



WebSphere Product Center

Release Notes

Fix Pack 5.0.1.5

Note!

Before using this information and the product it supports, read the information in “Notices” at the end of this document.

28 January 2005

This edition of this document applies to WebSphere Product Center, version 5.0.1.5, and to all subsequent releases and modifications until otherwise indicated in new editions.

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1. Overview

This document addresses enhancements, product fixes, and installation instructions for WebSphere Product Center Fix Pack 5.0.1.5

1.1 Fix Pack requirements

WebSphere Product Center 5.0.1 must be installed prior to the application of Fix Pack 5.0.1.5.

2. Product fix history

2.1 Fix Pack 5.0.1.5

The main purpose of this fix pack is to 'foreport' extensions to Web Services functionality made and delivered in in a previous release.

2.1.1 Enhancements

Web Services Enhancements to support Document/Literal style

What is contained in this enhancement?

This document contains the details of the changes done to the existing web services support in Websphere Product Center. RPC/Encoded style of web services was already available in Websphere Product Center.

However, RPC/Encoded web services only support simple string types, and there is a requirement to support sending and receiving of complex types. This enhancement adds support Document/Literal style of web services to Websphere Product Center.

In the process of enhancements, existing UI for web services and one of the script operations from earlier version have been modified to work with both styles.

How the Document/Literal style Web Service works in Websphere Product Center?

In order to deploy a Document/Literal style web service, a user would need to create a web service, which includes a WSDL defining the schema of the service and a Websphere Product Center trigger script to invoke when a request is encountered. When saving the web service, the user would need to explicitly select that it be deployed. Upon deployment, Websphere Product Center will create a URL for the web service where one can access the deployed WSDL. The URL of the web service will take the following form:

`http://<application-webserver>:<application-port-number>/services/<stored-webservice-name>`

Appending the “?wsdl” string to the end of the URL will yield in the path to the stored WSDL for the web service.

A request for a Document/Literal web service would be enclosed in a SOAP envelope, and the body of the SOAP message would include the request document in its entirety. This request document must be in proper XML form, and will be passed to the Websphere Product Center web service handler as-is. A caller would have created this request with prior knowledge of the format of the schema node of the stored WSDL for the web service, which is being invoked.

The Websphere Product Center web service handling mechanism will receive this request and validate its contents against the WSDL schema for Document/Literal style requests. If the request does not adhere to the WSDL schema, an AxisFault will be thrown. Otherwise, Websphere Product Center will eliminate the namespace references from the request body and pass the modified request to the Websphere Product Center trigger script, which was stored at deployment time. The namespace removal is required due to the limitations of the Websphere Product Center script context's inability to handle namespace-enabled XML documents. The Websphere Product Center trigger script will take the contents of the request and use them as defined by the script author. The script must output its results as a valid response to the incoming request. Therefore, the response will be validated against the WSDL prior to returning the output.

Example:

The Document/Literal schema would look like:

```
<element name="getStockQuote" />
  <complexType>
    <sequence>
      <element name="ticker" type="xsd:string" />
    </sequence>
  </complexType>
</element>
<element name="getStockQuoteResponse" />
  <complexType>
    <sequence>
      <element name="response" type="xsd:decimal" />
    </sequence>
  </complexType>
</element>
```

If the client invoked `getStockQuote("IBM")`, the flow would look like:

1. Websphere Product Center receives a SOAP request from the Axis SOAP stack.
2. Websphere Product Center validates the request message against the above schema.
3. Websphere Product Center strips all namespace prefixes from the request body. Not needed in this case, since this schema defines everything in the default namespace.
4. Websphere Product Center invokes the web service trigger script. The input variables are:

```
- operationName = "getStockQuote"
- message =
```

```
"<getStockQuote>
    <ticker>IBM</ticker>
</getStockQuote>"
```

5. The trigger script writes the response to the "out" Writer:

```
- out =
    "<getStockQuoteResponse>
        <response>83.76</response>
    </getStockQuoteResponse>"
```

6. Websphere Product Center validates the response against the above schema

7. Websphere Product Center sends the entire SOAP response back to the client through the Axis SOAP stack.

Changes done to support Document/Literal style

Following is a list of changes done to support Document/Literal style.

- Web Service Console: A new drop-down list box has been added from where style of web service can be selected. The styles are RPC_ENCODED and DOCUMENT_LITERAL.
- Database: *wbs* table will have a new column 'style'. This is a varchar column that stores the style of web service.
- There is a new *ccd-axis.jar* that provides the provider class names to axis, named *ccd-axis_1.1.jar*.
- Modification to existing *createWebService* script operation: A new parameter *style* has been added to this script operation that needs to be used to provide the style of the web service. Valid values are RPC_ENCODED or DOCUMENT_LITERAL.

```
WebService createWebService(String name, String desc, String wsdlDocPath,
String protocol, String style, String implScriptPath, Boolean storeIncoming,
Boolean storeOutgoing, Boolean deployed)
```

- Addition of *getStyle()* script operation, which returns the style of the web service as a String.
- New Script Context variables: Two new script context variables are available for scripting - *soapOperationName* and *soapMessage*.
 - *soapOperationName* – This string type variable provides the operation name that was passed as part of the request XML document.
 - *soapMessage*: This string type variable holds the request message as a XML document.

- For document-literal style web services, the request message sent from the client will be validated against the WSDL stored at web service deployment time. This does NOT affect RPC-encoded style web services.
- Incoming requests for document-literal style web services will be stripped of namespaces when passed to the Websphere Product Center script context (This is due to the fact that the Websphere Product Center script does not support namespace-enabled XML messages).

What is the impact on migration to 5.0.1.5 from previous 5.0.1.x versions?

To address this enhancement, a database modification step is required for migration to 5.0.1.5 from earlier 5.0.1.x versions. Scripts for creating web services need to include one additional parameter for specifying 'Style':

```
alter table twbs_wbs_webservice add (wbs_style varchar2(50));
```

2.1.2 Completed change requests

Tracking Number	Description
16336	Add support for Document-Literal style web services to the current web service functionality. Refer to section 2.1.1 for more information.
16337	Item lock when updating item through script in Web Services Console
16338	WSDL string styles should be consistent for both script operation and UI
16339	A fault should be returned when a script has a runtime error
16342	The soap fault code should default to "soapenv:Server" if not specified
16677	Invalid WSDL produces error and gets saved

2.2 Fix Pack 5.0.1.4

The major focus for 5.0.1.4 was to provide a number of performance improvements to improve end user experience, item retrieval, and save performance. Additionally, several issues have been resolved with the change requests that have been completed for this release.

2.2.1 Performance improvements

Item	Description
Excessive calls to syncToModel	The serialized form was being synchronized repeatedly with Specs even though no changes were made to the Specs. Synchronization now occurs only for situations when the meta-data model changes.
Implement Lazy initialization of caches	System information about location data is currently cached when an Item is retrieved and only used when operations on location data are run. Loading of the cache has been made a lazy operation and only takes the hit when needed.
Lookup Table Cache DB Calls	Loading a lookup table from the cache to resolve attribute values for Nodes of type Lookup table runs a query to determine a timestamp each time. Caching has been modified to run the query only once during the processing of a task; hence the query will not run more than once during the rendering of a UI screen or running of an export.
Multiple retrieval	Item data is loaded multiple times when a user accesses the workflow multi-edit

of Items for Workflow screen	screen. Item data is not reloaded unless needed.
Low level optimizations	Multiple low-level optimizations to Java code were made to improve performance and memory usage.
Interning of Paths to EntryPaths	Attribute paths for data are represented as strings in scripts and are interned on each call to get or set an attribute. Interned paths have been cached for faster access.
Rendering Asynchronous UI Events	A sort is performed on the list of UI widgets that need to be notified of a UI event; for asynchronous events this call is not needed. The sorting overhead has been removed to improve performance and also replaced internal structure to a TreeMap that maintains sorted order and reduces the cost of sorting.
Batching of DB statements for Item Save	Saving items did not use JDBC batches when inserting data to the DB. Implemented the use of JDBC batches to reduce network traffic and improve performance of inserting large number of the rows to the DB.

2.2.2 Completed change requests

Tracking Number	Description
JR 20920	<p>RunJob always returns code '0' which indicates success even when the job fails. Therefore the usage and the return code of RunJob has changed as follows:</p> <pre>\$JAVA_RT com.ibm.ccd.scheduler.common.RunJob: --job_name=aaaa --job_type=import export [--company_code=bbbb --username=cccc --debug=on off]</pre> <p>The debug flag was added to option whether or not debugging information is to be printed. The return code is 0 if the job completes successfully, otherwise the return code is 1. If a given job is not found or if it cannot be started for any other reason then the return code is -1.</p>
JR20960	Script compilation failing for script operations for certain type of scripts
15956	SQL error on Export Console screen
JR20876	getOldItem() does not return pre-workflow version of item being checked in
16526	When adding a hierarchy map to an item, categories with no display name cannot be selected
16529	Perform a search and click the category link for an item, the category loads indefinitely

2.3 Fix Pack 5.0.1.3

2.3.1 Completed change requests

Tracking Number	Description
P13831	removeLocalesFromAttrGroup() fails
P14849	Faster population and validation and location-has-data
P14950	Rich Search - Can not search on unassigned items
P15125	Location Attributes - If error happens in another location hierarchy, clicking on the

	error will not bring user to the other hierarchy node
P15210	Missing operators e.g. beginswith/contains for lookup table attributes for global & item-location data
P15272	userDefinedLogEntryGetTarget() fails on a category
P15305	getFlatEntryNodes() returns duplicate locale root nodes
P15316	User Setting "In Multi Edit, show all category specific attributes..." gives widget error in workflow
P15351	getCatalogAttributes() does not return all the values set by setContainerProperties()
P15360	Single Edit screen – It is possible to add a new occurrence for an un-editable field
P15362	On sorting the date attributes of the Items, a server Error occurs
P15364	Lookup table item edit: exit button disappears when there is unsaved entry
P15414	Provide gzip output stream support. (Refer to Section 2.3.2 for additional details)
P15417	Defaulting the item-location hierarchy per workflow step
P15438	Search in background throws widget error in Workflow step
P15611	Second catalog get less items than the imported catalog
P15637	getLocaleNode() has the wrong prototype
P15706	Entry Preview Script made available to "***All Catalogs**" not available
P15720	Throw an exception on sorting (attribute type flag) of the results of Lookup table rich search
P15723	The user always has to press the refresh button to get the status of the checked out item/s
P15725	Sequence location attributes behave unexpectedly
P15786	Cannot see/edit location attributes in workflow or approval step
P15801	Primary hierarchy location attributes in workflow modify step
P15808	Rich Search on Relationship primary attribute type does not work for different conditions
P15833	Category restriction search (Rich Search) works only for the selected level and it's immediate child level
P15834	setInheriting() has the wrong documentation
P15835	new\$SearchSelection is not supporting getSelectedItemCount()
P15848	runBackgroundSearch() does not create a new selection
P15854	Cannot access linked item within workflow
P15865	Secondary Hierarchy does not display any nodes in the left pane when expanded
P15885	Fail to retrieve implicit objects while checking out an item into collaboration area and while moving item to FIXIT
P15889	Imports run out of memory if too many are run in parallel
P15959	Cannot create gaps in inheritance of grouped location attributes
P15960	Inherited, grouped multi-occurrence location attribute values cannot be displayed
P16000	Icon appear to have data when data is missing
P16002	EntryNode.throwValidationError() throws error on all locations
P16004	Pre-processing script should not retrieve data value from the database
P16015/P15724	When checkout agreements to maintenance step it hangs
P16031	UI not being refreshed in workflow step
P16034	Workflow step finishes even though there is a validation error.
P16040	Workflow engine printing spurious error message when no events to process are found in DB

P16041	In a workflow step if you add a new item in the step using the UI and forget to put a primary key value, the item will not save as expected. Put in a value for the Primary keys after the failed save and save again a save error occurs.
P16042	Action menu item enable even if it has no actions defined
P16048	Bad DB2 SQL noticed in logs
P16052	Issue with EntryChangedData and location ops.
P16060	The "item selection" dropdown filter doesn't work for List View of Catalog module
P16063	EntryNode::hasInheritedValue() does not work
P16064	No logging of exception in module state server
P16065	Action menu item enable even if it has no actions defined
P16079	Displaying validation errors slow in location screen
P16081	Non-persistent attribute rules for location attributes need more context
P16097	Added configuration options for running pre and postscripts for location attributes. (Refer to section 2.3.3 for additional details.)
P16101	Get moniker method failed error pops up when logged in as new user other than admin and causes the Left Pane to not work properly
P16102	Item import to Collaboration area does not work
P16114	Select all 150 items in multi-edit causes some out of sync
P16121	Changes to Hierarchy nodes inside workflow are not reflected in the Left Pane
P16125	"Double quote" fails in string enumeration entry for a spec node
P16127	Re-catagorization within workflow does not work. (Replacing hierarchy mappings)
P16129	addLocalesToAttriGroup() fails
P16144	Vague Docs for getLocationChangedToHaveData() and getLocationChangedToHaveNoData()
P16145	Multi-edit for categories throws Java exception
P16150	Populate default value perf issue
P16151	getLocationChangedToHaveNoData() returns location even when the new entry has data
P16154	Added new script operations for search templates. (Refer to Section 2.3.4 for additional details.)
P16155	Do not perform save items if there are no items to save

2.3.2 P15414

Added support for a new element compress="yes" in the docstore_mount.xml file.

When set to "yes" anything written to the docstore will be stored gzipped (but no .gz extension is added) and the COMPRESSED attribute in the database will be set to indicate the file is compressed. Anything other than "yes", including no compress attribute, will cause the file to remain uncompressed to preserve existing behavior.

2.3.3 P16097

Added configuration options for running pre and post-scripts for location attributes

Running pre and post-script for each location can be a performance bottleneck. Now this is configurable in `common.properties`:

```
#run pre script for each available location when saving an item with
location attributes
run_pre_script_for_locations=true

#run post script for each available location when saving an item
with location attributes
run_post_script_for_locations=true
```

Specifying false for any of these parameters will disable running pre or post-script for location attributes when saving an item.

2.3.4 P16154

The following script operations for use with search templates were added to the script library:

- new SearchTemplate
- getSearchTemplateByName
- getSearchTemplateName
- deleteSearchTemplate

Refer to the Script Sandbox in WebSphere Product Center for documentation on the above script operations.

2.4 Fix Pack 5.0.1.2

Tracking Number	Description
P12363	Workflow events are not processed synchronously when nested scripts are called.
P12553	Auto-refresh of Item & Item-location screen when running macro and action scripts
P13662	Refresh and Undo buttons are not disabled in Rich Search screen
P14145	Location Attribute - Relationship value does not appear after specifying relationship and clicking Save
P14239	Checking out 150 items is not working
P14694	Standalone spec attributes do not appear when the spec is added to a hierarchy
P14949	Rich Search - If the same spec is used as a location for two hierarchies, the rich search screen attributes fields are not displayed properly
P14984	Only one collaboration area appears in the checkout tooltip, even when checked out to multiple areas
P15123	Checked out value rule attempts to update source on save and gives error if sent to interimCheckin
P15137	An error occurs when making a location available and saving after checkout
P15221	Saving invalid location data in workflow gives error asking if you want to navigate away from the page. This is the expected behavior.

P15239	Re-creating a company does not completely wipe out the old webs service data (intermittent).
P15271	Verify obsolete inheritance-related script operations
P15275	Population of offline search results container should be exposed via scripting
P15340	Errors in pre-processing script do not prevent checkin and do not add to the fixit step
P15341	Update documentation for hasInheritedValue()
P15342	arraylist concurrent modify error occurs when closing location data popup (doing a save)
P15345	Import into collaboration area works the first time only
P15348	New items added via import to workflow disappear on checkin
P15354	Item in source is not checked out if checked in from first collaboration area to which it has been checked out.
P15363	Location Attributes - java script error occurs when making a hierarchy node "available recursive"
P15374	Please remove item.setLocationAttrib(loc,path,value) OPS
P15375	Search is sometimes case sensitive. It should always ignore case.
P15380	entry.getEntrySaveResult() only return 'MODIFIED' entries
P15381	Entry::getDisplayValue() has wrong documentation or malfunctions
P15385	In the Item-location screen, using EntryNode::throwValidationError() does not display error messages
P15406	Script compilation fails for long return types
P15415	Cannot attach a secondary spec to a category
P15418	Entering value on locale attributes thrown error:entry can not be saved, but allows the item to move to the next step
P15419	Some popup windows are not sized optimally and need to be resized by the user
P15423	getLocationsAddedAvailability throws an error for first/one added location
P15424	Item-location inheritance does not fix issue with multi-occurrences
P15425	Nested grouping attribute loses data on save in workflow
P15426	Nested global groupings adding spurious occurrences on save in workflow
P15427	saveCtgItem() from wfl out() in() script throws class cast exception
P15429	When using the override button and saving the item, the attribute data disappears
P15431	Duplicate of P15426
P15432	Sub-attributes that are not editable in a grouping lose their data in a workflow
P15434	Entries with a minimum occurrence 1 group in location attributes get sent to the fixit step on checkin
P15543	Pressing "I" button throws an exception when there is nothing to inherit
P15544	collaboration_area, colArea, stepPath are returning NULL in Post Save script upon leaving the collaboration area
P15608	It is possible to bypass a reserve step in a hierarchy workflow using multi-edit
P15639	isInheriting()/hasNonInheritedValue/hasInheritedValue() are not working for Override with Null

P15683	Null overrides do not get saved/stored
P15711	It is not possible to create a tab view for hierarchy workflow

3. Issues and limitations

This section identifies issues and limitations that are known for this release and are planned to be addressed in a future Fix Pack.

3.1 Newly created Web services do not automatically deploy

Case ID: P16473

Issue: Create a new web service and restart WebSphere Product Center. An error appears when attempting to invoke the newly created web service.

Workaround: Allow write access to the Axis configuration file "server-config.wsdd" under the "public_html/WEB-INF" directory. Additionally, for environments using WebLogic, the WebSphere Product Center instance must be deployed in expanded directory format. If this is not done, the auto-redeploy functionality of Axis will not deploy the web services created by WebSphere Product Center on restart, thus causing an error.

3.2 Namespace must be defined on schema node of WSDL due to DOM versions

Issue: Due to limitations caused by the XML parsing implementation (provided by Xerces version 2.4.0), the namespace declaration must be defined locally on the schema node of the WSDL. This will be noticed mostly when deploying Document-Literal style web services. For example, the following is a valid WSDL, which would not be correctly recognized by WEBSHERE PRODUCT CENTER:

```
<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:y="http://ibm.com/wpc/test/stockQuote"
targetNamespace="http://ibm.com/wpc/test/stockQuote">
  <types>
    <xs:schema
targetNamespace="http://ibm.com/wpc/test/stockQuote"
elementFormDefault="qualified">
      <xs:element name="getStockQuote">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="ticker"
type="xs:string" nillable="false"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:schema>
  </types>
</definitions>
```

```

        <xs:element name="getStockQuoteResponse">
            <xs:complexType>
                <xs:sequence>
                    <xs:element name="response"
type="xs:decimal" />
                </xs:sequence>
            </xs:complexType>
        </xs:element>
    </xs:schema>
</types>
<message name="getStockQuoteRequest">
    <part name="parameters" element="y:getStockQuote" />
</message>
<message name="getStockQuoteResponse">
    <part name="parameters" element="y:getStockQuoteResponse" />
</message>
<portType name="StockQuotePortType">
    <operation name="getStockQuote">
        <input message="y:getStockQuoteRequest" />
        <output message="y:getStockQuoteResponse" />
    </operation>
</portType>
<binding name="StockQuoteBinding" type="y:StockQuotePortType">
    <soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http" />
    <operation name="getStockQuote">
        <soap:operation soapAction="" />
        <input>
            <soap:body use="literal" />
        </input>
        <output>
            <soap:body use="literal" />
        </output>
    </operation>
</binding>
<service name="StockQuoteService">
    <port name="StockQuotePort" binding="y:StockQuoteBinding">
        <soap:address
location="http://localhost/axis/services/StockQuoteService" />
    </port>
    </service>
</definitions>

```

The WSDL would have to be written, as follows, to be correctly parsed:

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions xmlns="http://schemas.xmlsoap.org/wsdl/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:y="http://ibm.com/wpc/test/stockQuote"
targetNamespace="http://ibm.com/wpc/test/stockQuote">
    <types>
        <xs:schema
targetNamespace="http://ibm.com/wpc/test/stockQuote"

```

```

xmlns:xs="http://www.w3.org/2001/XMLSchema"
elementFormDefault="qualified">
  <xs:element name="getStockQuote">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ticker"
type="xs:string" nillable="false"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="getStockQuoteResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="response"
type="xs:decimal"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
</types>
<message name="getStockQuoteRequest">
  <part name="parameters" element="y:getStockQuote"/>
</message>
<message name="getStockQuoteResponse">
  <part name="parameters" element="y:getStockQuoteResponse"/>
</message>
<portType name="StockQuotePortType">
  <operation name="getStockQuote">
    <input message="y:getStockQuoteRequest"/>
    <output message="y:getStockQuoteResponse"/>
  </operation>
</portType>
<binding name="StockQuoteBinding" type="y:StockQuotePortType">
  <soap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="getStockQuote">
    <soap:operation soapAction=""/>
    <input>
      <soap:body use="literal"/>
    </input>
    <output>
      <soap:body use="literal"/>
    </output>
  </operation>
</binding>
<service name="StockQuoteService">
  <port name="StockQuotePort" binding="y:StockQuoteBinding">
    <soap:address
location="http://localhost/axis/services/StockQuoteService"/>
  </port>
</service>
</definitions>

```

3.3 Cannot change the style when creating a new web service

Case ID: P16059

Issue: Create a web service using DOCUMENT-LITERAL. Save and go back to the newly created web service and change the style to RPC-ENCODED and save again. The style DOCUMENT-LITERAL is displayed.

This is a known limitation. A user cannot change the style of a web service that has been deployed.

3.4 Spec changes are not reflected in associated items

Case ID: 16702

Issue: If a spec is modified, the changes are not reflected on any existing items using the spec.

Workaround: Delete all existing items that use the modified spec and then recreate the item to reflect any spec changes.

4. Installation

This section provides general guidelines to apply a Fix Pack to WebSphere Product Center. Some information may differ depending on the methods used for previous installations. Contact your support representative for WebSphere Product Center with any installation issues.

4.1 Installation Notes

This release includes support for Document-Literal style web services to the current web service functionality (Refer to Section 2.1.1). The impact on migration to 5.0.1.5 from previous 5.0.1.x versions is the requirement of a minor database modification. Scripts for creating web services need to include one additional parameter for specifying 'Style':

```
alter table twbs_wbs_webservice add (wbs_style varchar2(50));
```

4.2 Preparation

Before attempting to apply the latest Fix Pack to WebSphere Product Center, the following preparation is recommended:

4.2.1 Stopping the whole application on the local machine

Complete the following steps to stop the WebSphere Product Center instance:

1. Check the scheduler to make sure there are no critical jobs that need to be completed. If the queue is clear, kill the scheduler manually by running the following script:

```
$TOP/bin/go/stop/stop_scheduler.sh
```

2. Abort the entire application by running the following script:


```
$TOP/bin/go/abort_local.sh
```

All services running on the local machine are aborted. The RMI registry is aborted.

Note: Check to make sure all processes have stopped using the 'ps' command.

Kill off any rogue "java" or "rmiregistry" processes that remain after shutting down the instance. Occasionally, it may take several attempts to kill off all java processes. Continue killing all java processes until they are all dead.

4.2.2 Backup

- **Create a full backup of the current WebSphere Product Center directories before applying the Fix Pack. The Fix Pack will overwrite files that have changed. If any issues occur, the backup will allow a rollback to a previous version**
- **It is recommended to apply the Fix Pack to a test system to identify any issues before applying the Fix Pack to a production system**
- **Perform a full backup of the database before applying the Fix Pack to a production system**

Note: Do not delete the old WebSphere Product Center version until performing thorough testing with the new installation.

4.2.3 Delete Tomcat working directory

For configurations using Tomcat, delete the Tomcat working directory using the following command:

```
rm -rf $TOP/etc/default/tomcat33/webapps/ccd
```

Once the working directory has been deleted, restart the application server and apply the Fix Pack.

4.3 Apply Fix Pack

To apply the Fix Pack to WebSphere Product Center, complete the following tasks:

- Unpack tar file
- Run WebSphere Application Server script
- Update configuration files
- Test installation

4.3.1 Unpack tar file

Purpose: To extract and update any new installation files into the current working directory

Note: GNU tar is needed to untar the WebSphere Product Center files.

1. Copy the WebSphere Product Center tar file to the user or temporary directory.

Example:

```
{HOME_OF_WPC}/tarballs
```

2. CD to \$TOP, the current working directory, and unpack the tar file:

Example:

Using GNU tar, the following command extracts and unzips the tar file using an absolute path:

```
tar zxvf  
/home/WPC/tarballs/wpc_5001_03_fixpak_from_5000_15_was5_db2.tgz
```

4.3.2 Run WebSphere Application Server script

After unpacking the tar file in the previous section, ensure that the default server (server1) is running and run the following WebSphere Application script:

```
$TOP/bin/websphere/install_war.sh
```

Note: Ensure that the default server (server1) is running, as it is required for the WebSphere Application Server script to work. If needed, start the WAS default server by issuing the following command as root:

```
{WAS_HOME}/bin/startServer.sh server1
```

4.3.3 Verify configuration files

Verify all configuration files required by the new installation and make any updates as needed. Refer to the backup copy of the configuration files for the previous installation if needed.

- ❑ common.properties
- ❑ admin_properties.xml
- ❑ init_ccd_vars.sh
- ❑ WebSphere Product Center license file

❖ **common.properties**

On startup, the system will use this file to read in all system level parameters. This file includes settings for the database layer (connection parameters), directory settings, default character sets, thread-pooling parameters, and other settings, which are documented in the file.

File location: \$TOP/etc/default

❖ **admin_properties.xml**

This file is used by the administrative utilities to configure clusters of the application.

File location: `$TOP/etc/default`

❖ **init_ccd_vars.sh**

The initialization file is the shell script that initializes the shell variables used by the system.

File location: `$TOP/setup`

❖ **WebSphere Product Center License File**

The license file contains the license keys needed to use the WebSphere Product Center application.

File location: `$TOP/etc/default`

4.4 Test installation

4.4.1 Start WebSphere Product Center

To start the WebSphere Product Center, execute the following script:

```
$TOP/bin/go/start_local.sh
```

The script starts all the services needed to run WebSphere Product Center.

Note: This process should take approximately 30-40 seconds, depending on the speed of the processor.

4.4.2 Check status

Run the **`$TOP/bin/go/rmi_status.sh`** script that was provided by WebSphere Product Center and verify the following services have started correctly.

- `admin_<machine name>`
- `appsvr_<machine name>`
- `eventprocessor`
- `queuemanager`
- `scheduler`
- `workflow`

YOU HAVE SUCCESSFULLY APPLIED THE LATEST FIX PACK FOR WEBSHERE PRODUCT CENTER!

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