

IBM Sterling WMS 9.4

Release Enablement



Agenda

·Session 1 – 5th May 2015

- Overview (Anand Kaddi)
- Stack Updates (Sushir)
- Containerization Enhancement (Pankaj/Abhilash)
- Q&A (Sushir)

·Session 2 – 7th May 2015

- Other Features (Neeraj/Anupama)
- Upgrade & Refresh Pack (Karthik/Sushir)
- Return To Vendor (Neeraj/Anupama)
- Q&A (Sushir)

WMS 9.4 release objectives

·Continue to provide new capabilities for existing customers to allow them to have more efficient fulfillment execution, and improved operational controls.

■Key themes of this release are –

- Drive reduction in shipping costs with more effective selection of containers
- Improve warehouse associate efficiency with task management capabilities
- Flexibility for international shipping with adherence to export regulations

Changes to Containerization Algorithm

·Business Problem –

- Cost of shipping is dependent on number of cartons shipped for Parcel
- Wrong carton suggestion by WMS leads to additional manual work to repack items into right cartons – merge or split cartons

·Solution –

- In the 9.4 release, carton selection can consider item dimensions for crushable / foldable items
- Stackable item dimensions can be configured, and is appropriately used
- Worked with customer data to show improvement in carton selection, that leads to lesser repack activity

Support regulatory needs for international shipping

·Business Problem –

- Shipping internationally requires export approvals from regulatory authorities
- Approval identifiers should be captured and printed on documents accompanying the shipment
- Exemptions for trade blocs, etc should be considered for approval exemption

·Solution –

- Capturing export approval numbers during packing
- Configuration to setup exemption rules which will prevent the approval number capture screens from coming up
- Prints can be modified to include approval numbers, etc as per prescribed formats by authorities

Operational improvements and efficiency

·Picking Multi SKU LPNs

- Single SKU LPNs could be picked more efficiently with “round up” configurations
- Multi SKU LPNs can now support the same behavior, with all the products on the multi SKU LPN getting picked
- Replenishing to MHE and multi SKU LPNs during peak season would benefit from this behavior to improve replenishment efficiency

·Putaway Task consolidation

- Second step picking / putaway tasks can be consolidated for same deposit location
- Only loose inventory putaway is consolidated

Operational improvements and efficiency

·Target Zone as a criteria

- Extended target zone as a criteria that can be entered at the start of task execution
- Allows warehouse associates to be spread across the warehouse – by choosing different target zones – to prevent space congestion
- Putaway of large inbound orders can be regulated with multiple associates putting away to different areas in warehouse

Documentation now available on Knowledge Center

- An IBM-wide view of multiple product technical information in a single location.
- IBM KC is fusion of today's information centers, wikis, and social media capabilities.
- In its first release, IBM Knowledge Center (KC) merges all existing IBM product information into a single Web application that provides a new user experience.
- IBM KC provides integrated tools for finding, filtering, customizing, saving, publishing, and sharing information.

Documentation now available on Knowledge Center

InfoCenter

Documentation for only one product or solution

Can only search one product

Cannot filter search results

Cannot save searches

IC TOC not in sync with search results

Runs in DHE

User cannot create custom documentation collections

No standard social media capability

No dropdown to change language

URL of selected topic does not get updated in address bar

Knowledge Center

Documentation for all IBM products and solutions.

Can search multiple products simultaneously

Can filter search results, by product, date, operating system, and task**

Can save up to 10 searches

TOC adjusts to search results

Runs in AHE. Meets ITCS104 security requirements

User can create, edit, and organize customized collections, and can export the collection as a PDF

Can share links via e-mail, LinkedIn and Twitter

Dropdown to select language***

Topic URL is dynamically displayed in the address bar

Stack Updates

Installation Considerations

IBM Sterling Warehouse Management 9.4

- Version 9.4 was eGA on 28th April 2015.
 - Media Availability is 5th May 2015.
- Product Documentation is now available on IBM Knowledge Center.
 - http://www-01.ibm.com/support/knowledgecenter/SS73R8_9.4.0/wms_maps/wms94_welcome.html
 - Download Information can be found here.
 - <http://www-01.ibm.com/support/docview.wss?uid=swg24039902>
- Can be deployed with OMS 9.4 or standalone.

IBM Sterling Warehouse Management 9.4 offers

- Changes to the container selection algorithm to account for non-rigid items, stackable items, and other irregular properties of items that would result in better selection of containers, reducing the need for repacking.
- Help in the selection of the right container to optimize shipping costs.
- New capabilities in replenishment and retrieval operations to improve productivity by grouping tasks based on additional parameters.
- New capabilities that adhere to regulatory requirements for exports.

ISADC – IBM Support Assistant Overview

- Tool that automates data collection from customer's environment and provides an option to upload the data automatically to Ecurep server against a given PMR.
 - Provides two collectors
 - System collector: Collects general information about hardware or software
 - Sterling Environment collector: Collects important information like fix pack version, configuration files, database version, log files, WMS property files etc. from IBM Sterling and Fulfilment environment.
- Collectors are launched in the interactive console mode and user can chose the appropriate options based on the data needed.
 - You can download this tool from IBM Passport Advantage.

IBM Sterling WMS 9.4 Installation Overview

- IBM Installation Manager for IBM Sterling WMS 9.4.0
- Like as 9.3, IBM Sterling WMS PCA installation stays merged with IBM Sterling WMS installation
 - Multiple Deployment modes:
 - Production
 - Non Production
 - Selecting the appropriate installer:
 - WMS Installer
 - WMS Refresh pack

Choosing an Installer

- New Instance WMS 9.4

- Download WMS 9.4 from Passport Advantage.
 - Install WMS 9.4

- OMS 9.4 and WMS 9.4 in a Single Instance

- Download OMS 9.4 from Passport Advantage
 - Install OMS 9.4

- Download the compatible WMS Refresh Pack from Fix Central
 - Install WMS Refresh Pack on the OMS 9.4 Runtime.

Upgrade Overview

Existing Instance	Target Upgrade Instance	Order of Steps
WMS 9.3 (or earlier)	WMS 9.4	<ol style="list-style-type: none"> 1. Download WMS 9.4 from passport advantage. 2. Install WMS 9.4 in upgrade mode. 3. Follow migration procedure for Sterling SSFS 9.4 4. Follow migration procedure for Sterling WMS
OMS 9.3(or earlier) and WMS 9.3 (or earlier) in a single instance	OMS 9.4 and WMS 9.4 in a single instance	<ol style="list-style-type: none"> 1. Download OMS 9.4 from passport advantage. 2. Install OMS 9.4 in upgrade mode. <p>Note: Apply OMS 9.4 Fix Pack 2 from Fix Central.</p> <ol style="list-style-type: none"> 3. Download WMS Refresh pack (9.4.0.0-Sterling-WMS-All-rp0001.zip) from Fix Central 4. Install WMS RP on the new runtime. 5. Follow migration procedure for Sterling SSFS 9.4 6. Follow migration procedure for Sterling WMS

Deployment Considerations

·Localization

- Localization support for 9 additional languages only.

·Integration

- Support for Single Schema – Single Instance for OMS & WMS

9.4.0

- Custom integration to be built in case of different instances of OMS & WMS 9.4.0

Supported Stack

·Prerequisite software:

- IBM DB2®
- IBM WebSphere® Application Server

·Base software:

- IBM Sterling Warehouse Management

·Additional components:

- Quick Start Guide
- Development Documentation
- IBM Cognos® Business Intelligence Server
- IBM Support Assistant

·Detailed Assembly

- <http://www-01.ibm.com/support/docview.wss?uid=swg24039902>

Containerization

Detailed Overview

Containerization Features

- Layered approach
- Deformable
- Stackable
- Height Oriented items
- Pack by Volume

The screenshot displays the 'Containerization' tab within a software interface. The interface includes a top navigation bar with tabs for 'Other Attributes', 'Associations', 'Node Items', 'Available Services', 'Item Instructions', 'Containerization' (highlighted), 'Inventory Info', and 'Classifications'. Below this, there are sub-tabs for 'Primary Info', 'Units Of Measure', 'Sourcing/Transportation', 'Inventory Info', and 'Classifications'. The main content area is divided into three sections:

- Packed Unit Dimensions:** Contains a checked checkbox for 'Deformable'. Below it are three rows of input fields: 'Length' (25.2), 'Width' (16.7), and 'Height' (10). Each row also includes a 'UOM' dropdown menu, all set to 'Inch'.
- Stacking:** Contains a checked checkbox for 'Stackable Item'. Below it is a row with a 'Height' input field (2.5) and a 'Stacking Height UOM' dropdown menu (Inch).
- Packing Constraints:** Contains two unchecked checkboxes: 'Orientation Constrained By Height' and 'Pack By Volume'.

Layered Approach (Overfilling betterment)

- Today's logic decides the container based on the item's weight and volume to pack. For each of the container decided (based on weight and volume) we try to fill the items inside the container based on it.
- Now in this enhancement, we introduce a new property to ensure that the items also fit dimensionally even though the container can accommodate the items by weight and volume.
- `yfs.containerization.trackItemsByDimensions= Y`

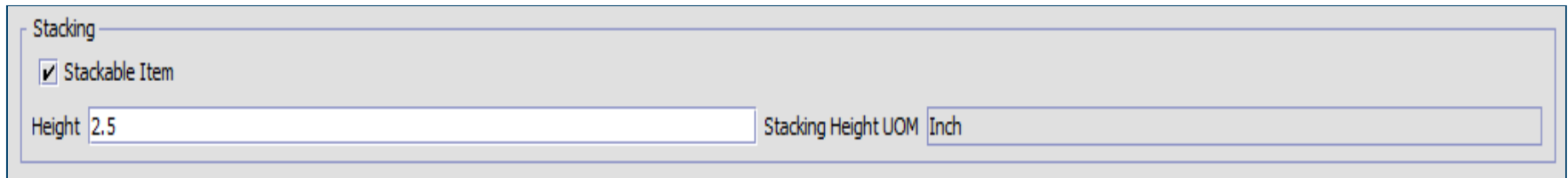
Deformable Items

There are items which can be folded (malleable) for ex: belts, clothes during packing. The dimensions of these items are different during packing since they are folded. New fields (null-able) are added at item level to store these dimensions.

Packed Unit Dimensions			
<input checked="" type="checkbox"/>	Deformable		
Length	<input type="text" value="12.5"/>	Length UOM	<input type="text" value="Inch"/>
Width	<input type="text" value="5.75"/>	Width UOM	<input type="text" value="Inch"/>
Height	<input type="text" value="10"/>	Height UOM	<input type="text" value="Inch"/>

Stackable Items

- Upon stacking the stacked item doesn't add the entire volume of item instead there is only small amount of volume added. We assume that it's only in the height that the item can be stacked. To track this, a field on the item specifies the increase in height upon stacking.
- Examples of Stacking items: buckets, tubs, mugs etc.



The screenshot shows a configuration form for 'Stacking'. It contains a checked checkbox for 'Stackable Item', a text input field for 'Height' with the value '2.5', and a dropdown menu for 'Stacking Height UOM' with 'Inch' selected.

Stacking	
<input checked="" type="checkbox"/> Stackable Item	
Height 2.5	Stacking Height UOM Inch

Note: System will consider stacking only for same SKU's.

Packing Constraints

Some other important packing constraints are introduced in this Enhancement:

Orientation Constraints By Height:

·Liquid items like paints cannot be tilted during packing since there are chances of it getting spilled. The containerization algorithm considers this and packs these items up-right only.

contd....

Packing Constraints

Pack By Volume:

- There may be still some items which can be squeezed/placed inside the container for which the dimension check is not at all needed, only weight and volume check is enough.

Packing Constraints

Orientation Constrained By Height

Pack By Volume

End of Session 1

Thank You



Target Zone as Criteria in Putaway and Retrieval

Detailed Overview

Target Zone

- Provision to enter Target Zone as the task selection criteria when executing retrieval and putaway tasks.
- Applicable for tasks that have a prior target location stamped.
- Business need – To distribute the workforce and improve task execution efficiency
- On scanning the target zone in the criteria screen, we will suggest the tasks stamped with the same target zone scanned.

Earlier/Current:

Sterling WMS Mobile Ap:
(Demo Use Only)

Criteria

Equipment #

Task List #

Start Location

After Enhancement:

Sterling WMS Mobile Application
(Demo Use Only)

Criteria

Equipment #

Task List # /Target Zone

Start Location

Consolidation of 2nd Step Replenishment Tasks

Detailed Overview

Consolidation

- **In multi-step replenishment scenario, the second step tasks we create from staging locations to the destination are putaway tasks. So, the second steps task's were not getting consolidated.**
- **Tasks are consolidated when they have same**
 - **SKU**
 - **Source Location**
 - **Target Location**
- **Business Need: Reduce the number of trips during task execution to maximize warehouse productivity**

Consolidation contd...

- **While choosing which tasks to consolidate, we will always pick the tasks with higher priority, before moving on to the next.**
- **Putaway tasks will be consolidated across MoveRequestNo's only when in task type configuration we allow multiple/infinite (0) users to work on the tasks.**
- **Auto-completes all the child tasks which are open for the consolidated quantity.**

Earlier

Pick - SPUT
 Location
 ST02
 SKU
 A08
 Feature Pack Item8

 UOM **Quantity**
 EACH 16.00

After Enhancement:

Pick - SPUT
 Location
 ST02
 SKU
 A08
 Feature Pack Item8

 UOM **Quantity**
 EACH 140.00

Multi-SKU LPN Replenishment

Detailed Overview

Multi SKU Replenishment

- **Allows to move Multi SKU Pallets during demand based replenishment by scanning only the LPN information in RF**
- **Configuration at zone level to drive this behavior.**
- **Business Need: Facilitate advance replenishment for future waves by moving extra inventory available in the LPN that is not part of the current demand.**

Multi SKU Replenishment contd...

- **In RF,**
 - If the user scans a multi-SKU LPN for an item whose task is being completed, system will move ahead without asking for further details (item id scan, quantity etc.,) and complete the task.
 - We check for other item tasks that are open across waves and can be completed by the entire LPN move. We will auto-complete such tasks in background.
 - We will move other items on the LPN that is NOT associated with any tasks to the target location for future waves fulfillment.

Zone Details (SELLER1_NODE1)

Zone: Description:

Building #: Primary Bulk Zone:

Track Inventory
 Forward Pick Zone
 Transfer Inventory Ownership
 Minimize No of Locations Per SKU

Track LPN:
 Pallet Case

Max No of Locations Per SKU:

Locations in this Zone store product in multiples of: Check Digit:

STOP Zone Constraints **Inventory Status Transitions** **Task Execution Preferences**

Force Location Scan On Visit
 Put On Variance Hold
 Confirm Location Empty After Pick
 Count entire location when item in location is put on count

Consider Capacity when Replenishing Locations in this Zone
Consider replenishing locations when inventory goes below % of Location Capacity
Replenish Locations % more than maximum capacity when demand exceeds maximum capacity of Locations

Can multiple users work simultaneously in a location:

Move multi-SKU LPN for demand replenishment using mobile

Zone Details (SELLER1_NODE1)

Zone: Description:

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STOP Zone Constraints **Inventory Status Transitions** **Task Execution Preferences**

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Consider Capacity when Replenishing Locations in this Zone
Consider replenishing locations when inventory goes below % of Location Capacity
Replenish Locations % more than maximum capacity when demand exceeds maximum capacity of Locations

Can multiple users work simultaneously in a location:

Move multi-SKU LPN for demand replenishment using mobile

ITN Capture & Export Regulations

Detailed Overview

Introduction

- **Internal Transaction Number gets captured for the non-domestic shipments. This is in adherence to Export Regulations.**

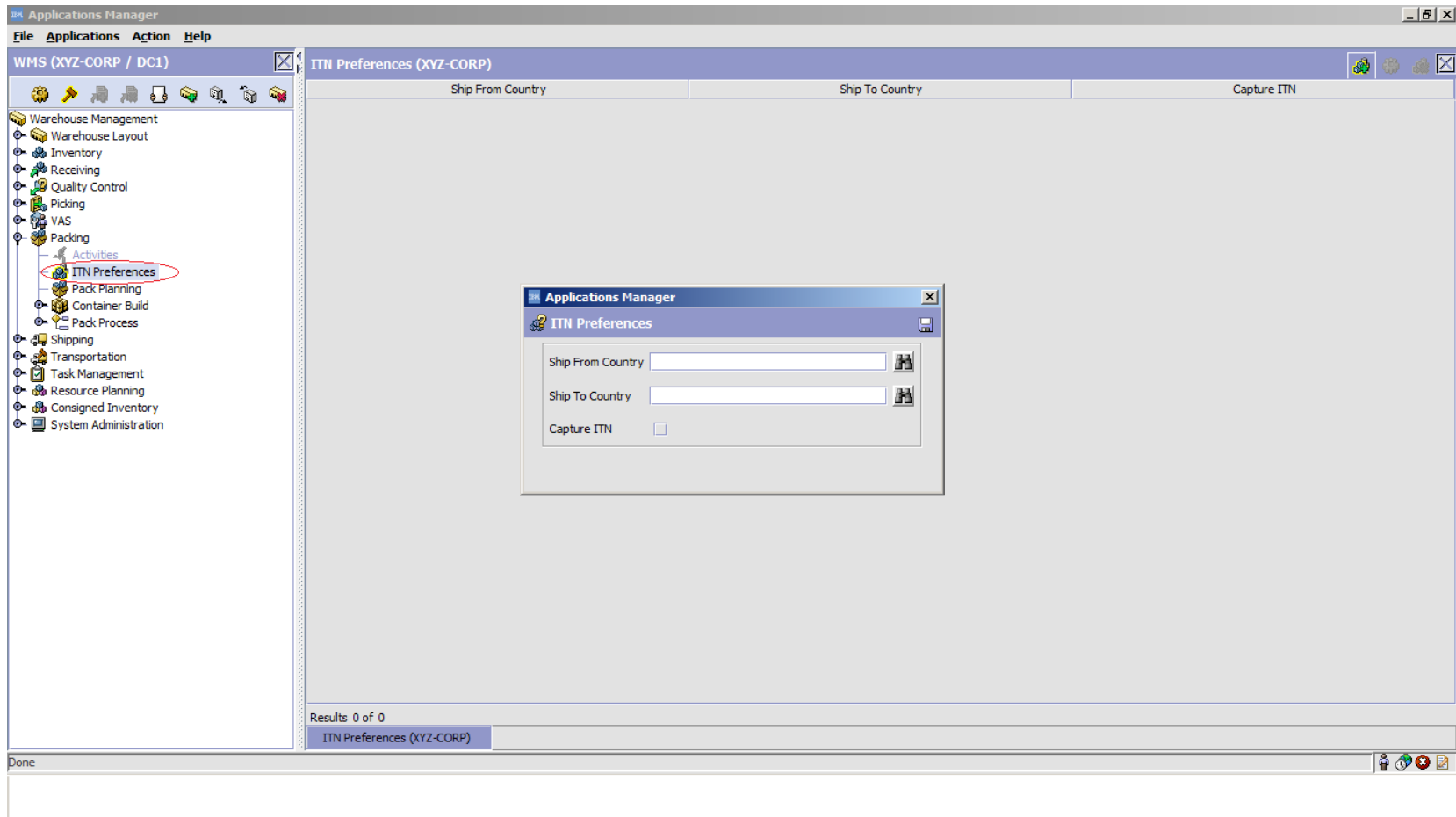
Previous Behavior and Limitations

- **ITN was only captured for non-domestic shipments of USA.**
- **Other countries couldn't capture ITN for their country, if they had to ship a non-domestic shipment.**
- **ITN was captured at HSDE pack station only.**

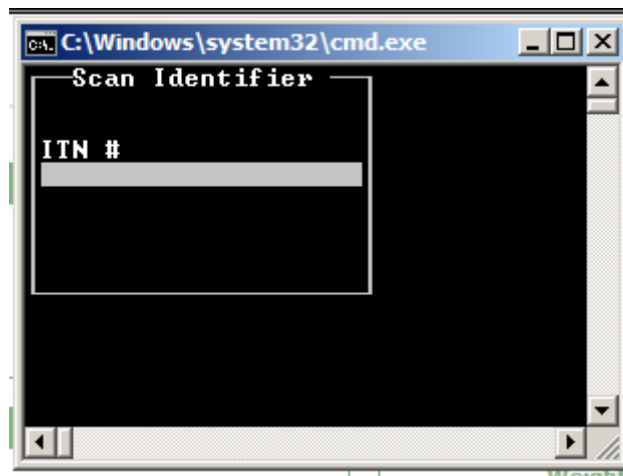
New Behaviour and Flexibility

- **Now the WMS 9.4 supports export regulations for all international shipments.**
- **This can be configured in the new screen introduced as part of this feature, called “ITN Preferences”**
- **Implementations can now choose the country combinations for which export regulations need to set up via ITN number.**
- **ITN can now also be captured by the packer with RF. A new screen in RF introduced on pack complete.**

Configuration screen for ITN



RF screen for capturing ITN



IBM WMS 9.4 Installation and Upgrade

Detailed Overview

Detailed Flow for Installation of IBM Sterling Warehouse Management System 9.4.0

Performing an Installation of IBM Sterling Warehouse Management System

- Before you execute `launchpad.sh`, you must first do the following:
 - Ensure that `launchpad.sh` has execute permission. In the directory where `launchpad.sh` is located, enter the following commands:

```
chmod +x launchpad.sh
chmod +x launchpad/*.sh
```
 - Export your browser location using the following command:

```
export BROWSER=/usr/bin/mozilla
```

You can replace `/usr/bin/mozilla` with the path to whatever browser you prefer.
- Now you can double-click on `launchpad.sh` or issue the `./launchpad.sh` command, which starts the Launchpad, opens the IBM Installation Manager, and begins the installation of the IBM Sterling Warehouse Management System software.

Select the link to install IBM Sterling Warehouse Management System



Review the installation packages to be installed

Install Packages
Select packages to install:

Installation Packages	Status	Vendor	License Key Type
<input checked="" type="checkbox"/> IBM Sterling Warehouse Management	Installed		
<input checked="" type="checkbox"/> Version 9.4	Installed		

Show all versions

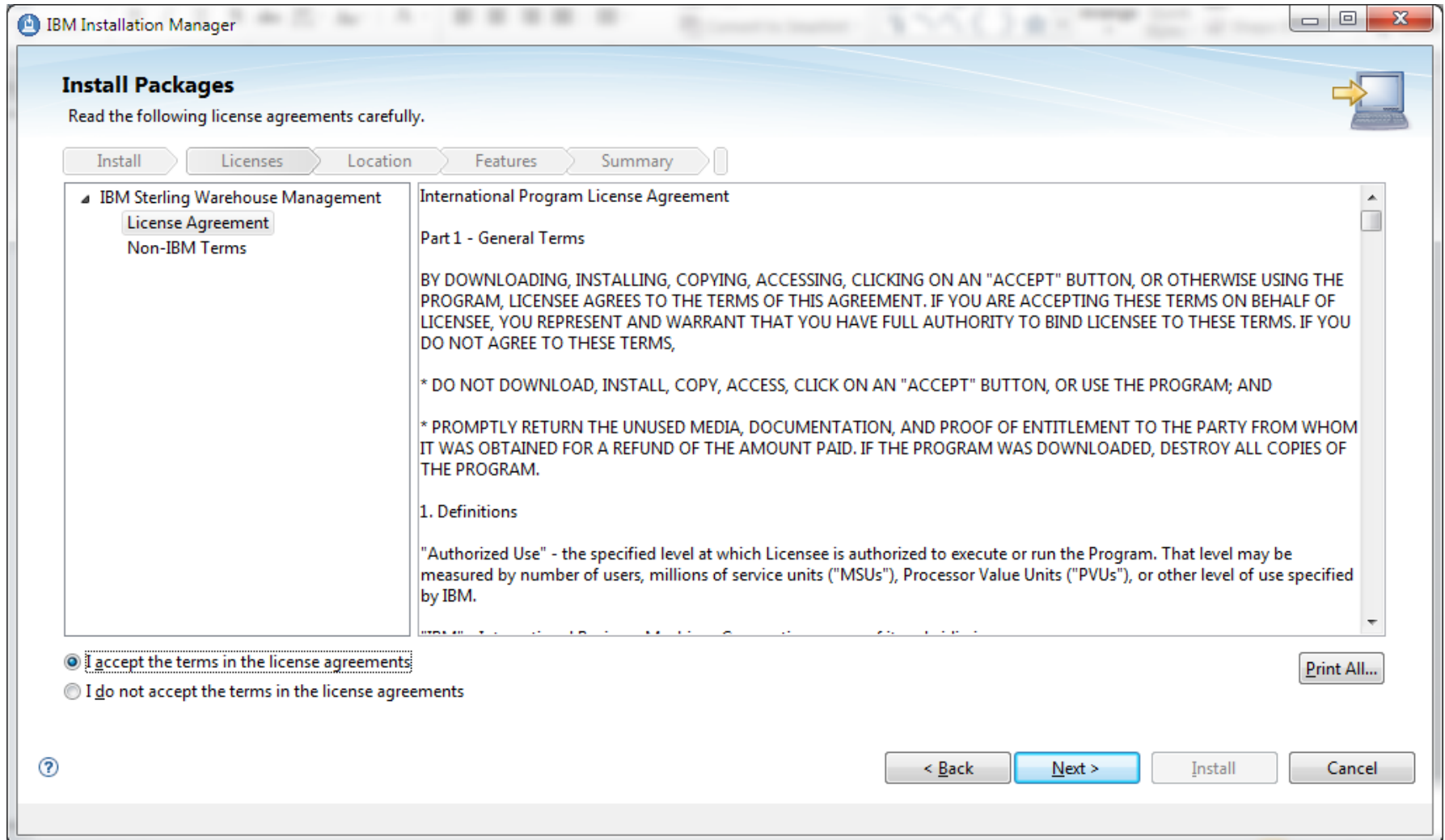
[Check for Other Versions, Fixes, and Extensions](#)

Details
IBM Sterling Warehouse Management 9.4
IBM Sterling Warehouse Management [More info...](#)

- Repository: E:\Softwares\Orion_Drop_13\WMS_Launchpad\WMS_Launchpad\disk1\foundation

[?<](#) [< Back](#) [Next >](#) [Install](#) [Cancel](#)

Review and accept the license agreement



The screenshot shows the 'Install Packages' window in IBM Installation Manager. The window title is 'IBM Installation Manager'. The main heading is 'Install Packages' with a sub-heading 'Read the following license agreements carefully.' Below this, there are five tabs: 'Install', 'Licenses', 'Location', 'Features', and 'Summary'. The 'Licenses' tab is selected. On the left, a tree view shows 'IBM Sterling Warehouse Management' expanded to 'License Agreement', with 'Non-IBM Terms' also visible. The main content area displays the 'International Program License Agreement' for 'Part 1 - General Terms'. The text of the agreement includes: 'BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, CLICKING ON AN "ACCEPT" BUTTON, OR OTHERWISE USING THE PROGRAM, LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF LICENSEE, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND LICENSEE TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS, * DO NOT DOWNLOAD, INSTALL, COPY, ACCESS, CLICK ON AN "ACCEPT" BUTTON, OR USE THE PROGRAM; AND * PROMPTLY RETURN THE UNUSED MEDIA, DOCUMENTATION, AND PROOF OF ENTITLEMENT TO THE PARTY FROM WHOM IT WAS OBTAINED FOR A REFUND OF THE AMOUNT PAID. IF THE PROGRAM WAS DOWNLOADED, DESTROY ALL COPIES OF THE PROGRAM. 1. Definitions "Authorized Use" - the specified level at which Licensee is authorized to execute or run the Program. That level may be measured by number of users, millions of service units ("MSUs"), Processor Value Units ("PVUs"), or other level of use specified by IBM.' At the bottom left, there are two radio buttons: 'I accept the terms in the license agreements' (which is selected) and 'I do not accept the terms in the license agreements'. To the right of these buttons is a 'Print All...' button. At the bottom right, there are four buttons: '< Back', 'Next >', 'Install', and 'Cancel'. A help icon (?) is located at the bottom left of the window.

IBM Installation Manager

Install Packages

Read the following license agreements carefully.

Install Licenses Location Features Summary

- IBM Sterling Warehouse Management
 - License Agreement
 - Non-IBM Terms

International Program License Agreement

Part 1 - General Terms

BY DOWNLOADING, INSTALLING, COPYING, ACCESSING, CLICKING ON AN "ACCEPT" BUTTON, OR OTHERWISE USING THE PROGRAM, LICENSEE AGREES TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCEPTING THESE TERMS ON BEHALF OF LICENSEE, YOU REPRESENT AND WARRANT THAT YOU HAVE FULL AUTHORITY TO BIND LICENSEE TO THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS,

* DO NOT DOWNLOAD, INSTALL, COPY, ACCESS, CLICK ON AN "ACCEPT" BUTTON, OR USE THE PROGRAM; AND

* PROMPTLY RETURN THE UNUSED MEDIA, DOCUMENTATION, AND PROOF OF ENTITLEMENT TO THE PARTY FROM WHOM IT WAS OBTAINED FOR A REFUND OF THE AMOUNT PAID. IF THE PROGRAM WAS DOWNLOADED, DESTROY ALL COPIES OF THE PROGRAM.

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"Authorized Use" - the specified level at which Licensee is authorized to execute or run the Program. That level may be measured by number of users, millions of service units ("MSUs"), Processor Value Units ("PVUs"), or other level of use specified by IBM.

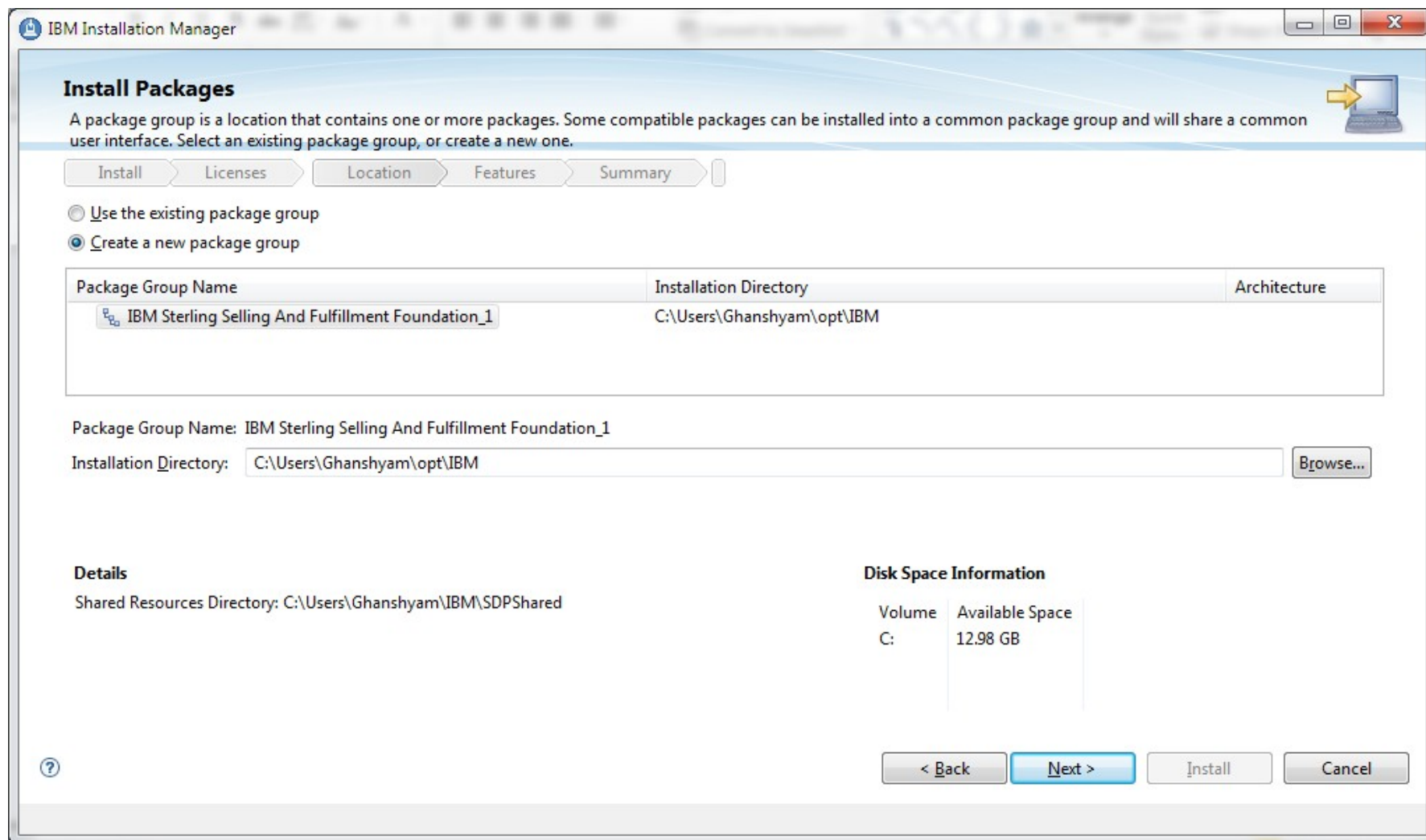
I accept the terms in the license agreements

I do not accept the terms in the license agreements

Print All...

< Back Next > Install Cancel

Accept the default installation location or browse to a new location



Install Packages

A package group is a location that contains one or more packages. Some compatible packages can be installed into a common package group and will share a common user interface. Select an existing package group, or create a new one.

Install | Licenses | **Location** | Features | Summary

Use the existing package group
 Create a new package group

Package Group Name	Installation Directory	Architecture
IBM Sterling Selling And Fulfillment Foundation_1	C:\Users\Ghanshyam\opt\IBM	

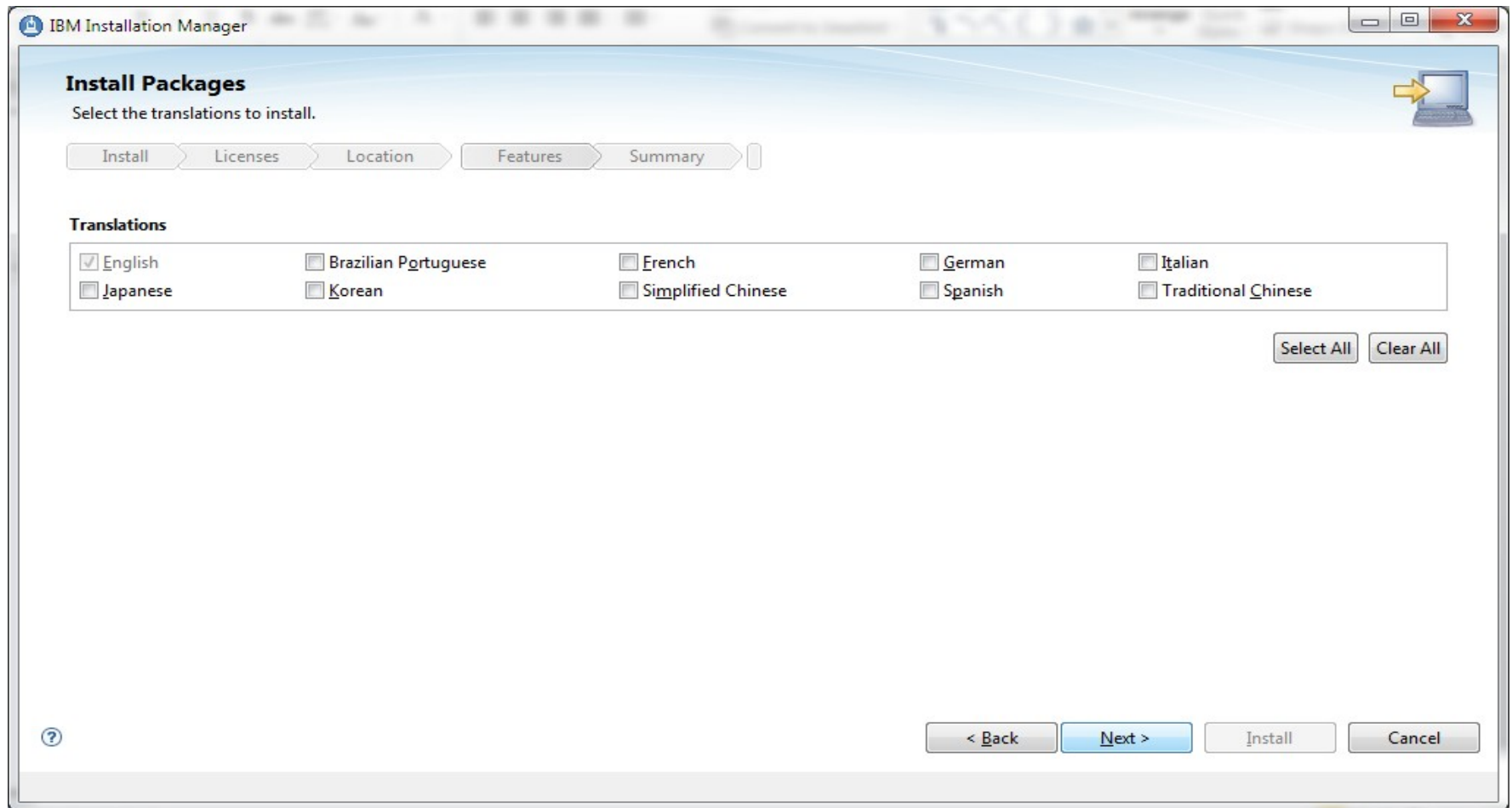
Package Group Name: IBM Sterling Selling And Fulfillment Foundation_1
Installation Directory: C:\Users\Ghanshyam\opt\IBM

Details
Shared Resources Directory: C:\Users\Ghanshyam\IBM\SDPShared

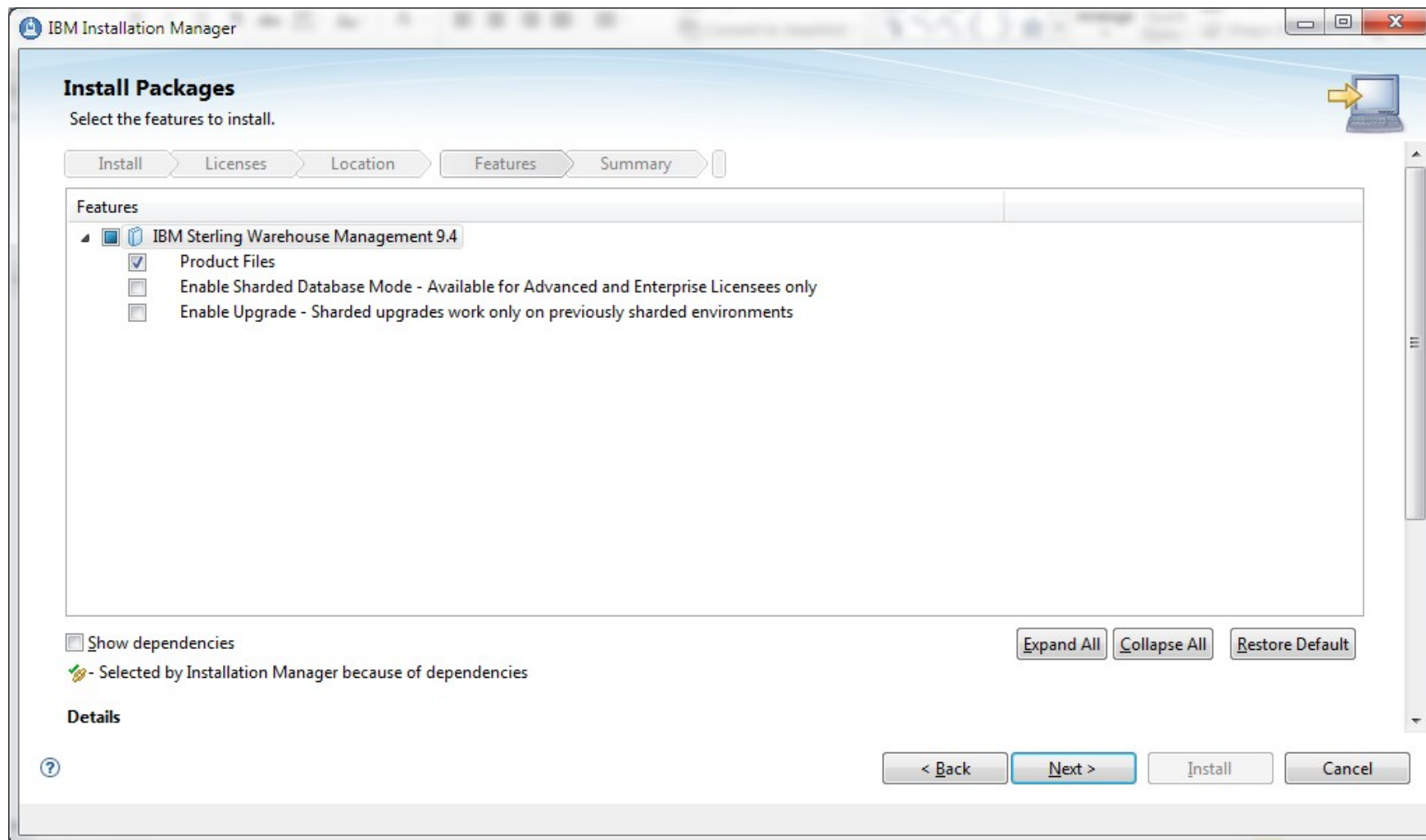
Disk Space Information

Volume	Available Space
C:	12.98 GB

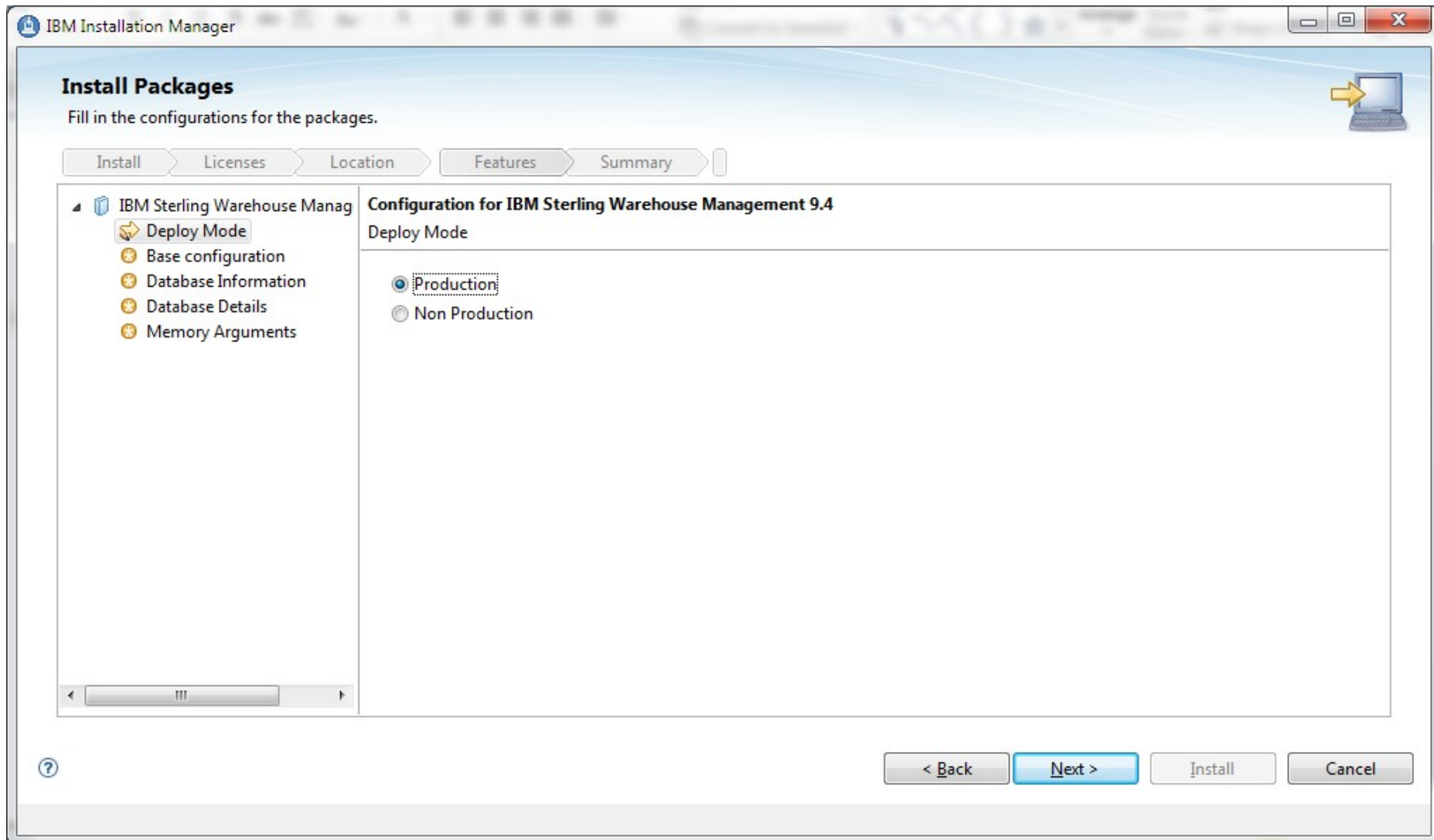
Select the language for which you want to install the IBM sterling WMS



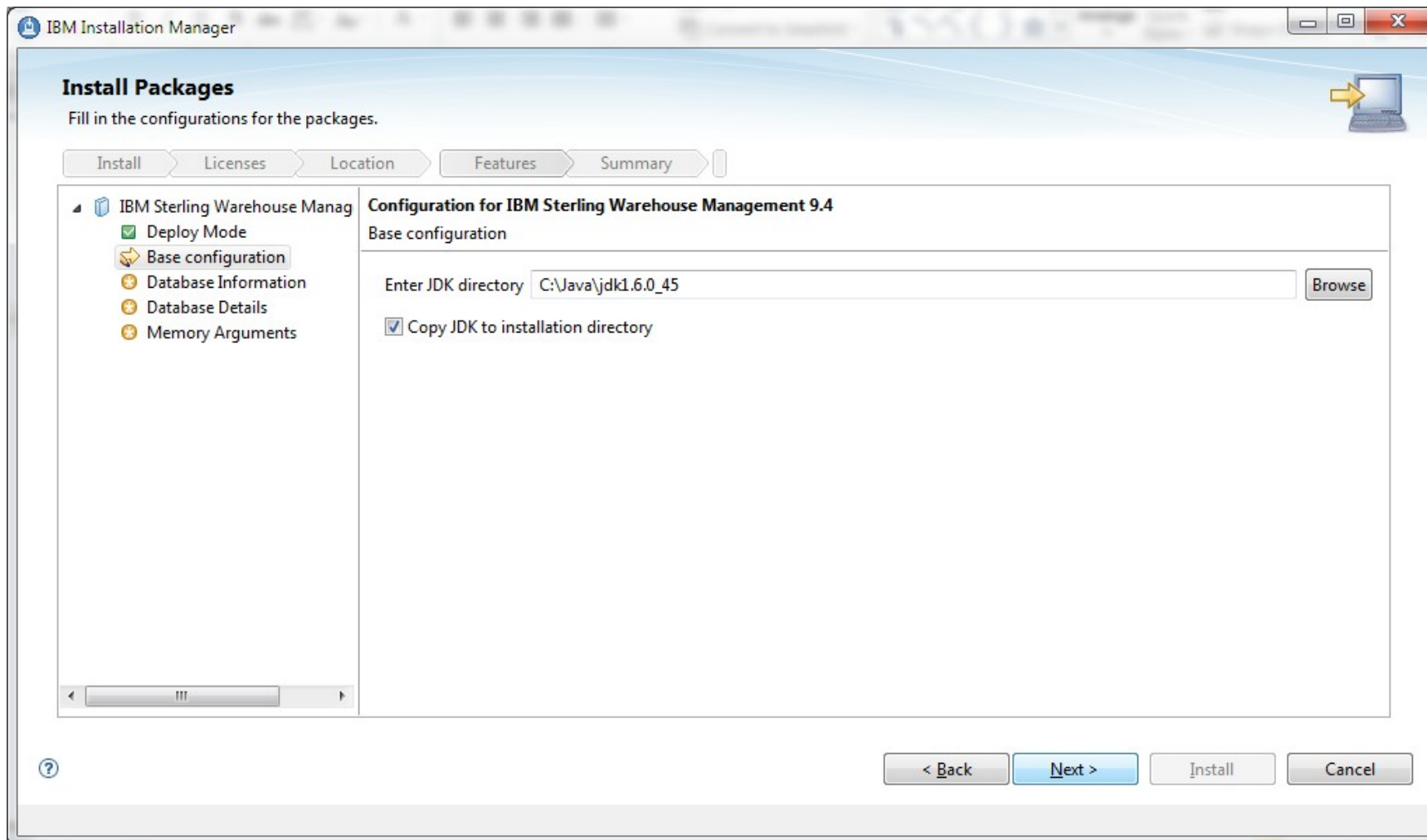
Select the appropriate features to install



Select the deployment mode accordingly



Enter the jdk directory



Enter the DB information and validate connection

IBM Installation Manager

Install Packages

Fill in the configurations for the packages.

Install Licenses Location **Features** Summary

- IBM Sterling Warehouse Manag
 - Deploy Mode
 - Base configuration
 - Database Information**
 - Database Details
 - Memory Arguments

Configuration for IBM Sterling Warehouse Management 9.4

Database Information

Database Vendor	Oracle
Database user Name	Orion
Database password	•••••
Confirm database password	•••••
Database catalog Name	orcl
Database host Name/IP Address	localhost
Database port Number	1521
Database schema Name	ORION

Database driver jars

ojdbc6.jar - C:\oracle\app\oracle\product\11.2.0\server\jdbc\lib

Add Jars...
Edit...
Remove

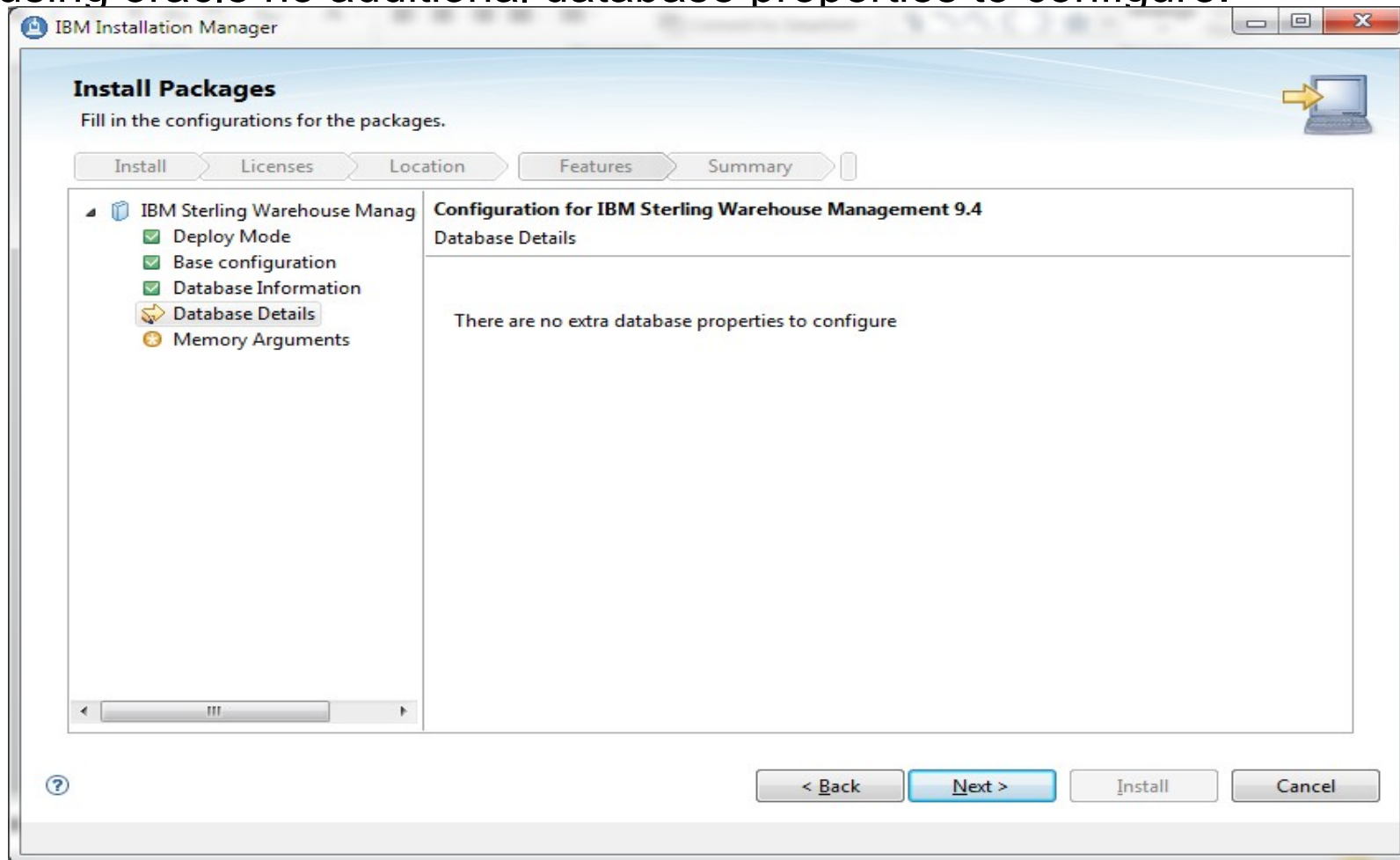
Validate Connection

< Back Next > Install Cancel

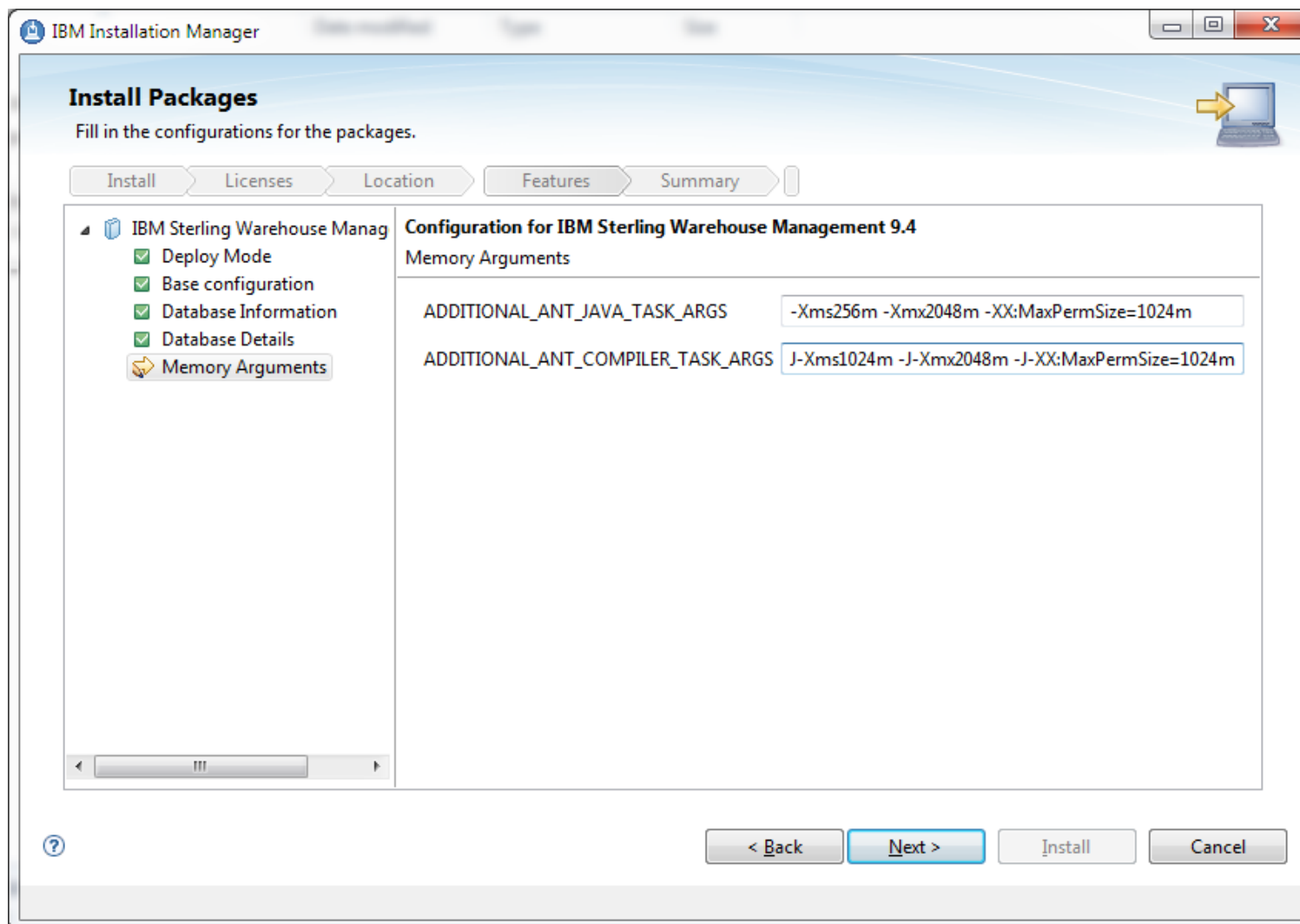
On the database details screen

If using DB2 choose whether to use multibyte support.

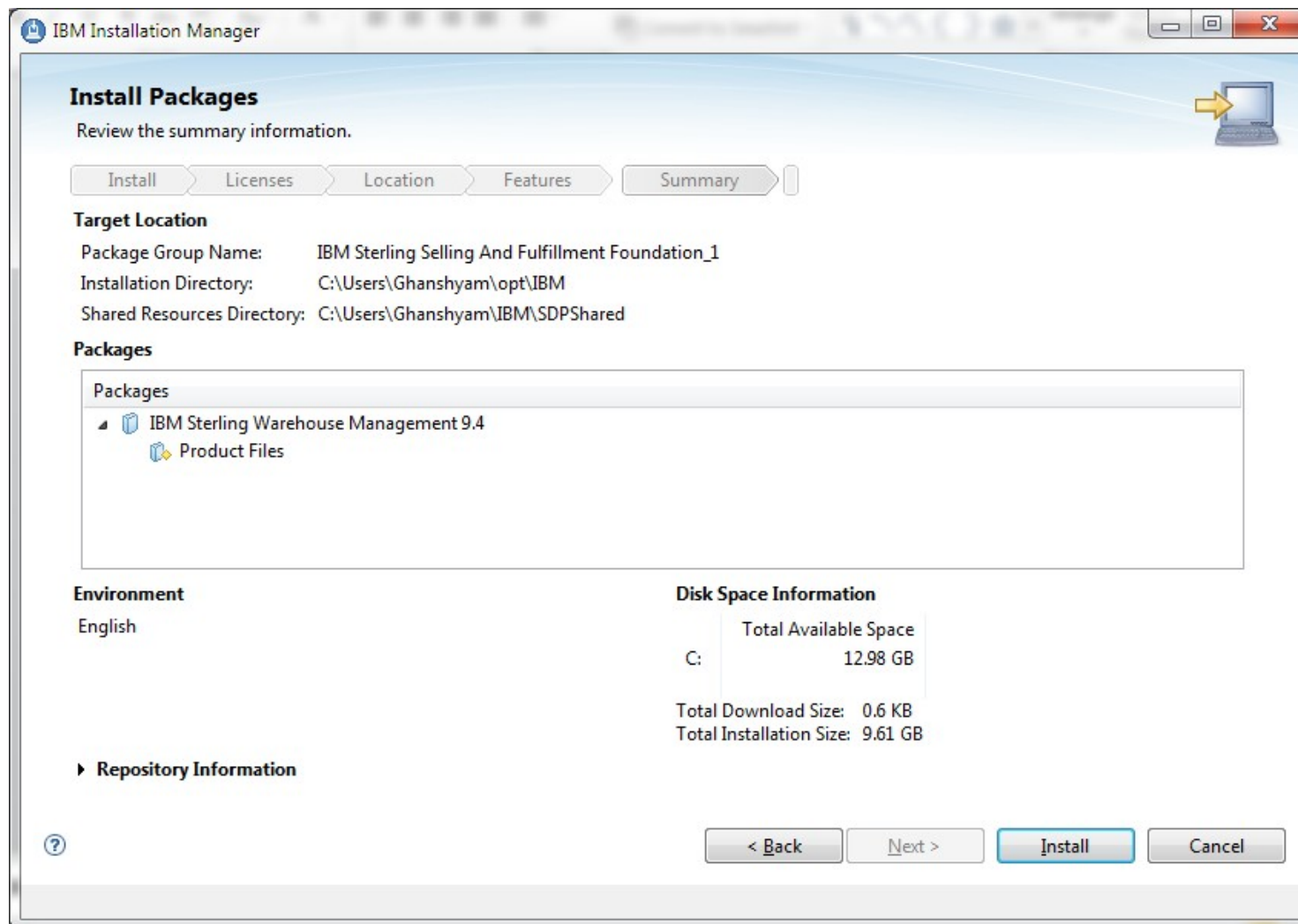
If using oracle no additional database properties to configure.



Enter the memory parameters settings



Click Install to start the installation



Build Ear and Deploy

For building ear run command :

```
./buildear.sh -Dappserver=websphere -Dwarfiles=smcfs,sma,sbc -Dearfile=smcfs.ear
-Dnodecar=true -Dnowebservice=true -Ddevmode=true create-ear
```

Install New Application

Specify options for installing enterprise applications and modules.

[Step 1 Select installation options](#)
[Step 2 Map modules to servers](#)
 → **Step 3: Summary**

Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	Sterling Applications
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here

Detailed Flow for Installation of IBM Sterling Warehouse Management System Refresh Pack

Performing a Refresh Pack Installation

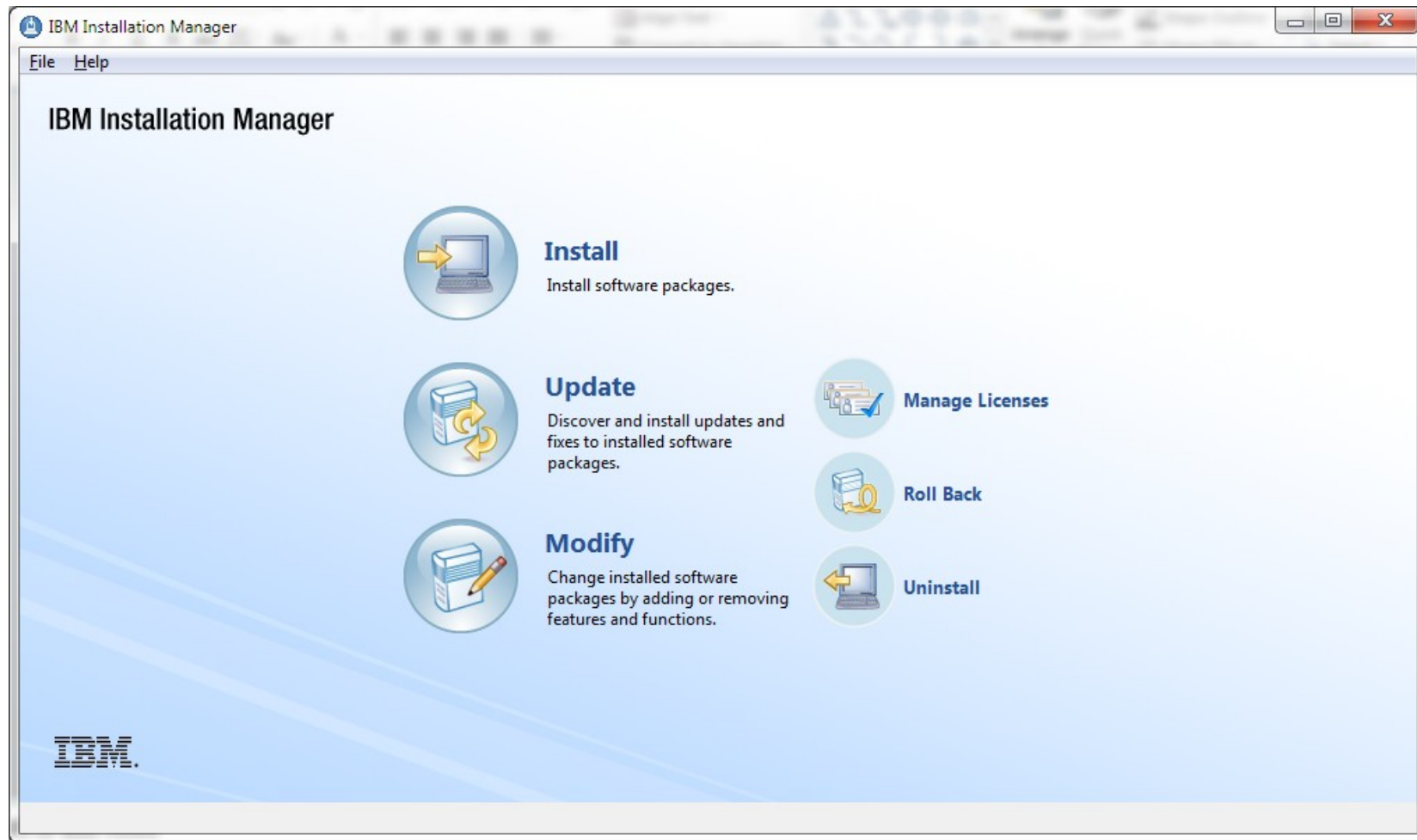
- Prior to beginning Refresh Pack installation first install IBM Sterling Order Management 9.4.
- The refresh pack installation package contains the fix pack, repository files that are used to install the corresponding refresh pack (WMS 94) on the base installation (OMS 94), and the repository.config file.

Execute the following command to start the IBM Installation Manager:

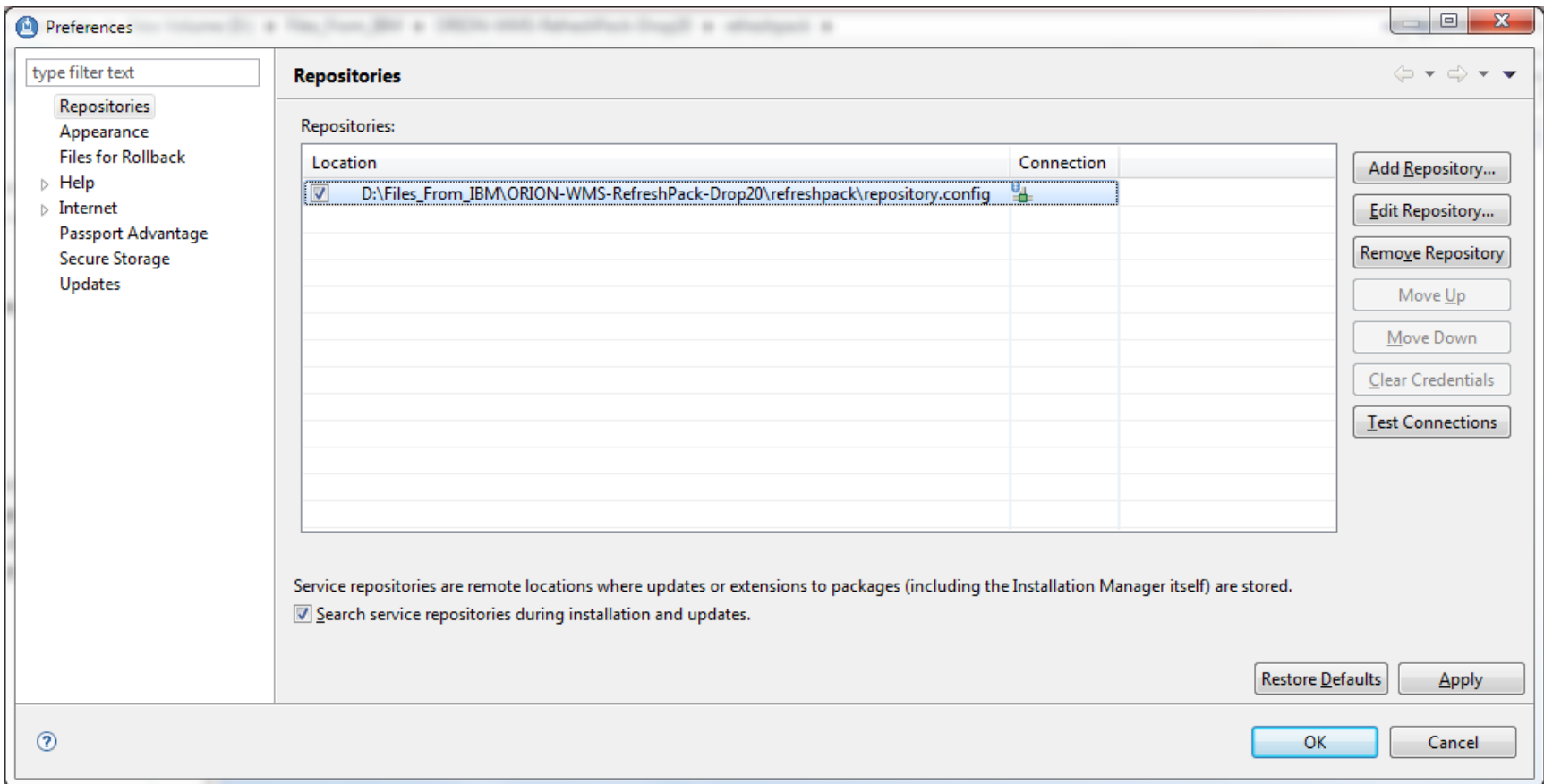
```
<IM_INSTALL_DIR>\eclipse\IBMIM.exe
```

```
<IM_INSTALL_DIR>/eclipse/IBMIM
```

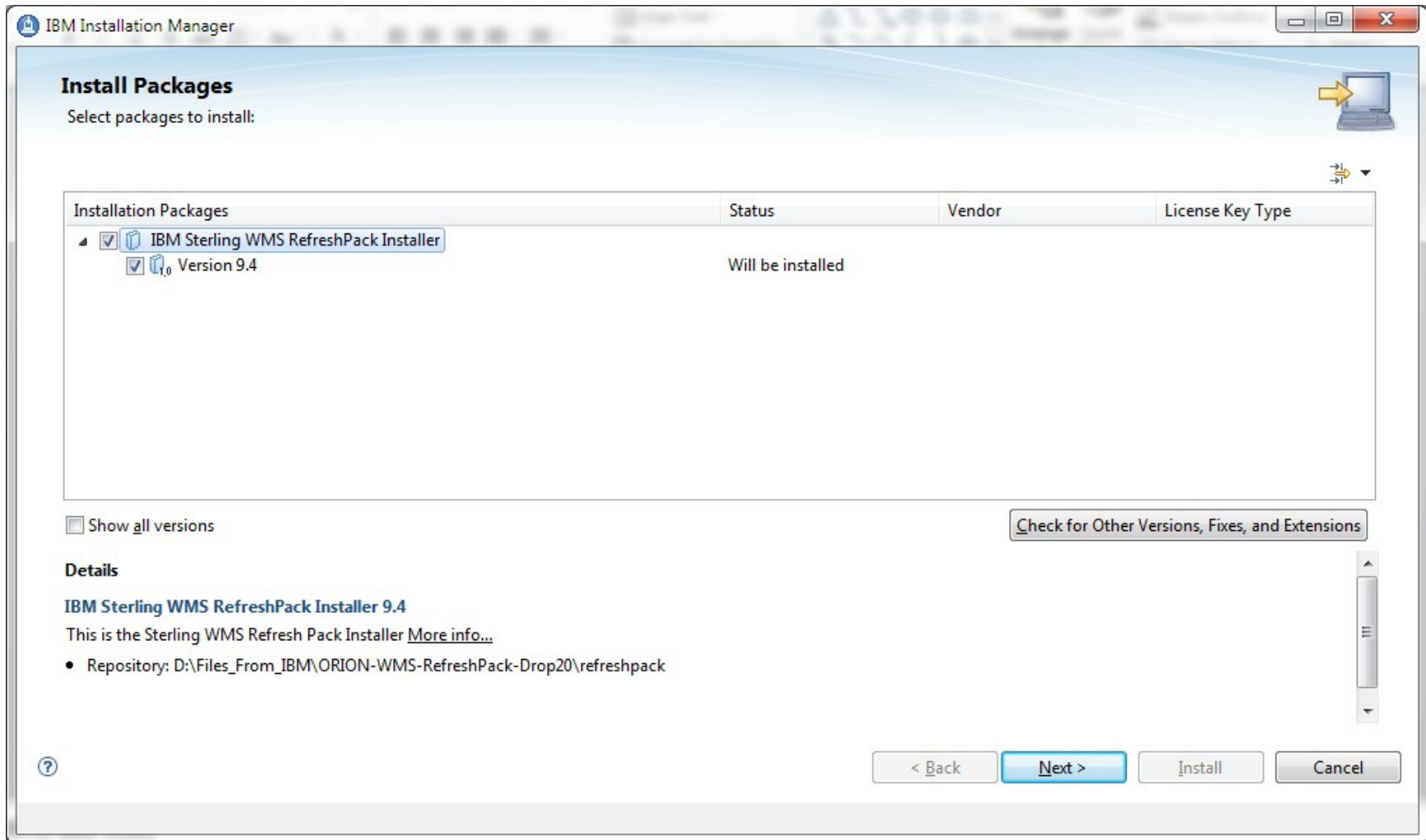
- Here, <IM_INSTALL_DIR> Indicates the directory where the IBM Installation Manager is installed.



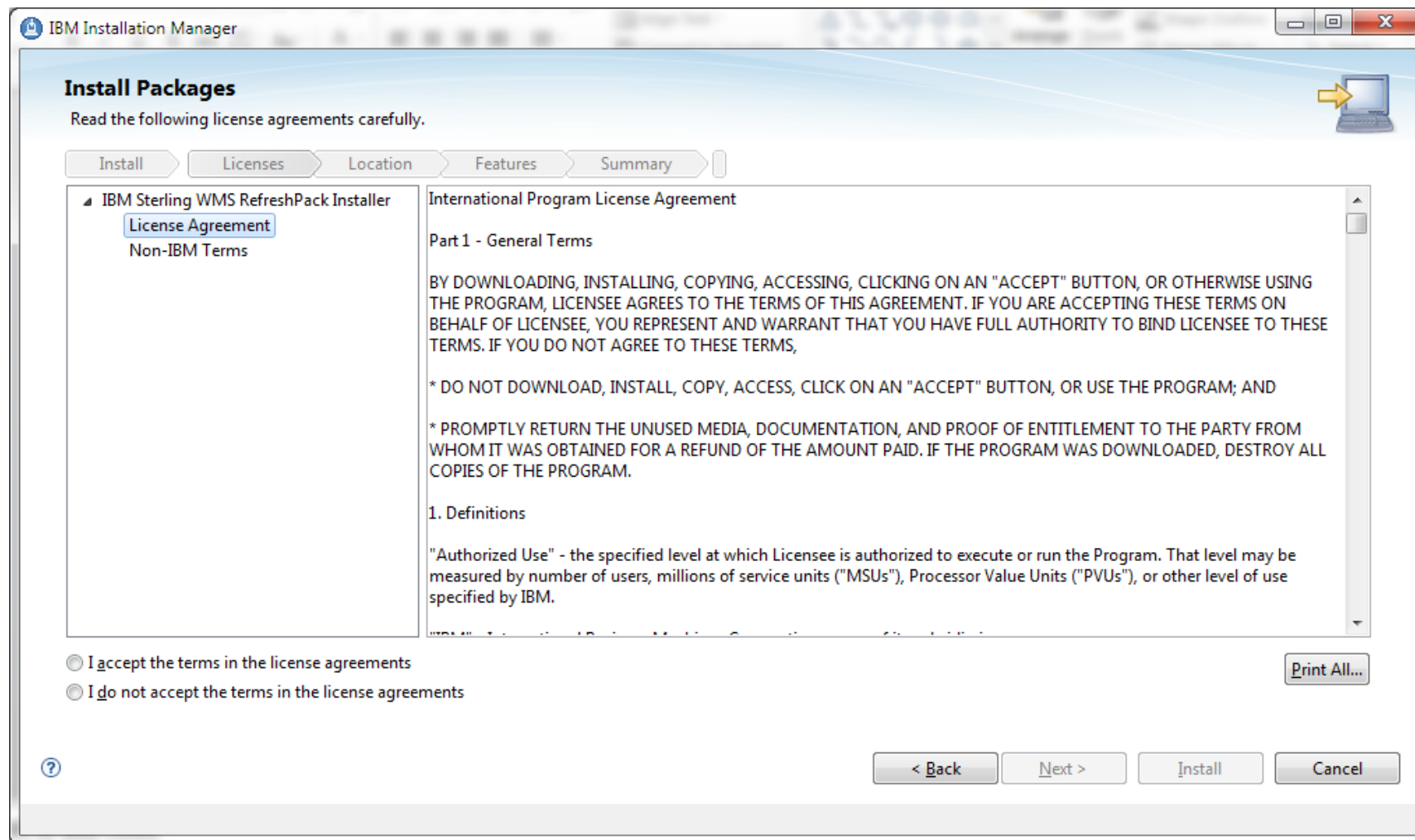
- Add refresh pack installation package to the IBM Installation Manager.
- In Installation Manager, click File > Preferences > Repositories.
- The Preferences page opens and displays the available repositories, repository locations, and the connection status for the repositories. Click Add Repository.
- Enter the repository location or click Browse and select the repository.config file for the refresh pack installation package . Click ok.



- Click Install.
- Select the check boxes for multiple installation packages that you may want to install. The installer will proceed to install these packages for you. Click Next.



- Review and accept the terms in the license agreements . Click Next .



The installer prompts you to enter the installation directory information. Enter the installation directory path of the Sterling Warehouse Management System and click Next.

IBM Installation Manager

Install Packages

Warning: The following packages do not support the 64-bit version of Installation Manager that you are using: IBM Sterling WMS RefreshPack Installer version 9.4. If you continue, you might have issues with installation and deployment. For information about 64-bit mode support for a package, see the package documentation. [Show details...](#)

Install Licenses **Location** Features Summary

Use the existing package group
 Create a new package group

Package Group Name	Installation Directory	Architecture
IBM Sterling WMS	C:\Sterling\Orion\Foundation	

Package Group Name: IBM Sterling WMS

Installation Directory: C:\Sterling\Orion\Foundation Browse...

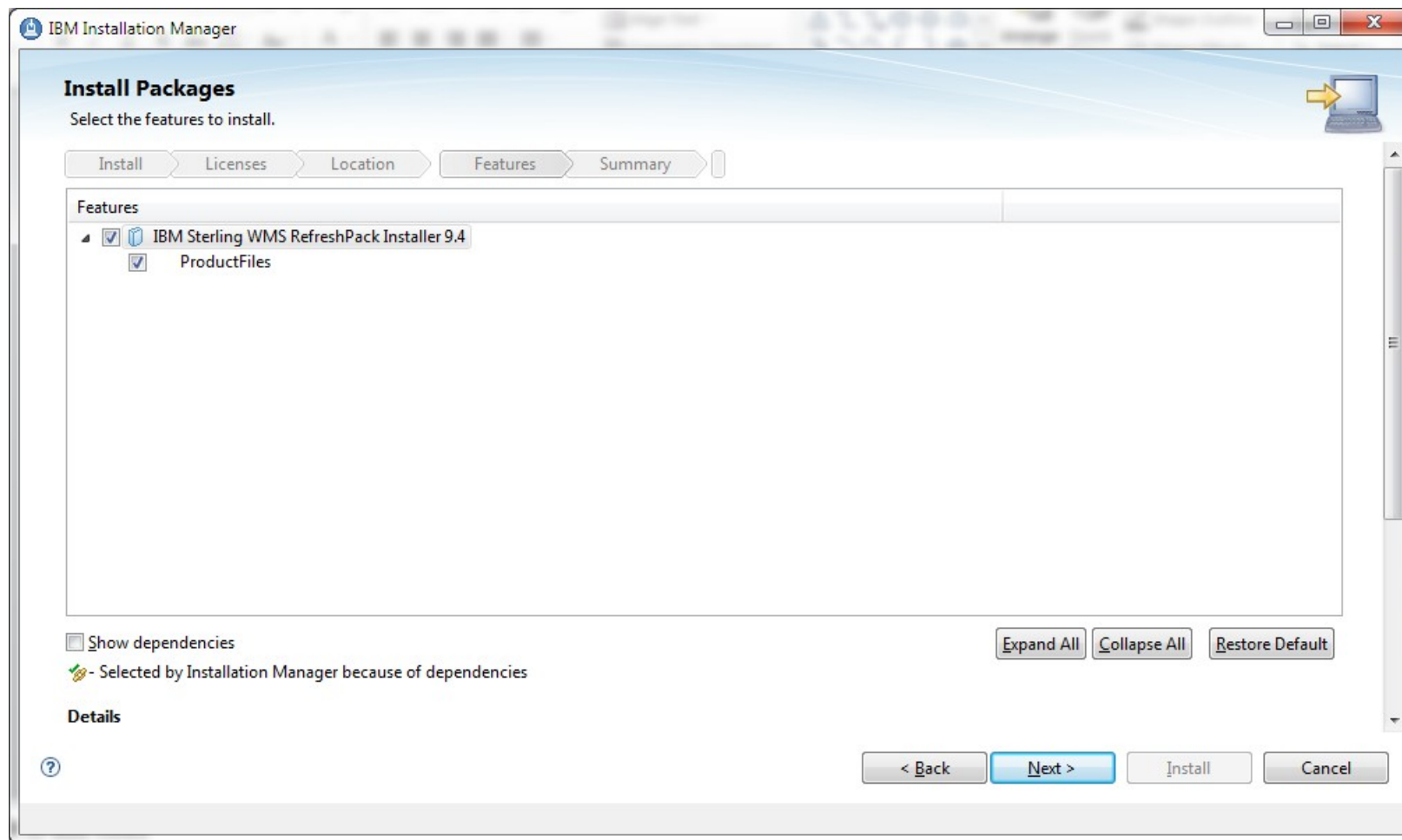
Details
Shared Resources Directory: C:\Users\Ghanshyam\IBM\SDPShared

Disk Space Information

Volume	Available Space
C:	12.89 GB

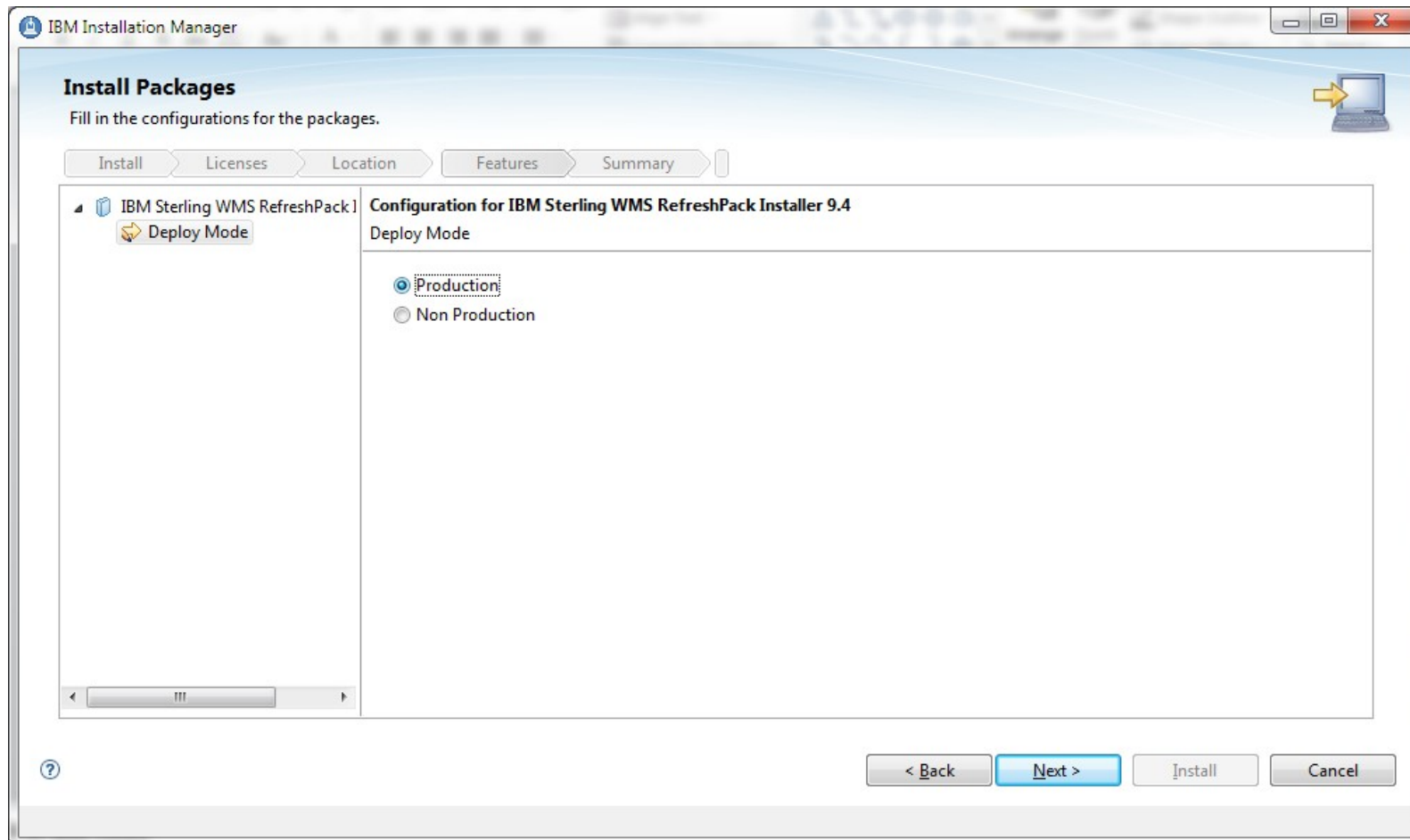
?

In the Features page, the installer displays the list of features that are to be installed. Click Next.

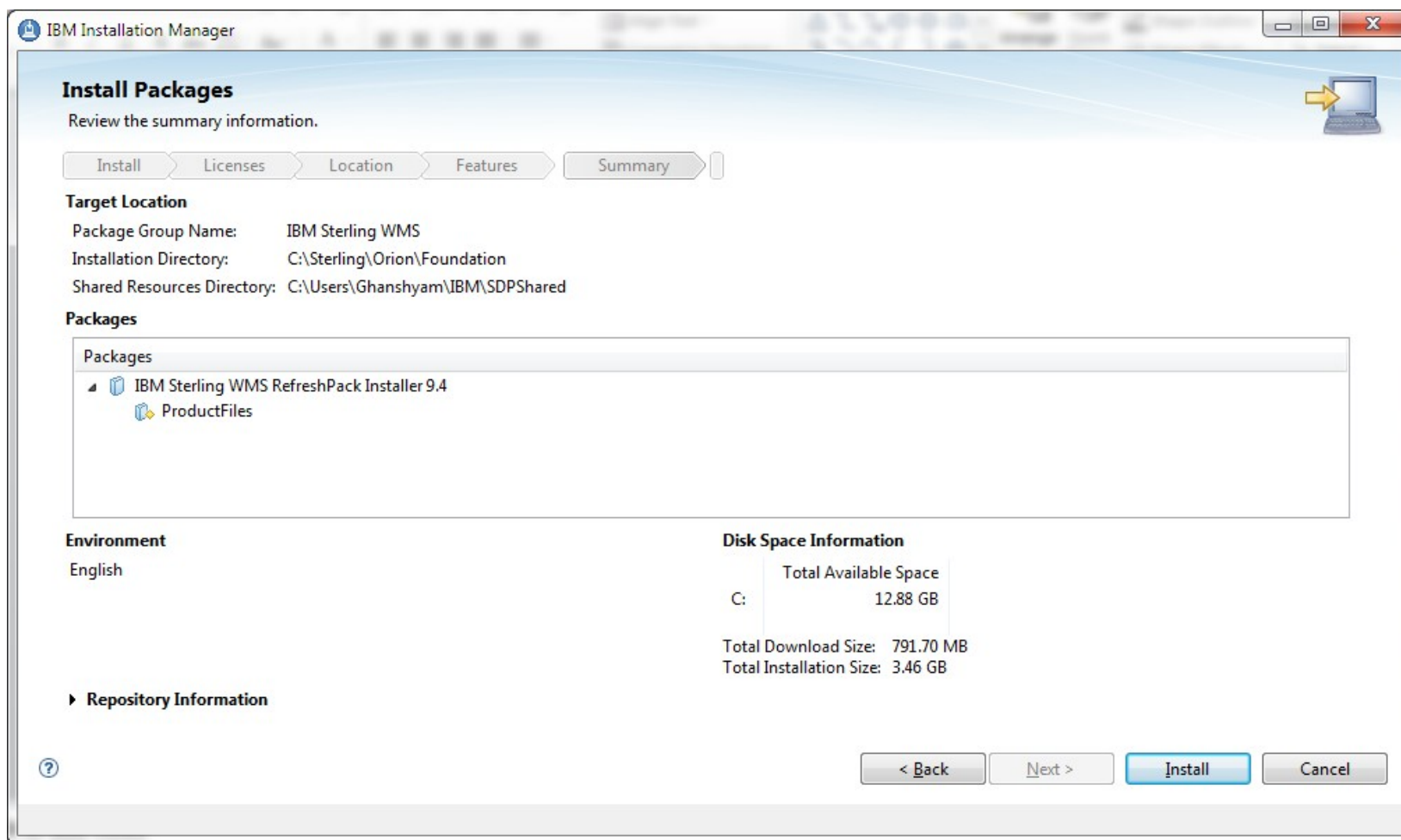


In the Configuration page select the deployment mode accordingly .

- a. Production
- b. Non Production



- In the Summary page, the packages are displayed. Click Install. A progress indicator displays the percentage of installation completed



Build Ear and Deploy for Refresh Pack

- For building ear run command :

```
./buildear.sh -Dappserver=websphere -Dwarfiles=smcfs,sma,sbc -Dearfile=smcfs.ear
-Dnodecar=true -Dnowebservice=true -Ddevmode=true create-ear
```

Install New Application ?

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

→ Step 3: Summary

Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	Yes
Application name	Sterling Applications
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\,dll=755#.*\,so=755#.*\,a=755#.*\,sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No
Business level application name	
Asynchronous Request Dispatch Type	Disabled
Allow EJB reference targets to resolve automatically	No
Deploy client modules	No
Client deployment mode	Isolated
Validate schema	No
Cell/Node/Server	Click here

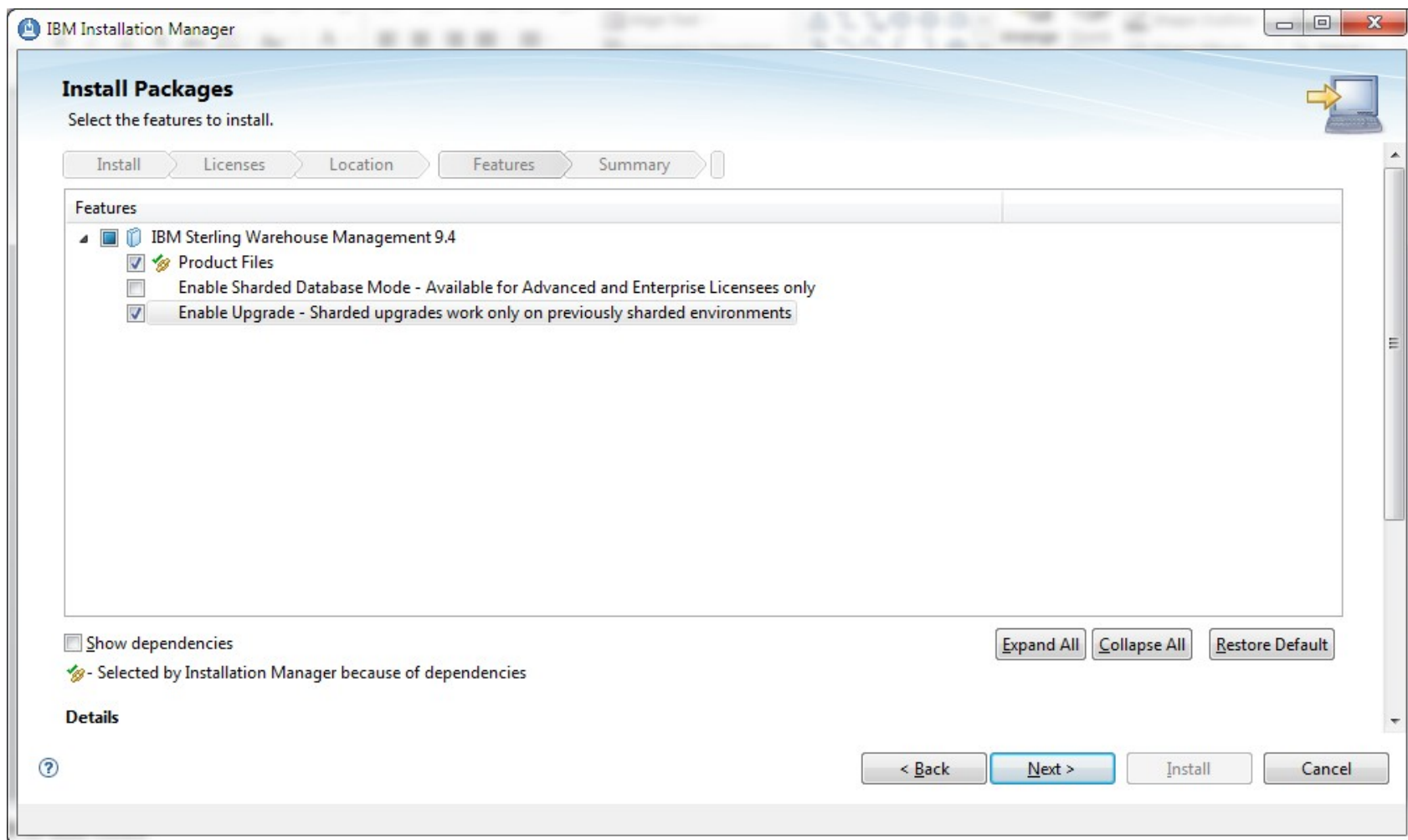
≡ Summary of WMS 94 Upgrade scenarios:

- WMS 93 to WMS 94
- Install WMS94 in upgrade mode with WMS 93 Database details.
- Once done, run the migration targets from Migration/93 folder.

- OMS 93 + WMS 93 (single instance) to OMS 94+ WMS 94(single instance)
- Install WMS 94 in upgrade mode on top of OMS 93 + WMS 93 instance.
- Then run the targets from Migration/9.3 folder

- OMS 93 (no WMS 93) to OMS 94 + WMS 94(single instance)
- OMS 94 install in upgrade mode.
- WMS 94 Refresh pack on top of OMS 94 instance.

- When installing IBM Sterling Order Management 9.4 , ensure that upgrade mode is enabled



- When installing the new software, ensure that the database information used is identical to that of previous 9.3 install

IBM Installation Manager

Install Packages

Fill in the configurations for the packages.

Install Licenses Location Features Summary

Configuration for IBM Sterling Warehouse Management 9.4

Database Information

Database Vendor: Oracle

Database user Name: Centaurus

Database password:

Confirm database password:

Database catalog Name: orcl

Database host Name/IP Address: localhost

Database port Number: 1521

Database schema Name: CENTAURUS

Database driver jars: ojdbc6.jar - C:\oracle\app\oracle\product\11.2.0\server\jdbc\lib

Buttons: Add Jars..., Edit..., Remove, Validate Connection

Navigation: < Back, Next >, Install, Cancel

Setting Up Environment Variable

- Before starting upgrade, you will need to set some system variables:

- `INSTALL_DIR / YFS_HOME`:

This represents the folder where the new install is located.

- `ANT_HOME`

This represents the folder where the ANT tool is located.

- `JAVA_HOME`

This represents the folder where the supported JDK is located.

- Ensure that the `JAVA_HOME/bin` and `ANT_HOME/bin` folders have been added to your `PATH` .

Migration Targets for Foundation Upgrade

- Copyextensions

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile copy_extensions.txt -Dtarget=copyextensions migrate
```

› This target is responsible for copying all the extensions from the previous install and applying them to the new installation.

- InstallPCAs

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile install_pca.txt -Dtarget=installPCAs migrate
```

› This target handles the reinstallation of any PCAs previously installed on the version you are upgrading from. If you do not have any PCAs installed, this step may be skipped. Although this target is optional, it must be completed before generated the database alters in the following scripts.

- Initupgrade

- ```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f
buildmigration.xml -logfile init_upgrade.txt -Dtarget=initupgrade migrate
```
- › This target is responsible for creating, but not executing, the SQLs necessary to make the existing database correlate with that of a fresh install (plus extensions).
  - › These SQLs will be generated under three folders underneath  
NEW\_INSTALL/Migration/<VersionNo-1>/database/scripts/<DB>
  - › The folders are history, textsearch, and transaction.
  - › If the initupgrade task fails and you need to restart, you must run 'clean-up-for-rerun' ANT task.

- ```
/home/Orion/Omupgrade//Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile clean.txt -Dtarget=clean-up-for-rerun migrate
```

- Migration-validation

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile data_validation.txt -Dtarget=migration-validation migrate
```

- This command searches tables for specific data which may cause errors during data migration.

- Alter-history-tables

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile preparation_upgrade.txt -Dtarget=alter-history-tables migrate
```

- This target applies the table alters generated for the history tables during the initupgrade step. This target will only execute SQL under the folder “/history”.

- Install-history-indexes

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile index.txt -Dtarget=install-history-indexes -Dnonuniqueindex=Y  
migrate
```

- This target runs the SQLs for index creation generated for the history tables during the initupgrade step. By default, only the unique indexes are applied. You may also install functional indexes by including `-Dnonuniqueindex=Y` after the target name.

- Dbclassgen

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile extension.txt -Dtarget=dbclassgen migrate
```

- The final target for upgrade, this will run the entitydeployer to rebuild your dbclass files; this is so the application will understand what tables are available in your database.

- The entities.jar file created by running this target will get picked up the next time you build the smcfs.ear file for deployment.

- Upgrade-history-tables

- /home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant

- Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f buildmigration.xml -logfile history_table.txt -Dtarget=upgrade-history-tables migrate

- This target is responsible for the installation of the factory setup between each version 'hop' required to bring the history tables of the database up to the most recent version.

- After migration of history data, the tables will have new columns and data.

•Alter-transaction-tables

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
```

```
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile prepare_transaction.txt -Dtarget=alter-transaction-tables migrate
```

▸ This target applies the table alters generated for the transaction/configuration tables during the initupgrade step. This target will only execute SQLs under the folder “/transaction”.

•Install-transaction-indexes

```
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
```

```
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile index_transaction.txt -Dtarget=install-transaction-indexes  
-Dnonuniqueindex=Y migrate
```

▸ This target runs the SQLs for index creation generated for the transaction tables during the initupgrade step. By default, only the unique indexes are applied. You may also install functional indexes by including –Dnonuniqueindex=Y after the target name.

- Dbclassgen
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f
buildmigration.xml -logfile regenerate_transaction.txt -Dtarget=dbclassgen migrate
 - › The final target for upgrade, this will run the entitydeployer to rebuild your dbclass files; this is so the application will understand what tables are available in your database.
 - › The entities.jar file created by running this target will get picked up the next time you build the smcfs.ear file for deployment.

- Upgrade-transaction-tables
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f
buildmigration.xml -logfile migrate_transaction.txt -Dtarget=upgrade-transaction-tables migrate
 - › This target is responsible for the installation of the factory setup between each version 'hop' required to bring the transaction and configuration tables of the database up to the most recent version. No factory setup is installed that could overwrite existing customer configurations. The actual data migration of all transaction data present in the transaction tables are done. All new indexes required for performance are added

- Migrate-doc-params
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f
buildmigration.xml -logfile document.txt -Dtarget=migrate-doc-params migrate
- This is a separate target that handles the factory setup migration of the document parameters for all of the base document types .

- Migrate-custom-doc-types
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant -Druntime=/home/Orion/Omupgrade
-Druntime.old=/home/yantra/upgrade93294 -f buildmigration.xml -logfile custom_docs.txt
-Dtarget=migrate-custom-doc-types migrate
- Under the “<INSTALL_DIR>/Migration/<VersionNo-1>/transaction” folder there is a file called customdoctype.properties. This file is created by the customer and contains the mappings of extended document types to the correlating base document types.
- After determining what base document type each extended document type represents, this target diffs the two of them and adds any new attributes from the base version into the extended doc type.

- validate-upgrade

```
/home/yantra/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile data_validation_transaction.txt -Dtarget=validate-upgrade migrate
```

- This target performs any validations specific to the version of the application you are upgrading to.

- Run-history-drop

```
/home/yantra/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile drop_history.txt -Dtarget=run-history-drop migrate
```

- This target simply runs the SQLs generated for unused history columns/tables by the initupgrade target and removes them from the database

- run-transaction-drop

```
/home/yantra/Omupgrade/Migration/apache-ant-1.7.1/bin/ant  
-Druntime=/home/Orion/Omupgrade -Druntime.old=/home/yantra/upgrade93294 -f  
buildmigration.xml -logfile drop_transaction.txt -Dtarget=run-transaction-drop migrate
```

➤ This target simply runs the SQLs generated for unused transaction columns/tables by the initupgrade target and removes them from the database.

Migration Targets for PCA Upgrade

- These Targets will be executed from “/WMS/Migration/WMS_Add-in/9.3/” folder :
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant -f ynwmigration.xml
-Druntime.old=/home/Orion/upgrade93294 -Druntime=/home/Orion/Omupgrade
-Dtarget=upgrade-transaction-tables migrate -l ynw_upgrade-transaction-tables1.log
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant -f ynwmigration.xml
-Druntime.old=/home/yantra/upgrade93294 -Druntime=/home/Orion/Omupgrade
-Dtarget=upgrade-transaction-tables migrate -l ynw_upgrade-SI_ver-tables.log
- These Targets will be executed from “/WMS/Migration/WMS/9.3/” folder :
/home/Orion/Omupgrade/Migration/apache-ant-1.7.1/bin/ant -f ynwmigration.xml
-Druntime.old=/home/yantra/upgrade93294 -Druntime=/home/Orion/Omupgrade
-Dtarget=upgrade-transaction-tables migrate -l ynw_wms_upgrade-transaction-tables.log
/home/yantra/Omupgrade/Migration/apache-ant-1.7.1/bin/ant -f ynwmigration.xml
-Druntime.old=/home/Orion/upgrade93294 -Druntime=/home/Orion/Omupgrade
-Dtarget=upgrade-transaction-tables migrate -l ynw_wms_upgrade-SI_ver-tables.log

End of Session 2

Return to Vendor Details Will Be Shared Separately.
Documentation available in 9.3 as well.



Questions?

Thank You

