IBM® WebSphere® Application Server V6.1 Feature Pack for Web Services

Feature pack overview

This presentation will focus on explaining the use of feature packs with WebSphere Application Server V6.1.

Agenda

- Feature pack overview
- Administration and maintenance

Feature pack overview

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This presentation will begin with a general overview of feature packs, explaining the strategy behind their creation, and reasons for using them. Next, the presentation will cover the administration and maintenance concerns associated with feature packs in general.

Section

Feature pack overview

The next section will provide an overview of the feature pack strategy.

Feature pack overview

- Feature packs provide a flexible mechanism to deliver content between full WebSphere Application Server releases
  - ▸ Themed based on content
  - ▸ Allows users to stay on a stable base
  - ▸ Enable users who want to try new functionality

- Used to provide support for new or enhanced technologies
  - ▸ Web services
  - ▸ EJB 3.0

- A new delivery vehicle (not a replacement for refresh packs)
  - ▸ No burden on footprint when features are not installed
  - ▸ Not a required installation

Feature pack overview

Feature packs help provide a new flexible way to add new technologies and features to WebSphere Application Server, between major releases. Feature packs are themed based on similar content, for instance the feature pack for Web Services adds new technologies surrounding Web Services. Customers who want to use these new features can add the feature pack to their already existing, stable WebSphere Application Server V6.1 environments. Other feature packs will be created to support different technologies, such as EJB 3.0. Feature packs are a new delivery vehicle for WebSphere Application Server, they are not a replacement for any current content vehicles such as refresh packs. Feature packs are not a required installation, and when not installed will not increase the overall footprint of the environment with unused technologies.

Feature pack details

- Feature pack content extends base WebSphere Application Server function
  - ▶ An optional installation on top of WebSphere Application Server, similar to stack product
- Feature pack content will either be added to the next major WebSphere Application Server release or a feature pack rebased on the next major release will be made available
  - ▶ Current feature packs install on WebSphere Application Server V6.1
- GA feature packs support the same configurations as the WebSphere Application Server release
  - ▶ Includes platforms and language support
  - ▶ Applicable to Express, Base and Network Deployment
- Feature packs inherits End Of Service (EOS) from base WebSphere Application Server release
  - ▶ Same extended support rules apply

Feature packs are designed to extend base WebSphere Application Server functionality. They are optional installations that add new features onto existing installations much like other stack products like WebSphere Application Server Extended Deployment. Content provided by a feature pack will eventually be added in to the next major release of WebSphere Application Server, or there will eventually be another feature pack created for that next major release. The current feature packs are all to be used with WebSphere Application Server V6.1. Feature packs can support the same configurations as WebSphere Application Server, with the same language and platform support, and can be added to both express, base and network deployment environments. Feature packs will inherit the same end of service dates from the base WebSphere Application Server release they work with, so in this case WebSphere Application Server V6.1. The same rules will apply for extended support statements.

Feature pack details

- Initial feature pack offerings are free
- Feature packs can require WebSphere Application Server base code changes
  - ▶ Changes only introduced if feature pack is installed
  - ▶ Intended to not change existing application behavior
- Packaging and delivery
  - ▶ Web download only
  - ▶ WebSphere for z/OS$^®$ - through PTFs in the optional materials FMID shipped with WebSphere Application Server V6.1
- Independent delivery schedule
  - ▶ Deliver fixes using a specific feature pack service stream
  - ▶ Fixpacks for WebSphere Application Server base and feature packs will be released simultaneously
  - ▶ Content refreshes (functional enhancements) may be faster than WebSphere Application Server base

The initial feature packs will be offered as free products that can be downloaded and installed on WebSphere Application Server V6.1. Feature packs may alter the base code of the WebSphere Application Server environment as part of supporting the new features, though adding a feature pack is not intended to alter existing applications behavior. Feature packs will initially be available as Web downloads, for zOS they will be added as PTFs to the optional material FMID shipped with WebSphere Application Server V6.1. Each feature pack will have a separate, independent delivery schedule. Fixes for each feature pack will be delivered in a separate service stream, with fix packs for WebSphere Application Server Base and the feature packs released at the same time.

Limitations

- Feature packs will have limitations that need to be evaluated
  - ▸ Each feature pack will document it's specific limitations
  - ▸ Customers will need to understand these restrictions to make an appropriate decision

- Feature packs may not have tool support when released
  - ▸ Some feature packs are designed to not require tools

- Effects maintenance and administration
  - ▸ May contain limitations for installation and un-installation
  - ▸ Additional maintenance streams to monitor
  - ▸ Technical limitations specific to each feature pack

Feature packs may also contain various limitations that will need to be evaluated as part of considering the optional installation. Each feature pack will document it's own limitations, these restrictions should be carefully considered before installing a feature pack. Some feature packs may not have tool support when first released, some feature packs may be designed to not require tools at all. Feature packs will also effect maintenance and administration of existing WebSphere Application Server environments in different ways. They may limit installation and un-installation practices. They add additional maintenance streams that will need to be monitored. And there may be technical limitations specific to the feature pack that would need to be understood.

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Administration and maintenance

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The next section discusses the general administrative concerns related to feature packs.

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Feature pack installation and uninstallation

- A feature pack may depend on other feature packs to reuse functionality

- Uninstalling a feature pack will not uninstall WebSphere Application Server fix packs or other stack products
  - Will not be able to uninstall minimum level of maintenance if feature pack is installed
  - VersionInfo and HistoryInfo command are enhanced to query the feature pack info

- Uninstall feature packs before uninstalling WebSphere Application Server

Feature packs may require other feature packs to be installed in order to use their functionality. This is not the case for the feature pack for Web Services, but maybe a consideration for future feature packs. Performing an un-installation on feature pack will not uninstall WebSphere Application Server or any fix packs or other stack products that have been installed. In addition, if a feature pack requires a certain level of maintenance as part of it's installation, it will not be possible to remove that required level of maintenance from WebSphere Application Server while that feature pack is still installed. The existing versioninfo and historyinfo commands can be used to query information related to existing feature pack installations in an environment. When a feature pack is installed, it must be un-installed before performing an uninstall of WebSphere Application Server.

Maintenance and support

- Each feature pack has its own services stream
- Each feature pack has its own Support Web page, similar to JDK™ page
  - ▶ Contains:
    - The overview of the feature pack
    - Feature pack full installation image and its fix pack level
  - ▶ It has a link back to WebSphere Application Server V6.1 download page
- Also has a separate information center page

Each feature pack will have a separate service stream that should be monitored for updates and fixes. As part of this strategy each feature pack will have it's own support Web site, that will contain information about the feature pack, and a link back to the WebSphere Application Server V6.1 download page. Each feature pack will also have a separate information center page that will contain additional reference information specific to the feature pack.
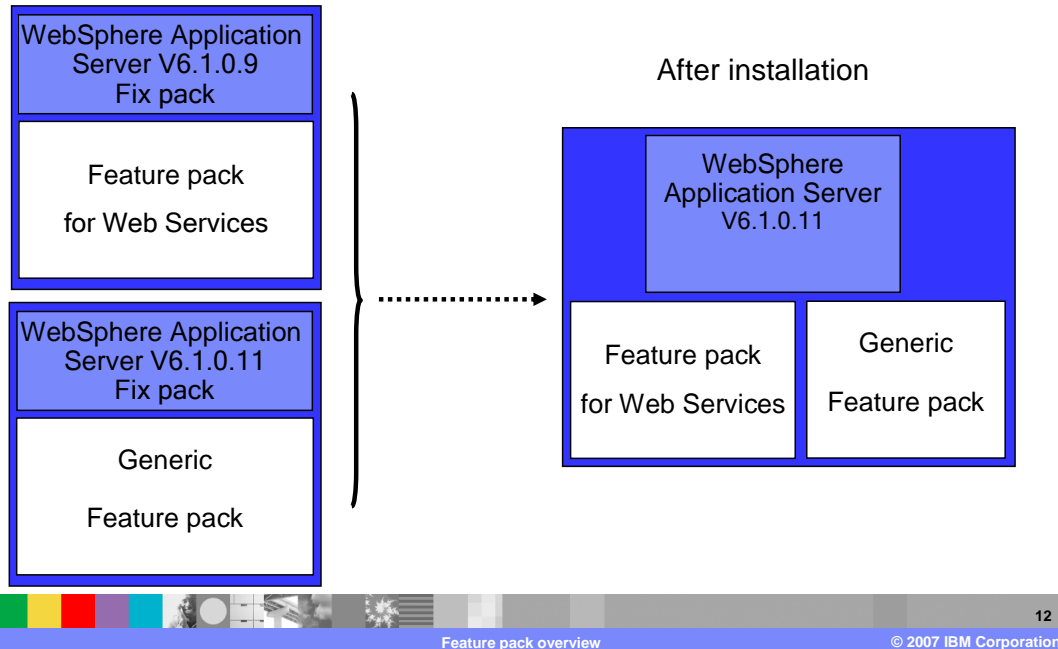
Single install bundle

- Feature pack installable image
  - ▶ Contains feature pack code and all required WebSphere Application Server specific minimum prerequisites
  - ▶ Required prerequisite fixes cannot be uninstalled without uninstalling the feature pack first
  - ▶ Requires profile augmentation
  - ▶ Only existing DMGR profiles can augmented by the feature pack for Web Services
  - ▶ Others must be created from scratch

Fix pack

Feature pack
for Web Services

The feature pack installable image contains not only the feature pack code, but also the required maintenance level for the feature pack. This maintenance will be used by the installer to upgrade the existing WebSphere Application Server base environment if needed. Once a feature pack is installed, the required maintenance level must be maintained. The maintenance cannot be removed with out first uninstalling the feature pack. In order to use the technologies provided by the feature pack, the application server profiles must also be augmented. Only existing deployment manager profiles can be augmented, other profile types will have to be created from scratch as feature pack enabled profiles through the profile management tools.
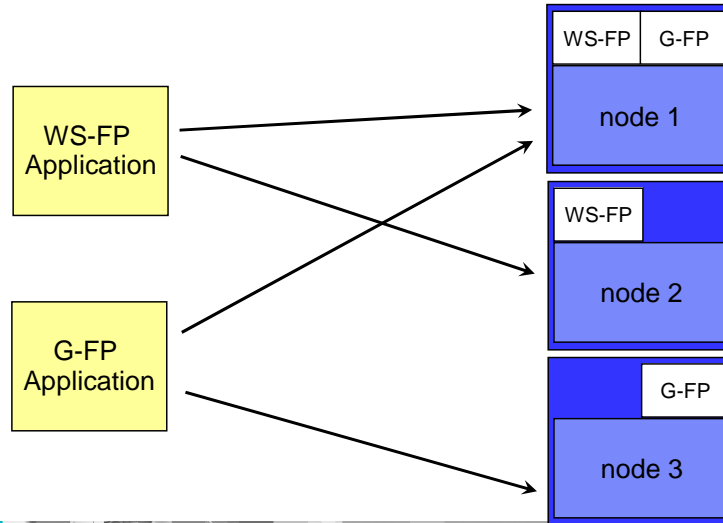
Multiple feature packs installation

WebSphere Application
Server V6.1.0.9
Fix pack

Feature pack

for Web Services

WebSphere Application
Server V6.1.0.11
Fix pack

Generic

Feature pack

After installation

WebSphere
Application Server
V6.1.0.11

Feature pack

for Web Services

Generic

Feature pack

Multiple feature packs can be installed on the same base WebSphere Application Server environments. In situations where multiple feature packs are installed, the base installation will be upgraded to the highest level of maintenance required by any of the installed feature packs.

Mixed cell application deployment

- Applications that use feature pack specific technologies can only be deployed to nodes with that feature pack installed
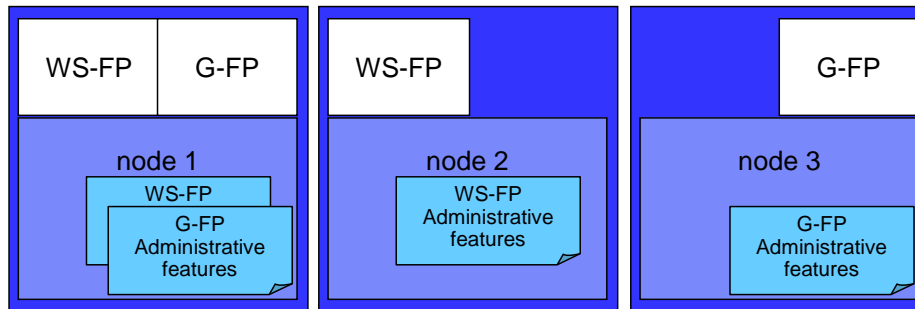
| WS-FP | G-FP |
| node 1 |

WS-FP Application

WS-FP
node 2

G-FP Application

G-FP
node 3

Applications that are written to make use of technologies provided by a feature pack can only be deployed and run on application servers or nodes that have that feature pack installed. In the above example there is both a Web Service feature pack and Generic feature pack in the environment. Applications written for the feature pack for Web Services can only be deployed and run on environment with the feature pack for Web Services installed, or in this example node 1 and node 2. Existing applications, not using the new features, should not be effected.
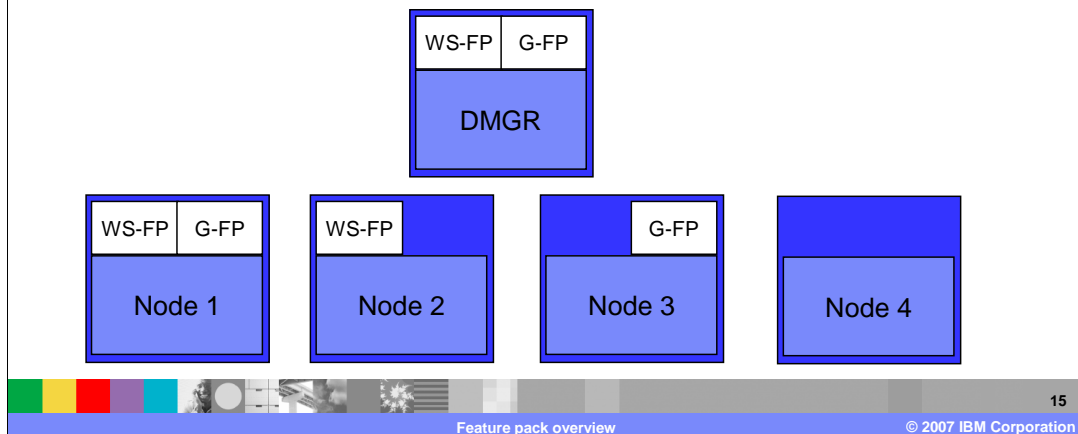
Mixed cell administration

- Administrative features only show up on nodes where the feature pack is installed

- Features are removed when feature pack is uninstalled

WS-FP	G-FP	WS-FP			G-FP

node 1
- WS-FP
- G-FP Administrative features

node 2
- WS-FP Administrative features

node 3
- G-FP Administrative features

Feature pack overview

New administrative features provided by a feature pack such as additions to the administrative console, will only be available on application server or nodes where that feature pack has been installed. These administrative features will be removed if the feature pack is uninstalled. The above example illustrates the available administrative features in an environment with multiple feature packs installed.
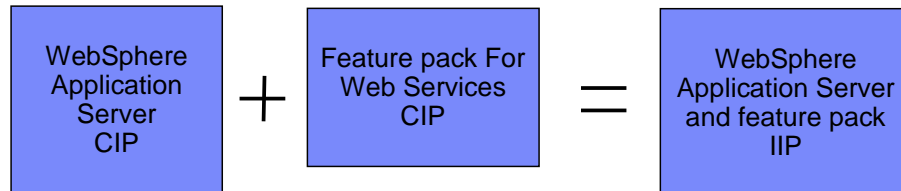
Cell environment

- Deployment manager must have all the feature packs used in the cell installed on them
- Applications can only be deployed on compatible nodes
- All nodes must be at version 6.1 or higher

WS-FP	G-FP
DMGR	

WS-FP	G-FP		WS-FP				G-FP		
Node 1			Node 2			Node 3			Node 4

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Feature pack overview

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In a cell environment with a deployment manager where feature packs have been installed, additional rules apply. The deployment manager must have all the feature packs that are used by nodes in the cell installed on it. Applications will only be able to be deployed to nodes that have the required feature packs installed. In a feature pack enabled cell, all nodes must also be at WebSphere Application Server version 6.1 or higher.

Installation factory

- Installation factory will allow users to build custom installation packages (CIP) for a feature pack
    - In this case the CIP will only contain the feature pack and any fixes that have been added

- Installation factory will also have a new integrated installation package (IIP) that can combine multiple CIPs or GM images into a single package

| WebSphere Application Server CIP | + | Feature pack For Web Services CIP | = | WebSphere Application Server and feature pack IIP |

Installation Factory is also being updated to support feature packs. Users will be able to create custom installation packages for a feature pack installation. There is also a new concept of an aggregated installation package, that can be used to combine multiple custom installation packed into a single package. For example, this aggregated package can be used to bundle a WebSphere Application Server V6.1 installation package with a feature pack for Web Services installation package.

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Section

Summary

Feature pack overview

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The next section provides a summary of this presentation.

Summary

- Feature packs provide a flexible option to add technologies to an existing environment
  - ▶ Allow users to maintain a stable base
- Content can be installed and managed as needed

The new strategy for feature packs provides a flexible option to add new technical features onto existing WebSphere Application Server V6.1 environments. Customers can evaluate and use the feature packs with the technologies they need, and ignore feature packs they are not interested in.

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