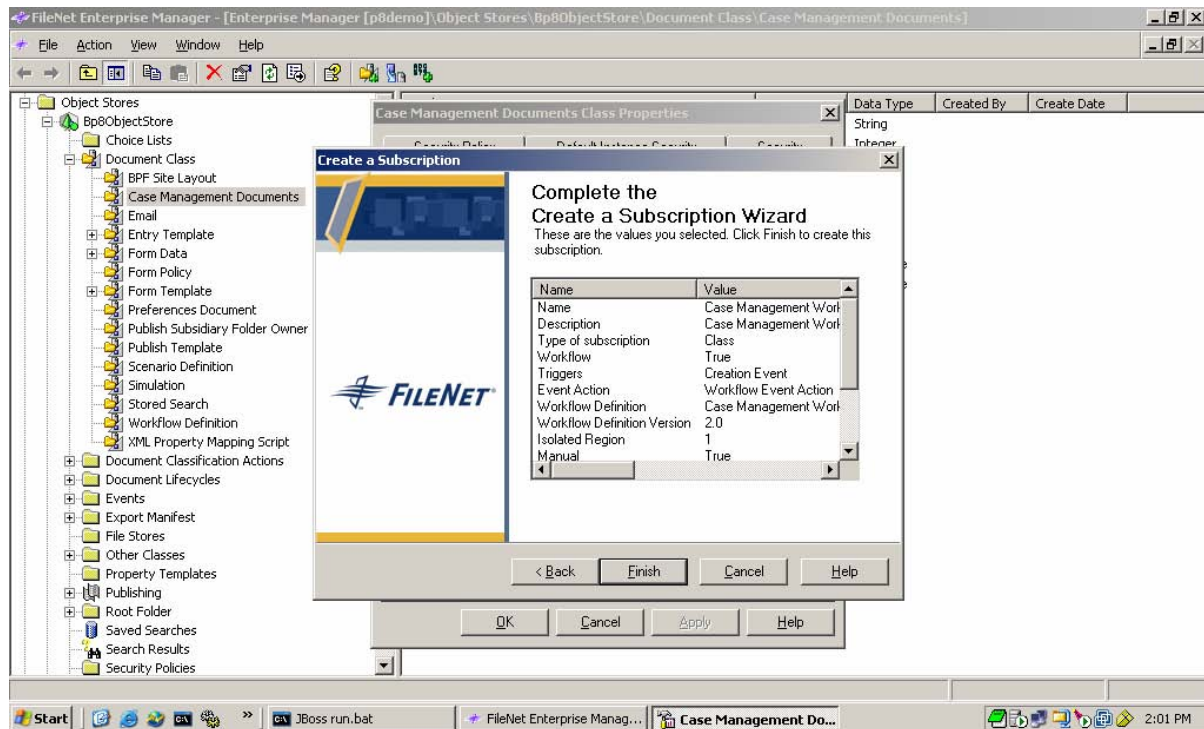
Next, on the **Specify Additional Properties** screen, enter “DocEntryStatus=1” for Filter Expression and click the **Next** button.



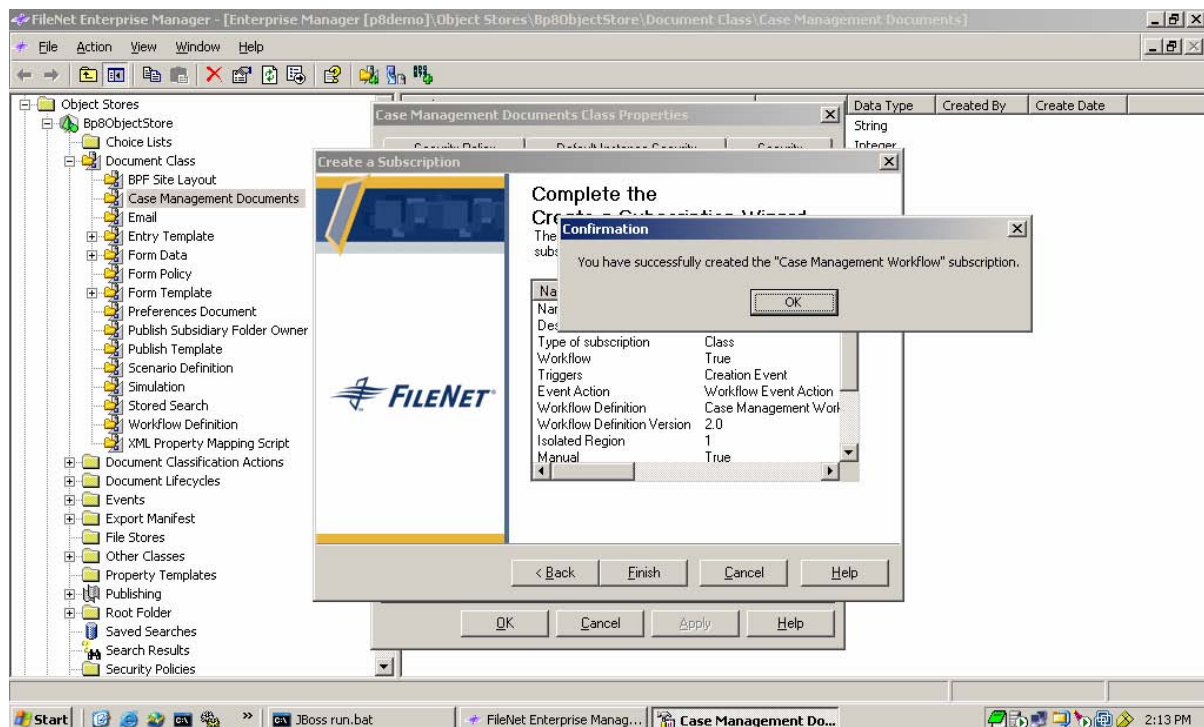
Lastly, on the **Complete the Create a Subscription Wizard** screen, confirm your settings and click the **Finish** button.

IBM FileNet Business Process Framework Installation Guide

Troubleshooting

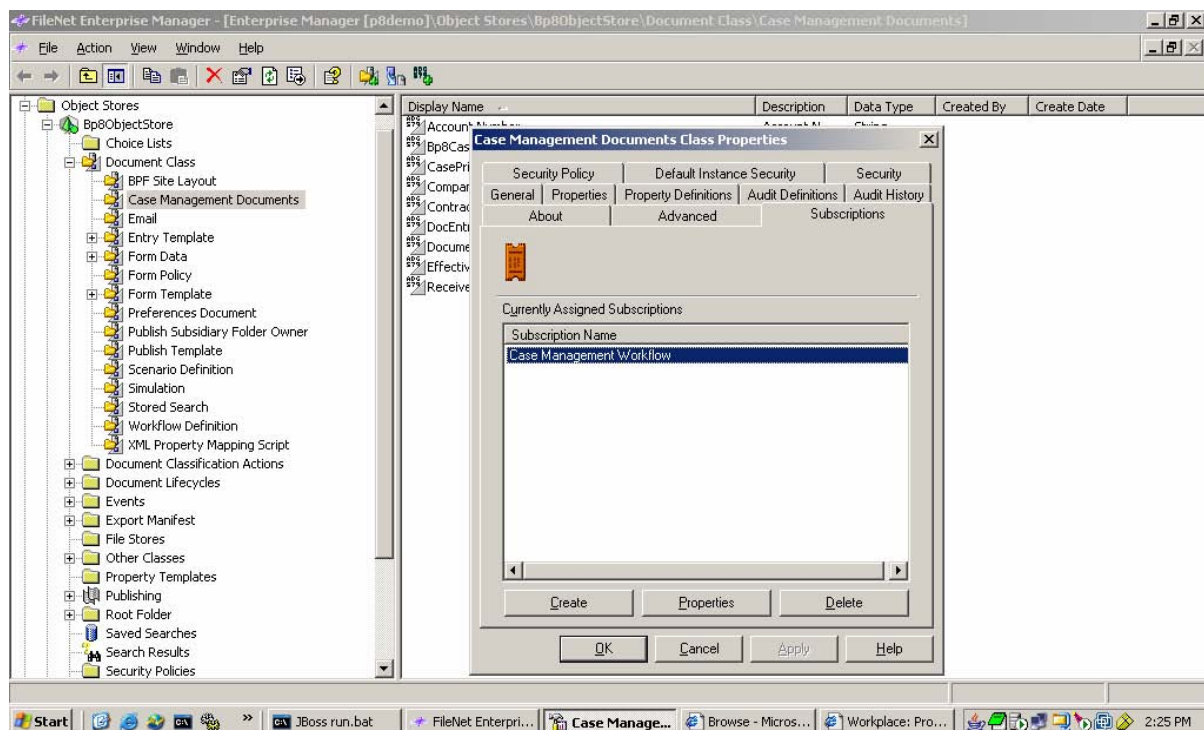


You should then see a Confirmation message indicating that you have successfully created the “Case Management Workflow” subscription.

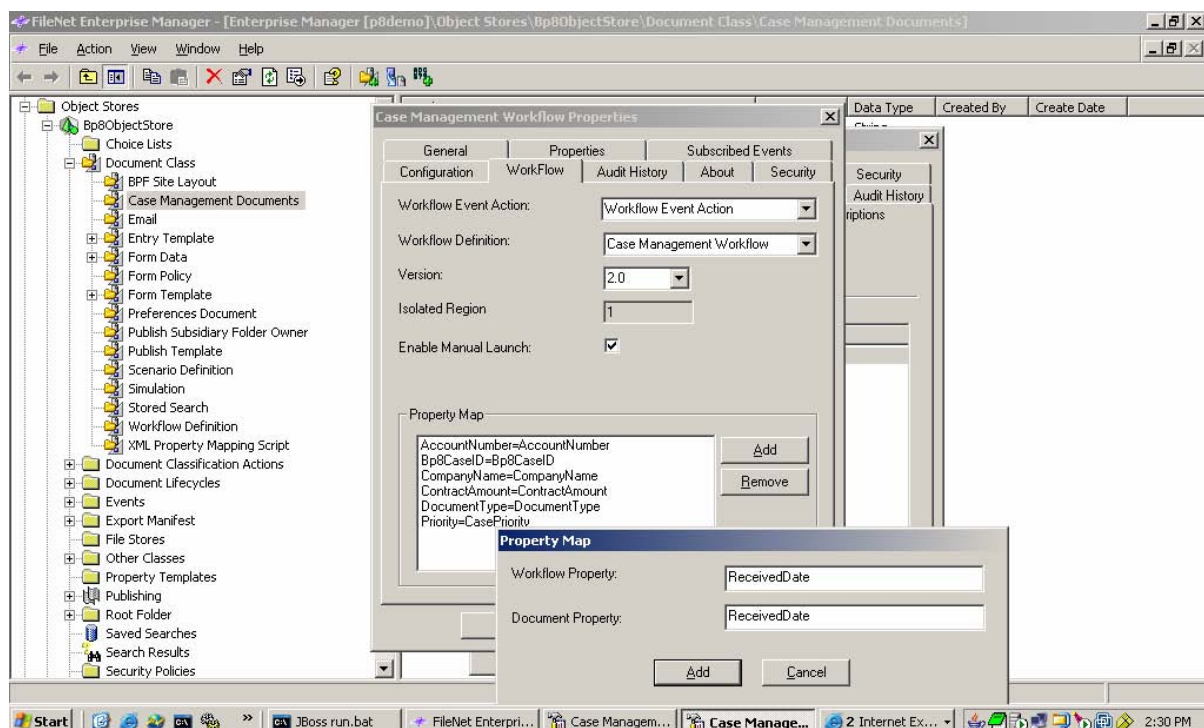


You will now need to re-open the properties for your new subscription and configure its **Property Map**. To do this, while still on the **Subscriptions** tab of the property page for your **Case**

Management Documents Class Properties screen, highlight the new **Case Management Workflow** subscription and click the **Properties** button.



Now click on the **Workflow** tab of the **Case Management Workflow Properties** screen that comes up and enter the **Property Map** settings as indicated below. **NOTE** The **Workflow Property** and **Document Property** names for the **Case Management Sample Application** are all the same except for **CasePriority** (CE) and **Priority** (PE).



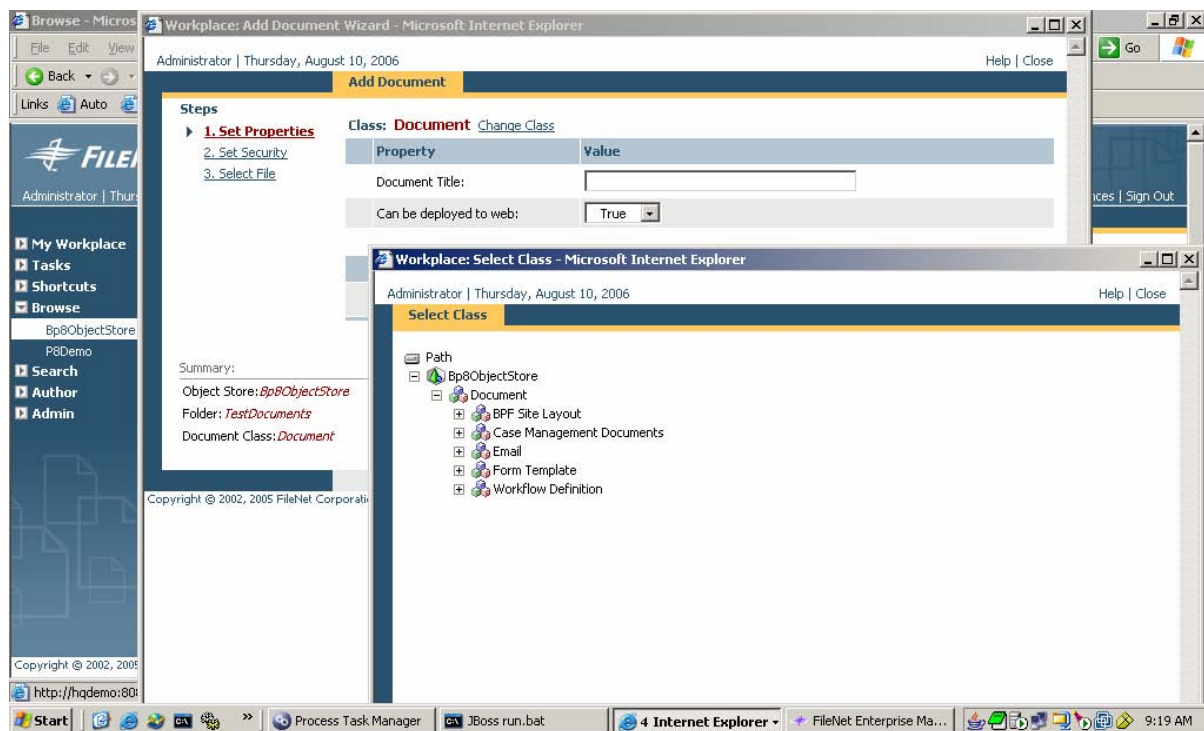
When you have finished adding the last mapping (**ReceivedDate**), click the **Cancel** button, then the **Apply** button, then the two successive **OK** buttons that you will be offered.

Test Workflow Subscription on the CE Case Management Documents Document Class

You are now in a position to test the Workflow Subscription you just created. You can do this either by creating a new instance of the **Case Management Documents** class or by launching the Workflow manually.

Launching the Workflow Subscription by Creating a New Instance

To test the Workflow Subscription by creating a new instance of the **Case Management Documents** class, log on to **Workplace**, and browse to a folder in your Object Store in which you would like to place your new documents. (**NOTE** You might need to create this folder yourself.) Once there, click on the **Add Document** link to launch the **Add Document Wizard**. Then click on the **Change Class** link and select **Case Management Documents**.



Enter document property values in the resulting screen, making sure to change **DocEntryStatus** from **None** to **DocEntry** (1). (This is because of the **Filter Expression** you set when configuring the Workflow Subscription itself.) Otherwise the Workflow Subscription you created will not be launched at all. For **DocumentType** you can then specify either **1** or **2**. If you specify **1**, the Workflow launched by the Workflow Subscription will create a new BPF Case regardless of any other values you enter here. If you specify **2**, the Workflow launched by the Workflow Subscription will check the **AccountNumber** value you specify here and try to find an existing BPF Case already in your system that has the same **AccountNumber**, attach this newly created document to it, and then terminate

itself. So, if you enter **2**, be sure to enter an **AccountNumber** value that matches that of a BPF Case already in your system.

The screenshot shows the 'Workplace: Add Document Wizard' in Microsoft Internet Explorer. The wizard is at the 'Add Document' step, showing a form for 'Case Management Documents'. The form includes fields for Document Title, Can be deployed to web, DocEntryStatus, DocumentType, CasePriority, ReceivedDate, Company Name, Contract Amount, Effective Date, Bp8CaseID, and Account Number. There are also options for 'Add as major version'. The 'Next' button is visible at the bottom right.

Property	Value
Document Title:	TestWFSubscription001
Can be deployed to web:	True
DocEntryStatus:	DocEntry
DocumentType:	1
CasePriority:	High
ReceivedDate:	08/1/06
Company Name:	FileNet
Contract Amount:	1
Effective Date:	08/1/06
Bp8CaseID:	
Account Number:	1

Options	Value
Add as major version:	Yes

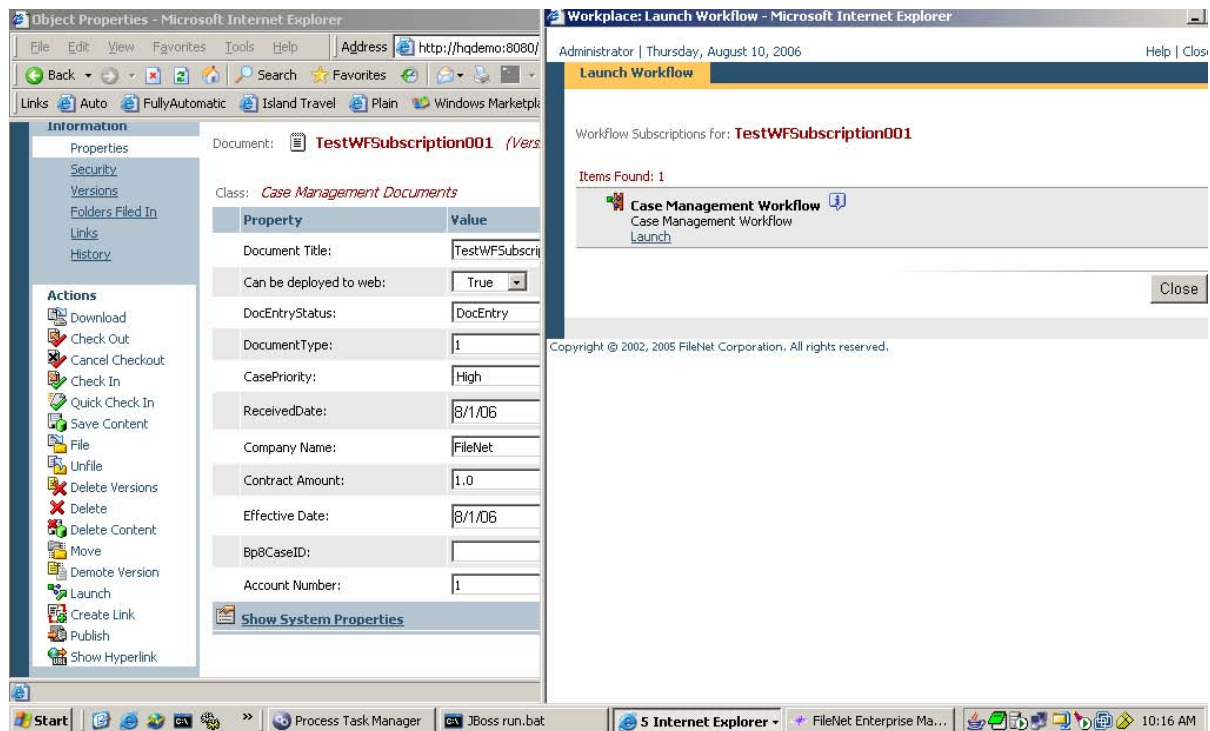
Once you have finished entering the document property values, click the **Next** button, adjust the security settings (on the resulting **Set Security** screen) as you wish (or take the defaults), then click **Next** again and, on the **Select File** screen, browse to a local file to upload as the content of this new document object. When you are done, click the **Finish** button. The Workflow Subscription should now launch a new Workflow. To check the results, log on to the BPF Web Application and see if your new BPF Case was created (if you chose **DocumentType=1**) or if your new document was attached to a previously existing BPF Case with the same **AccountNumber** (if you chose **DocumentType=2**).

Launching the Workflow Subscription Manually

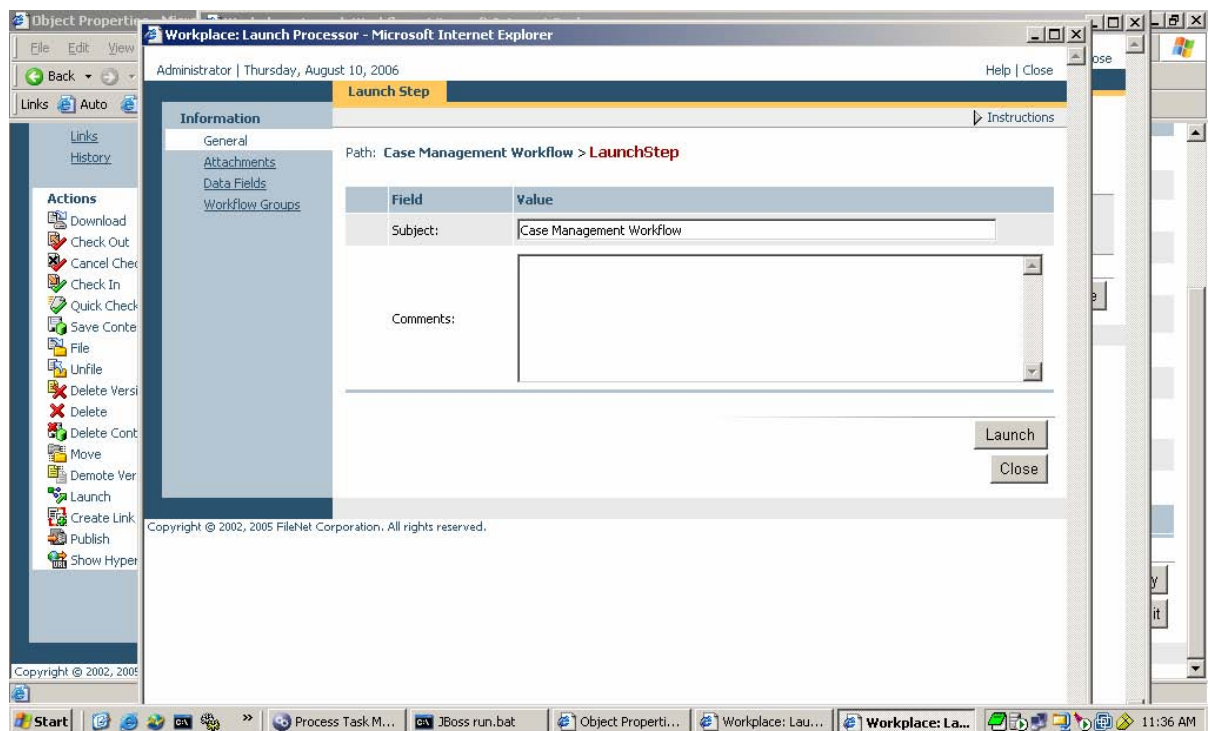
To launch the Workflow Subscription manually, either create a new **Case Management Documents** document and leave DocEntryStatus set to None (0) so that the Workflow Subscription will not fire through the Creation Event and then browse to it or browse to an existing **Case Management Documents** document in Workplace and open its Information page. Once there, make sure to change the value of the **DocEntryStatus** property to **DocEntry** (1) if it is already set to any other value. Otherwise, you will not be able to launch the Workflow Subscription at all. (This is because of the **Filter Expression** you set when configuring the Workflow Subscription itself.) Then, select **Launch** from the list of **Actions** available and you should be presented with the following screen.

IBM FileNet Business Process Framework Installation Guide

Troubleshooting



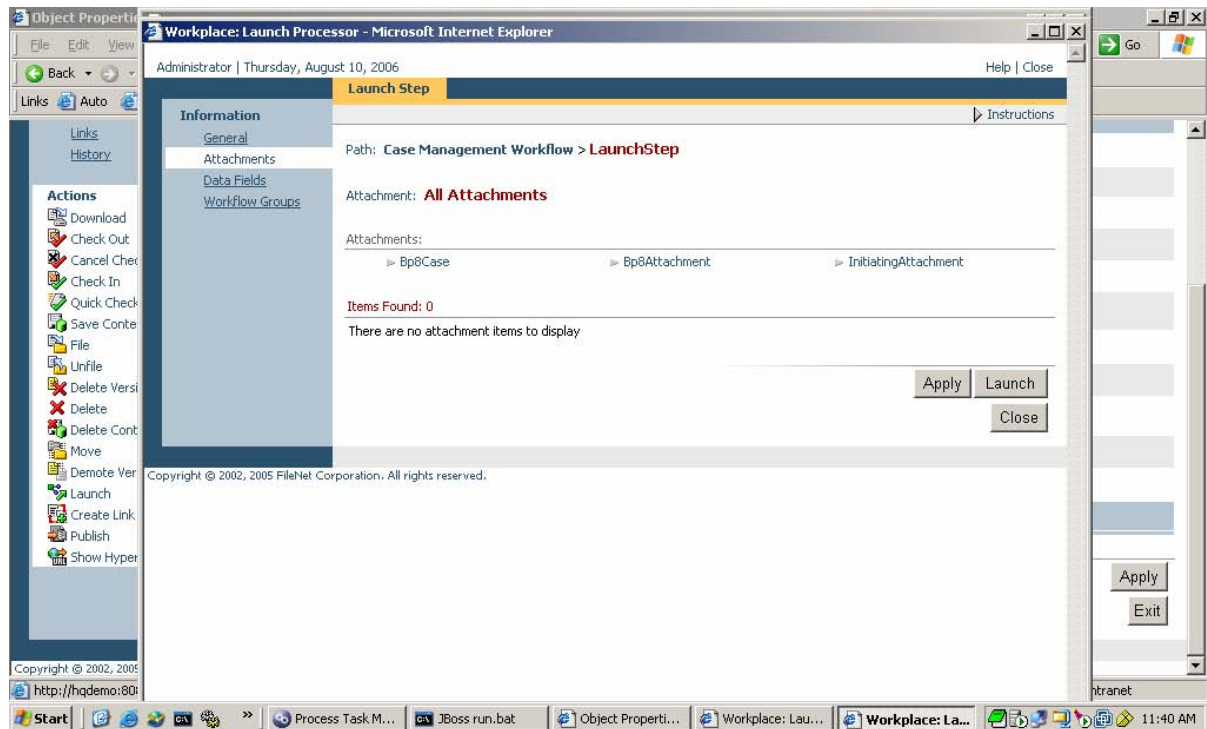
Click the Launch link to see the following screen.



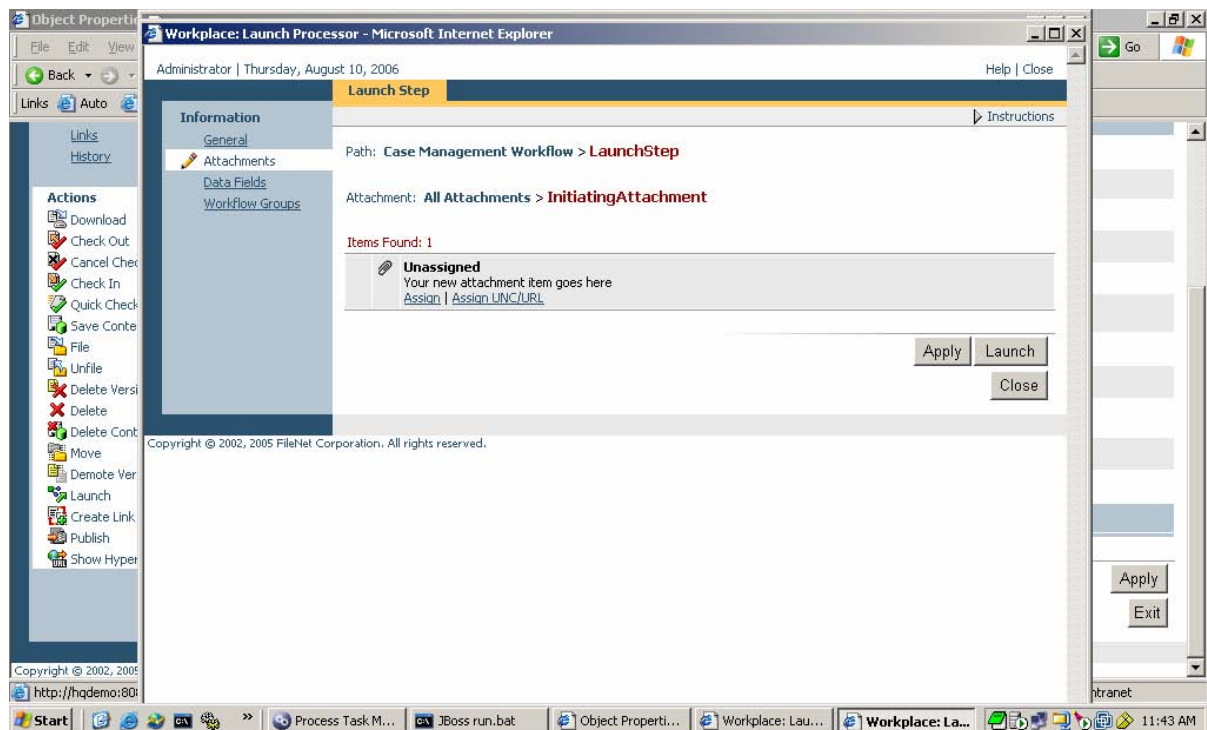
Click on each of the four links under **Information** to review the values configured (noting that your current document will already be set as the **Initiating Attachment**) and then click the **Launch** button.

IBM FileNet Business Process Framework Installation Guide

Troubleshooting



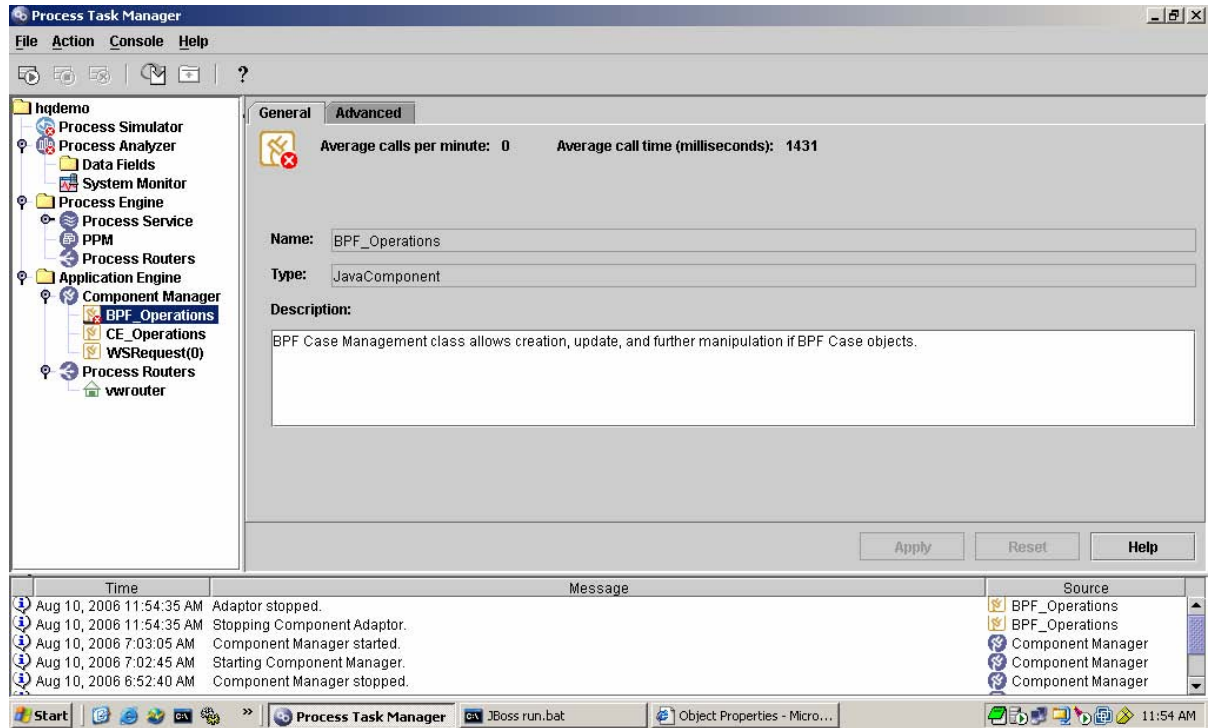
On the following screen, click the Assign link and browse



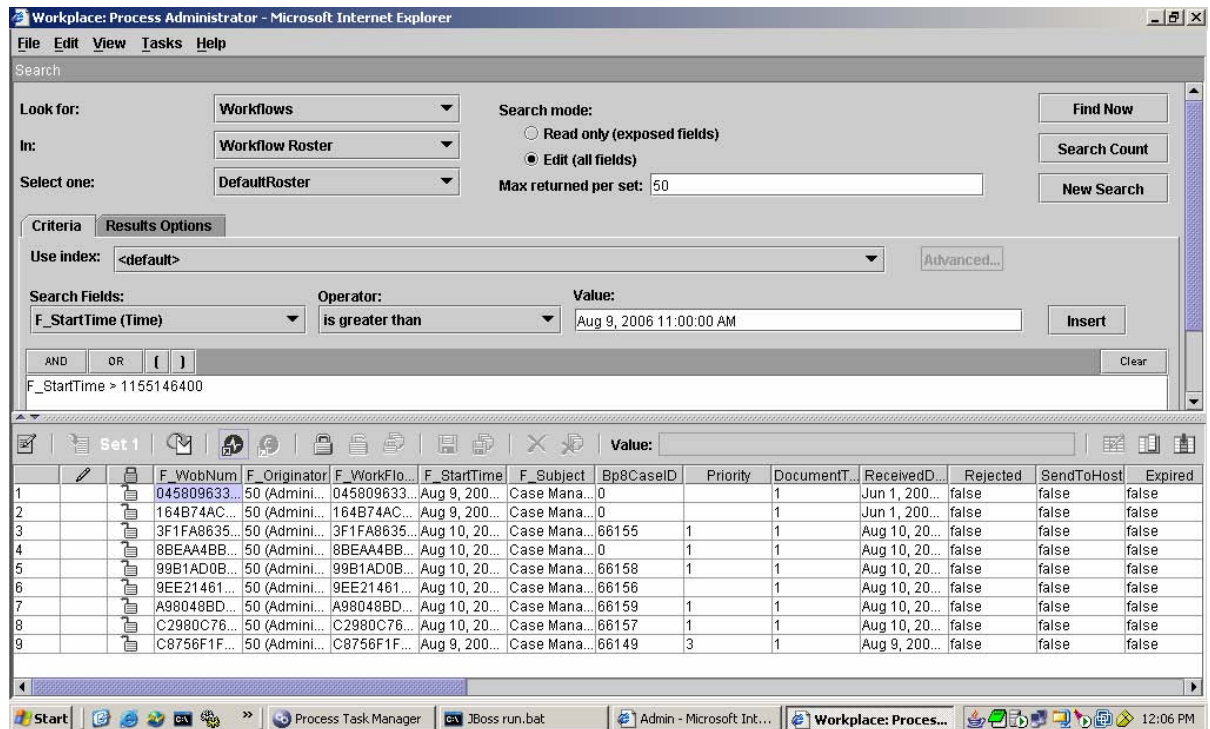
Troubleshooting the Workflow Subscription

There are a number of things that can go wrong during the course of testing your Workflow Subscription. The following are some of the most common.

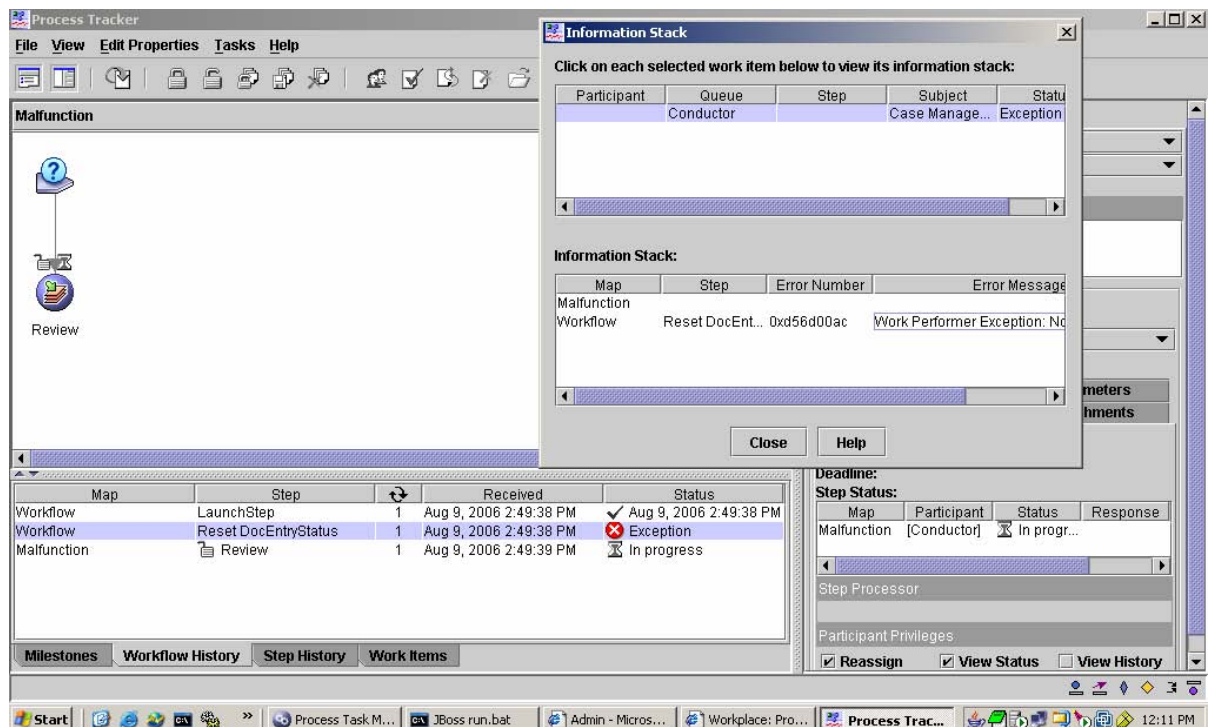
- If you launch your Workflow Subscription and nothing seems to happen (no new Case or no new Attachment on an existing Case), make sure that BPF_Operations is running in Component Manager. If BPF_Operations is stopped (as in the following screenshot), restart it and see if your results now appear as expected.



- If BPF_Operations is running and you still see no effects from launching your Workflow Subscription, open Process Administrator and search for new Work Items to see if any Work Item was launched at all.



If a Work Item **was** launched, open it in **Process Tracker** to see what went wrong. Click on the **Workflow History** tab, highlight the line where the Exception occurred, right-click and select **View Information Stack...** Then, highlight the line in the upper pane and then hover your mouse pointer above the **Error Message** text to see full information about the error.



- Alternatively, if a search in **Process Administrator** indicates that no Work Item was launched at all, open the **Windows Application Event Log** on the Content Engine server to see if any error occurred during launch.

Edit Taskman Policy

1. Edit **taskman.policy**. (By default, it is found in the Router folder in the AE installation folder.)
2. If **bp8ciops.jar** file is not listed, create a new section to grant the required privileges.

Example:

```
grant codeBase "file:{install.home}/bpfops/bp8ciops.jar "
{
    permission java.security.AllPermission;
};
```

3. Save and close **taskman.policy**.

Edit taskman.properties

1. Edit **taskman.properties**. (By default, it is found in the Router folder in the AE installation folder.)
2. Add path for {install.home}/bpfops/bp8ciops.jar to TaskManager.ComponentManager.ClassPath.

Add Taskman libraries (vwtaskman.xml)

The Task Manager utilizes the following libraries:

Expected path	Library short name
{install.home}/bpfops/lib/xalan.jar	xalan.jar
{install.home}/bpfops/bp8ciops.jar	bp8ciops.jar
{install.home}/bpfops/lib/pe.jar	pe.jar

Add libraries to vwtaskman.xml in the following manner: (By default found in the Router subdirectory in the AE installation directory)

- a. Start the AE router (using **routercmd**).
- b. Stop the Component Manager (in the AE Router).
- c. Go to the Required Libraries tab.
- d. Add all of the libraries listed above.

Edit Taskman Login Configuration

1. Edit **taskman.login.config** as follows.
(By default, it is found in the Router subdirectory in the AE installation directory.)
2. Edit the **routername** setting under **CELogin**, if necessary, to match your environment settings.

NOTE Do not use **localhost** as a system name.

Example:

```
CELogin
{
    filenet.vw.server.VWLoginModule required routerurl="{web
application server}:32771/{ae pe router name}";
    com.filenet.wcm.toolkit.server.operations.util.CELoginModule
        required credTag=Clear;
};
```

3. Save and close **taskman.login.config**.

Configure User Tokens

1. Synchronize CryptoKeyFile key in WCMApiConfig.properties

- Typical entries for Crypto key file in WCMApiConfig.properties configuration file are as follows:

- **CredentialsProtection = Symmetric**

**CryptoKeyFile =C:\Program Files\FileNet\Authentication\CryptoKeyFile.properties
(this could be any other accessible path to CryptoKeyFile.properties)**

- BPF uses "CryptoKeyFile.properties" file for passing user credential in encrypted form to Content Engine. This behavior is same as AE/Workplace. You can choose either of following values for CredentialsProtection in BPF WCMApiConfig.properties file.
- CredentialsProtection = **Clear**

NOTE Setting **Clear** encoding for CredentialsProtection/UserToken will result in nuisance logins from AE/Workplace and should be avoided. For practical purposes, Symmetric encoding should be used under all circumstances.

Or

CredentialsProtection = **Symmetric**

- If "Symmetric" option is used then contents of "CryptoKeyFile.properties" used by BPF must be present inside "CryptoKeyFile.properties" file used by Content Engine. If BPF and Content Engine entries for "CryptoKeyFile.properties" different than you would get logon failure from BPF application.
- If "Clear" option is used then contents of "CryptoKeyFile.properties" used by BPF will be ignored and will not be used while passing user credential to Content Engine.

NOTE BPF and Workplace can point to same or different CryptoKeyFile.

2. Synchronize UTCryptoKeyFile in WCMApiConfig.properties

Correct entries inside WcmApiConfig.properties for using token sharing with Workplace is

- **CredentialsProtection/UserToken =Symmetric**

CryptoKeyFile/UserToken =C:\Program Files\FileNet\Authentication\UTCryptoKeyFile.properties (this could be any other accessible path to UTCryptoKeyFile.properties)

- BPF uses "UTCryptoKeyFile.properties" file for token sharing with Workplace. Contents inside "UTCryptoKeyFile.properties" file used by BPF and Workplace must be identical.

These file can reside at any location but correct accessible path must be specified inside the WcmApiConfig.properties file. This file will be used by BPF and Workplace during Workplace integration with BPF. This will allow user logon to BPF from Workplace and to Workplace from BPF without asking for user credential again.

3. Set Workplace Bootstrap properties as follows:

WEB-INF/bootstrap.properties:

- **generateTokens=True**
- **acceptTokens=True**
- **tokenTimeoutValue=5**
(or sufficient number of minutes to account for clock differences between servers)

NOTE You can set these properties by clicking **Workplace > Site Preferences > Bootstrap**.

See the FileNet P8 Platform documentation:

FileNet P8 Documentation > Developer Help > Workplace Integration and Customization > User Tokens > Configuring Applications to Use Tokens.

4. Verify the following FileNet Content Java API registry settings on the CE server:

- **CryptoKeyFile** – Must point to a **CryptoKeyFile.properties** file with content identical to the **UTCryptoKeyFile.properties** file of AE.
- **Timeout** – The value is intended to cover the amount of time the token is in transit and to be short enough so that the tokens cannot be reused in a security attack. You can increase the value if necessary.

See the FileNet P8 Platform documentation:

FileNet P8 Documentation > Developer Help > Content Java API > Getting Started > Concepts > Content Java API Registry Settings.

5. Synchronize all clocks on the AE and CE servers.

See the FileNet P8 Platform documentation:

FileNet P8 Documentation > Developer Help > Workplace Integration and Customization > User Tokens > Configuring Applications to Use Tokens.

6. Restart applications.

- Stop and restart **Workplace** in your Web Application server.
- Restart the **Apache SOAP listener** on the Content Engine.

Configure Toolbar Items

Configure the BPF Inbasket Toolbar items. For initial testing, you might want to configure some simple search functionality. See the example below.

See also in BPF Help: **Help for Advanced Users and Designers > BPF Advanced Configuration > BPF Toolbar Interface**.

Edit BPF Web Application “web.xml”

BPF Installer updates Meta Store DataSource Name **{meta datasource}** and Process DataSource Name **{pe datasource}** in **web.xml** during installation time. These should have been previously created and tested in the Environment Configuration section. BPF Installer does not perform DataSource name validation. In case any of these DataSource names have been entered wrong

during installation, you might want to edit web.xml file to correct these entries. These entries can be manually edited in **web.xml** by browsing **{install.home}/web/{web application name}/WEB-INF** location. WAR or EAR installation would require extracting contents in temporary folder and re-bundling it after making correction in **web.xml**.

Modify bold italic text to correct DataSource names.

```
<init-param>
    <param-name>MetaStoreDSName</param-name>
    <param-value>Bp8MetadataDS</param-value>
</init-param>
<init-param>
    <param-name>ProcessStoreDSName</param-name>
    <param-value>Bp8ProcessDS</param-value>
</init-param>
```

Uninstall BPF

NOTE You can have multiple versions or configurations of BPF on the same machine if required, deployed in different web applications. Only the specific BPF application to be upgraded needs to be un-deployed in this step.

Uninstall BPF Web Application

Do the following:

1. On the AE server, stop the Component Manager **BPF_Operations** component using the FileNet **Process Task Manager**.
2. Remove the folder **{install.home}/BPFops**.

BEA WebLogic

1. Log into BEA WebLogic console using IE: **http://{web application server}:7001/console**.
2. Delete module by doing the following:
 - a. Expand **mydomain** > **Deployments** > **Web Application Modules** (in tree-view pane).
 - b. Right-click **BPF**.
 - c. Select **Delete BPF...**
 - d. Click **Yes**.
 - e. Click **Continue**.

IBM WebSphere

1. Use IE to go to the WebSphere Admin page at:
http://{web application server}:9060/ibm/console.
2. Enter your name.
3. Navigate to **Applications/Enterprise Applications**.
4. Select **BPF application name**.

5. Click **Stop**.
6. Reselect **BPF** (or other application name you have BPF deployed under)
7. Click **Uninstall** followed by **Save**.

JBOSS

1. Delete the directories for BPF and BPF help under **JBOSS ../server/default/deploy**.

Oracle Application Server

1. In the console, select the **OC4J Instance** where you want to deploy the war file.
2. Select the **Applications** tab.
3. Un-Deploy the BPF WAR file.

Remove All Deployment Information

IBM WebSphere

1. Execute the following from the WebSphere Admin page:

Environment > Update Web Server Plugin > OK

NOTE This automates removal of the deployment file when uninstalling the Web Application. This step must be performed after every un-install.

BEA WebLogic

1. Stop **WebLogic**.
2. Delete Deployment folder.

Remove these folders manually from the **WebLogic** deployment folder:

.../.wlnotdelete/extract/...<application name>

.../upload/<application name>

These folders might reside under **C:/bea/user_projects/domains/mydomain/myserver:**

.../.wlnotdelete/extract/myserver_BPF_BPF

.../upload/BPF

NOTE These folders might be deleted when the Web Application is deleted in the previous step.

JBOSS

No action required.

Oracle Application Server

No action required.

Uninstall BPF Explorer

Microsoft Windows

Do the following on the server where BPF Explorer is installed:

1. Open **Start Menu > Settings > Control Panel > Add/Remove Programs**.
2. Select **FileNet Business Process Framework Explorer**.
3. Select **Change/Remove**.

Uninstall BPF Web Application

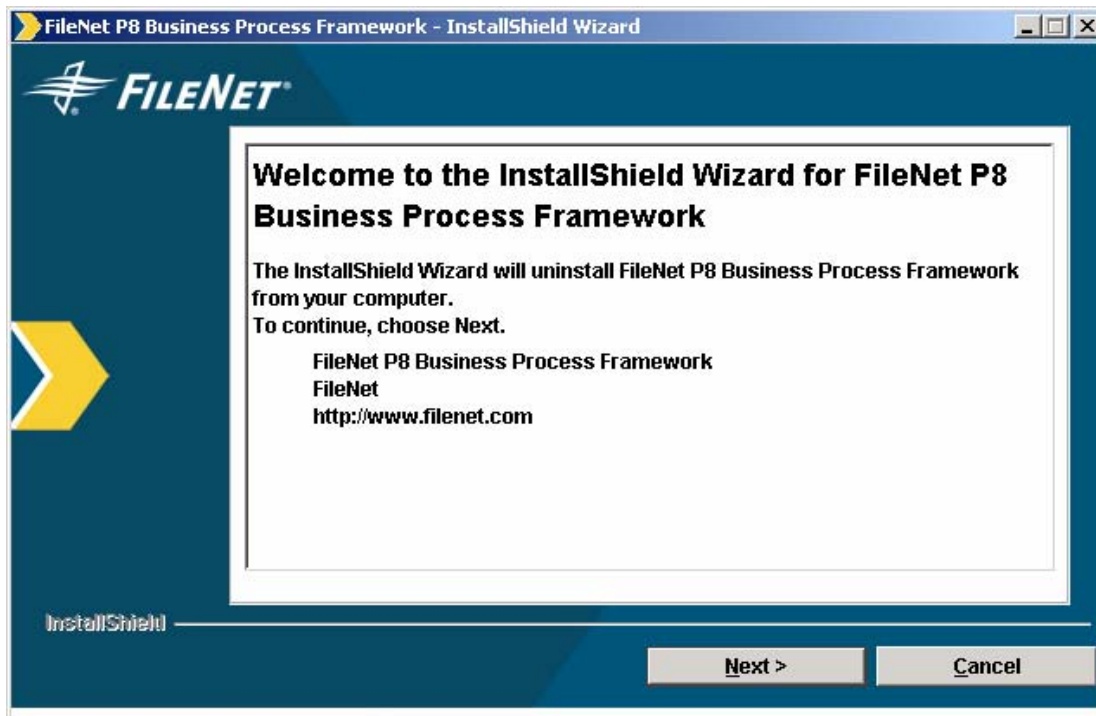
Microsoft Windows

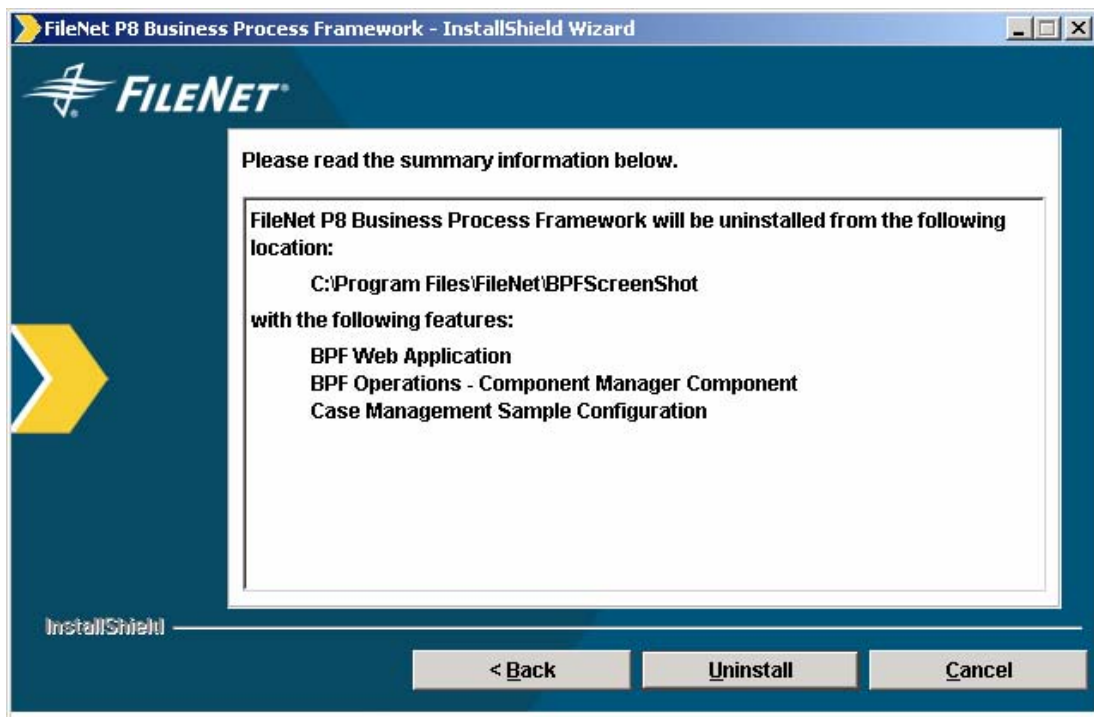
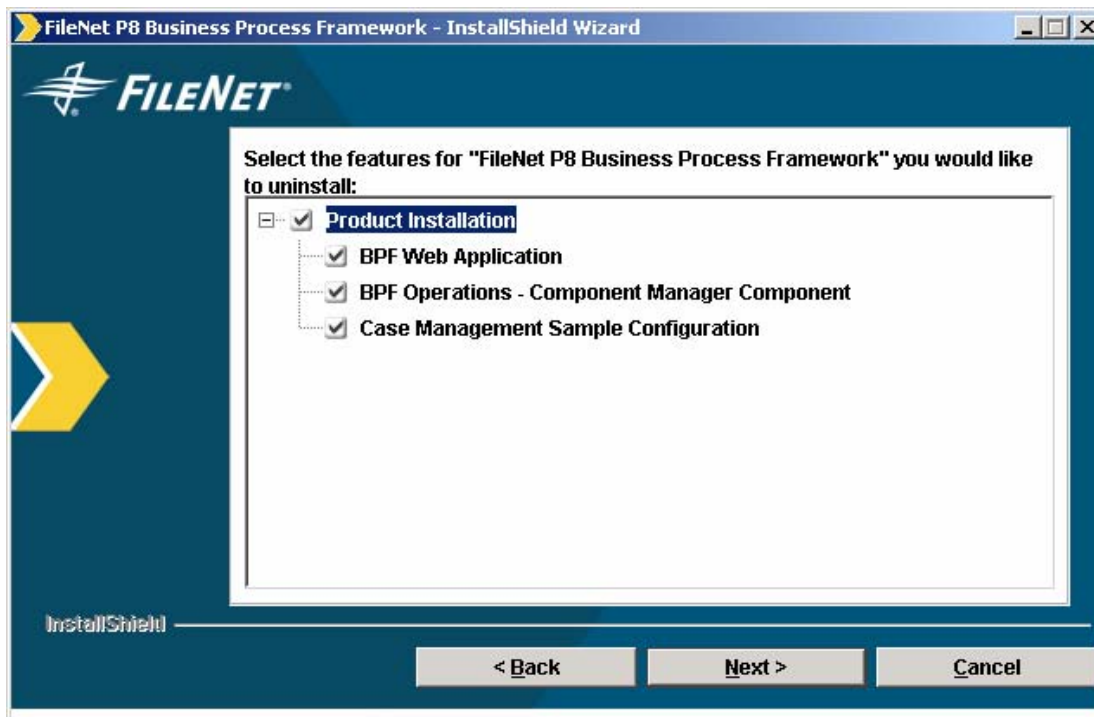
Do the following on the server where **BPF Explorer** is installed:

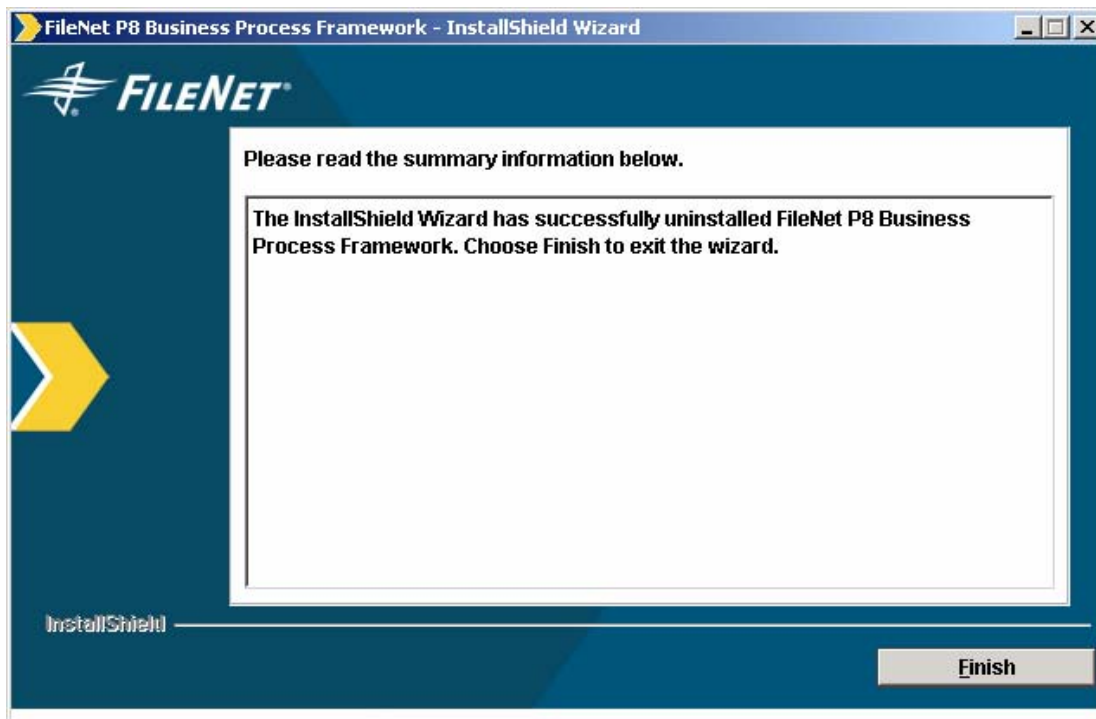
1. Open **Start Menu > Settings > Control Panel > Add/Remove Programs**.
2. Select **FileNet Business Process Framework**.
3. Select **Change/Remove**.

UNIX

1. Navigate to the **/_uninst** folder under the BPF installation location.
The default location is: **/opt/FileNet/BPF/_uninst**
2. Go to {**install.home**}/_uninst folder and execute “**uninstaller.exe**”
3. Run the **uninstall** program.







Remove BPF from the environment

This is an optional standalone procedure. Follow it to completely remove an installation of BPF. If you are performing a BPF version upgrade, do not perform these steps.

NOTE Some of the steps below refer to worksheet items. Some familiarity with the worksheet item and the installation procedure is assumed.

Delete Object Store In Content Engine

1. Run **Start Menu > Programs > FileNet P8 Platform > Enterprise Manager SnapIn**.
2. Right-click **Object Stores > {os display name}**.
3. Select **Delete**.
4. Click **Yes**.
5. Click **Ok** on other prompts.

Delete Object Store Database

Contact database system administrator to delete metastore database.

Delete DataSources

BEA WebLogic

1. Log into BEA **WebLogic** console using IE: <http://{web application server}:7001/console>.
2. Delete DataSources:
 - a. Expand **Services > JDBC > DataSources** (in tree-view pane).
 - b. Right click **{meta datasource}**.
 - c. Select **Delete {meta datasource}...**
 - d. Click **Yes**.
 - e. Click **Continue**.
 - f. Repeat the same process for the **{pe datasource}**.
 - g. Delete pools as follows:
 - i. Expand **Services > JDBC > Connection Pools**.
 - ii. Right click **{meta connection pool}**
 - iii. Select **Delete {meta connection pool}...**
 - iv. Click **Yes**.
 - v. Click **Continue**.
 - h. Repeat the same process for the **{pe connection pool}**.

IBM WebSphere

1. Logon to the WebSphere Administrative Console:
<http://{web application server}:9060/ibm/console>.
2. Create JDBC Provider:
Click on **Resources** > **JDBC Providers**.
3. Click appropriate JDBC provider
4. Click Data source link
5. Check **{meta datasource}** and **{process datasource}** and delete them by clicking Delete button.

JBOSS

1. In the JBOSS directories, browse to...**\server\default\deploy**
2. Edit '**msSQL-ds.xml**' or '**oracle-ds.xml**'
3. Delete **meta datasource** and **{process datasource}** entries and save the files.

Oracle Application Server

1. Click the **OC4J Instance** you are using.
2. Click **Administration** tab.
3. Click **Data Sources**.
4. Delete **{meta datasource}** and **{process datasource}**

Delete Metastore Database

Contact database system administrator to delete metastore database.

Upgrade BPF

NOTE It is possible for BPF-3.5.2 and BPF-3.6.0 instances to share the same instance of AE/Workplace as long as the following considerations are kept in mind:

1. Access Roles are always read from the Application OS (the objectstore defined in BPF Explorer).
2. The combination of ObjectStore name in BPF Explorer and the Workplace preference name should be unique. If say you have created Workplace36 preference for BPF3.6 application with OS36 and Workplace352 preference for BPF3.5.2 application with OS352 (with access roles created in both the objectstores), using the Workplace36 preference name for BPF3.5.2 and vice versa will make the application fail to logon with error "You are not assigned to any Roles".
3. The ObjectStore name in bootstrap and BPF Explorer could be different in case of BPF 3.5.2 application but it should be same for BPF 3.6 application.

BPF 3.5.x to BPF 3.6 (on P8 3.5.x)

This task includes BPF upgrade instructions for WebSphere, WebLogic, Oracle Application Server and JBoss.

Before you upgrade BPF

Make sure the site has restorable backups of system and data of all FileNet P8 components. In case of an emergency, you might need to back out of the upgrade. For details on what to back up for

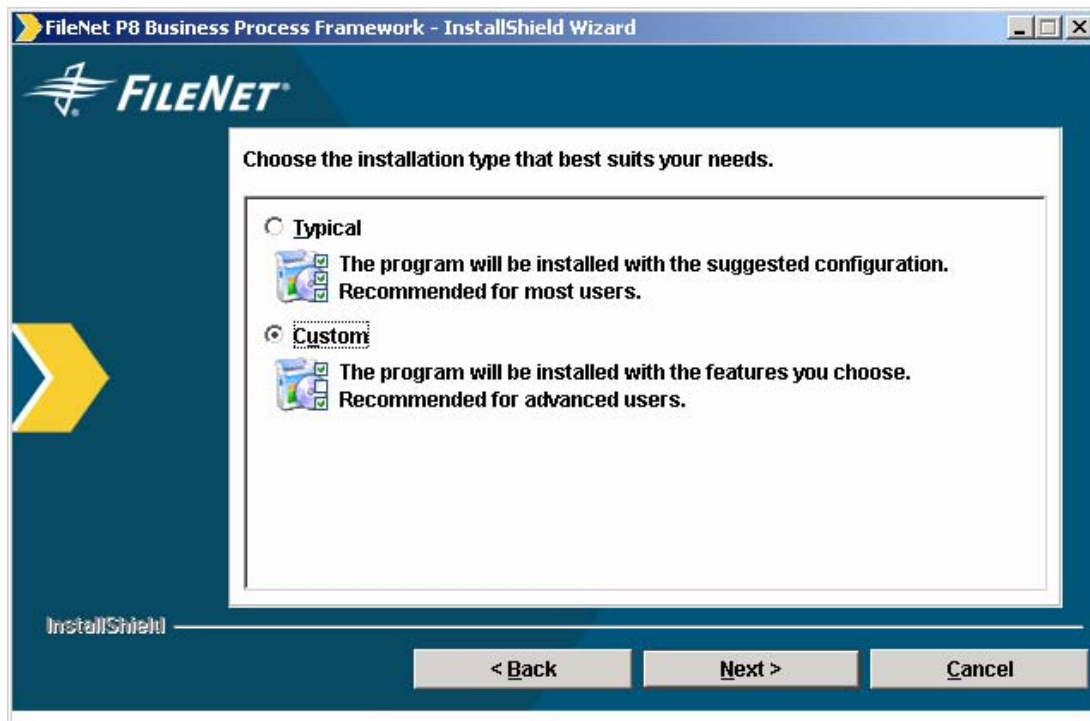
FileNet P8 components, see the topic FileNet P8 Documentation > Enterprise-wide Administration > Backup and Restore in the general FileNet P8 Platform help. Make backups of your custom and application-specific configurations.

This section assumes that you have already upgraded all BPF dependent FileNet P8 products. The following steps describe BPF upgrade configuration only. The following areas will be covered during a BPF upgrade:

- BPF Operations component.
- Solution-specific code if any.
- BPF Explorer application.
- BPF metastore schema changes.
- BPF metastore configuration.
- BPF Web Application.

To upgrade BPF

1. Back up your existing bp8ciops.jar (used by BPF_Operations). This JAR file contains two XML files, of which bp8_config.xml must and log4j.xml can contain custom and application-specific settings which you will need to copy back into the corresponding files in the new bp8ciops.jar installed during the upgrade.
2. Back up the entire deployed folder used by the BPF Web Application. Specifically, back up any of the BPF XSL files to which you have made custom modifications. You will need to merge these changes back into the new XSL files installed during the upgrade. Backing up the entire deployed folder will also make sure you do not lose any custom JavaScript in any of the *EventHandler* JavaScript files, your custom Bp8CustomStyles.css (if any), as well as the current copies of the .JS or .JSP files any custom tabs, tools, lookups, and so on, that you might have deployed – as well as the compiled class files for any of these or for any custom CaseEventHandler subclasses you might have deployed. In general, refer to the BPF Developer Guide to review the various customization points available and verify just what custom code exists in the current application that will need to be redeployed after the upgrade.
3. Export the configuration of your **{meta database}** to an XML manifest using the Export feature in BPF Explorer *and* (if possible) make a full database backup within your RDBMS. Consult the section of the BPF Explorer Handbook entitled “**Saving/Moving BPF Configurations**” for further details of what information you will need to save/backup prior to beginning your upgrade installation.
4. Log on to the application server:
 - UNIX - logon as root.
 - Windows - log on as member of the local Administrator group or a user with equivalent permissions.
5. Undeploy and remove BPF Web Application and BPF Explorer. Prior to executing this step, make sure you have backed up solution specific files. You will use backed up files while executing BPF Web Application installation steps below. To Undeploy and remove BPF Web Application and BPF Explorer see [Uninstall BPF](#).
6. Install BPF Web Application from media. On the Custom Vs Typical Installation screen, select the Custom option. See [Install and Configure BPF Web Application](#). All of below screen will appear when you will execute BPF Installer. Go through the text and screens below before executing BPF Installer.

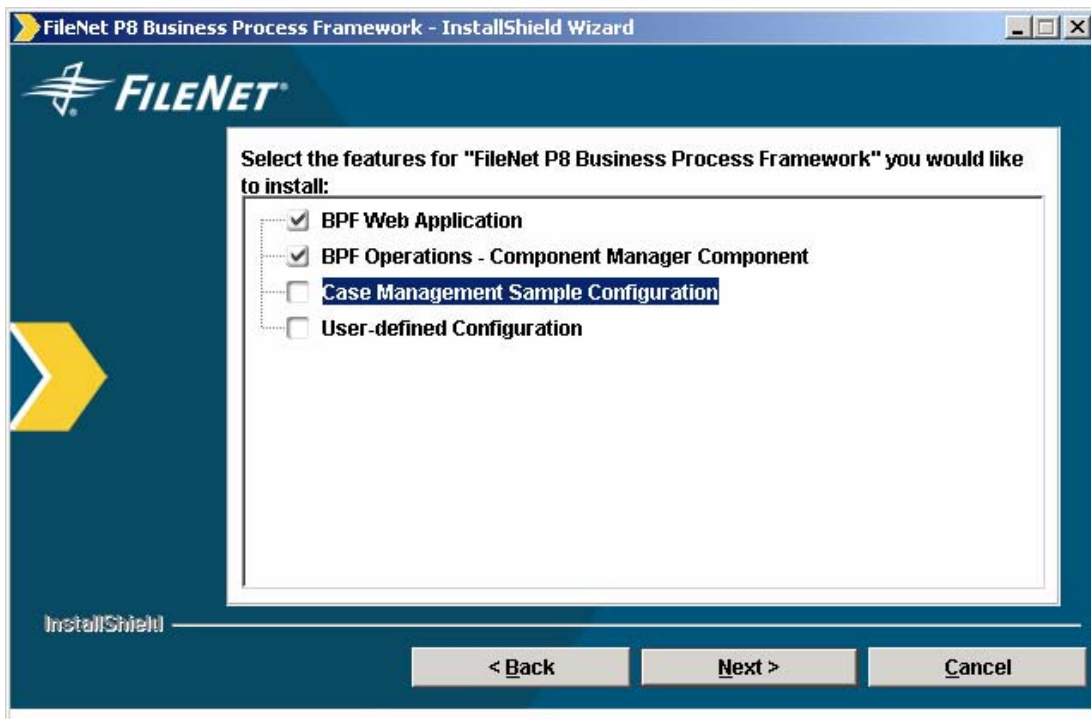


Custom Vs Typical Installation Screen

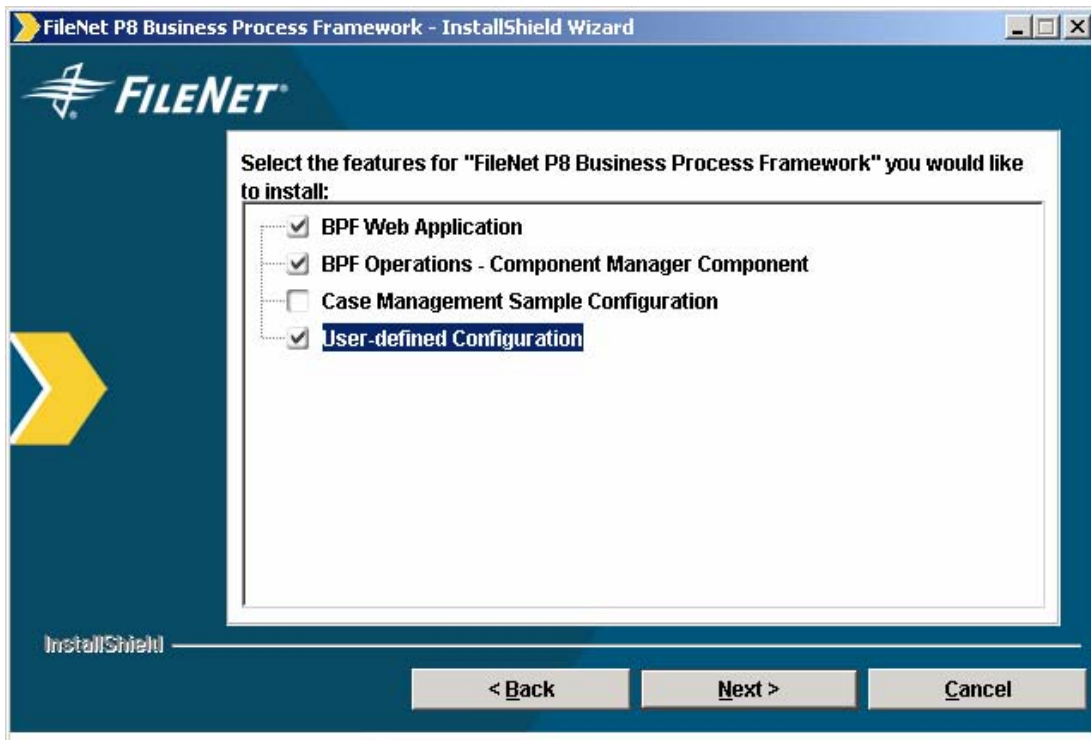
CAUTION Selecting the Typical option when upgrading could override existing BPF application configurations and should be used only when you DO NOT wish to preserve an existing application configuration.

- From '**Custom Installation Feature Selection Screen**' select the first two options to re-install the new BPF Web Application and BPF Operations version only.
- Select first two and last option when you want to add custom code to BPF Web Application Code (Your custom code backed up from step 2). You would need to copy all customization to a folder replicating BPF Web Application folder. Any modules including JSP, JAR or XML files specified in this folder will be bundled as part of WAR/EAR or in Exploded Folder.
- **User Defined Configuration** and **Custom Code Folder** screens will only appear when you selected last option from Custom Installation Feature Selection screen. Leave all entries blank on **User Defined Configuration** screen.

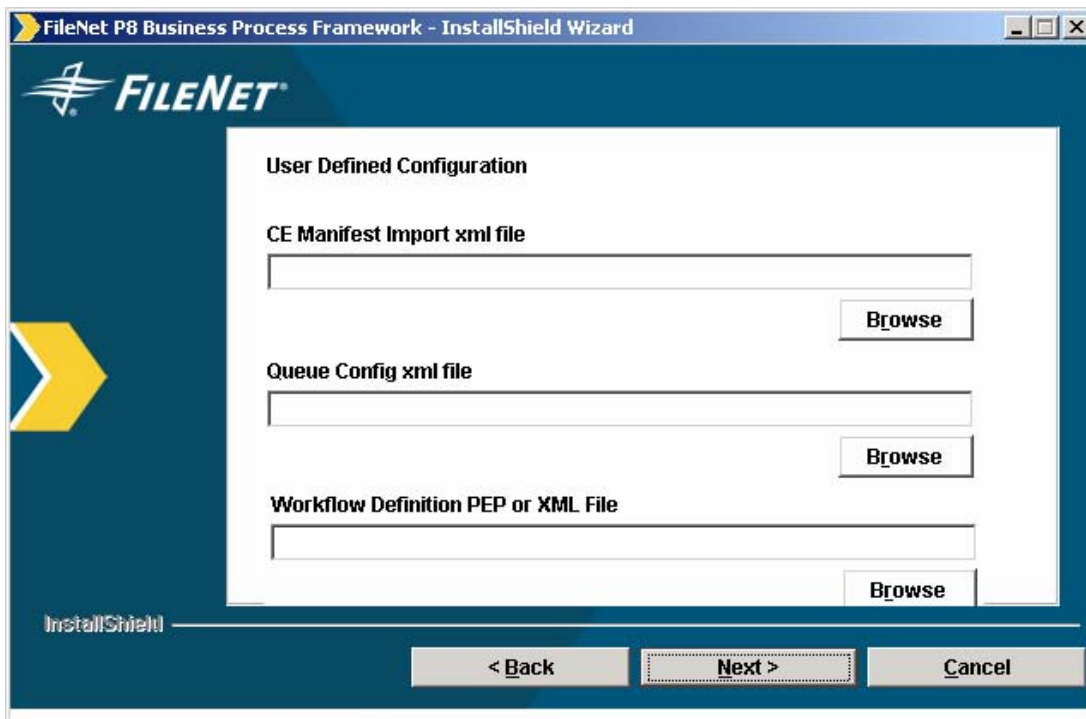
CAUTION Do not select fully backed up BPF Web application folder from step 2 as custom code folder. Only copy customization to a folder replicating BPF Web Application folder. Any modules including JSP, JAR or XML files specified in this folder will be bundled as part of WAR/EAR or in Exploded Folder.



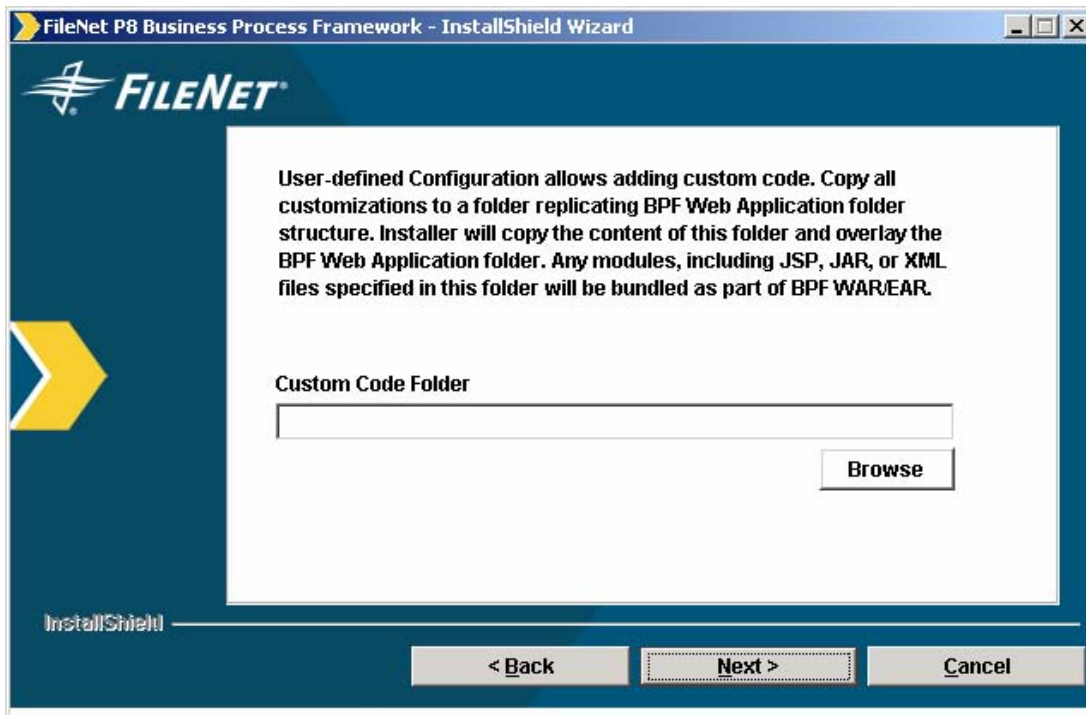
Custom Installation Feature Selection Screen



Custom Installation Feature Selection Screen



User Defined Configuration Screen



Custom Code Folder Screen

CAUTION Selecting either Case Management Sample Configuration or User-defined Configuration options when upgrading could override existing BPF application configurations and should be used only as needed.

7. In this step you will be deploying BPF Web Application which was installed in Step 6. To deploy BPF Web Application see Deploy [BPF Web Application](#).

8. Make sure you uninstalled BPF Explorer while executing Step 5. Install BPF Explorer from [/{staging folder}/admin/](#) folder. While installing BPF Explorer you would be pointing to your previous metastore database. To install see [Install BPF Explorer](#).
9. Load BPF metastore. This step will upgrade your metastore database with new database schema specific to BPF release you are upgrading to. To Load BPF Metastore see [Load BPF Metastore](#).

CAUTION Step 0 (for Oracle only) and Step 1 metastore scripts are executed only new BPF Application is installed. For upgrades, Step 0 and Step 1 scripts should not be executed.

10. If you are upgrading BPF 3.5.2 to BPF 3.6, the BPF Site Designer role will need to be defined. To enable Layout Designer, you must manually create a BPF Site Designer role and assign a user to that role in BPF Explorer. Refer to the *IBM FileNet Business Process Framework Web Application User Interface Guide* for more information about Layout Designer.
11. [Configure BPF Operations](#). Be sure to refer to the bp8_config.xml and log4j.xml files in your backup copy of bp8ciops.jar to verify the correct settings for your environment and copy the information from these files into the corresponding files in the new bp8ciops.jar installed by the upgrade.

BPF Release Identification

The BPF release number can be identified in one of the following ways:

Web Application	Point to the following URL in IE: http://{web application server}:{web port}/{web BPF name}/About.jsp NOTE Consult your Web Application service for the correct port number.
BPF Operations	Extract Manifest.mf from the bp8ciops.jar using WinZip or any other archiver and check the Implementation-Version tag.
Wfutil	Extract Manifest.mf from the wfutil.jar using WinZip or any other archiver and check the Implementation-Version tag.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
J46A/G4
555 Bailey Avenue
San Jose, CA 95141-1003
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, or service names may be trademarks or service marks of others.



Program Number: 5724-R75

Printed in USA

GC19-2735-00

