



Accelerated Value Program
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AVP-2776 Migrating WebSphere Application Server V6.1 to V8

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Agenda



- Migration Lab Overview
- Questions





Migration Lab Overview





Migrating WebSphere Application Server V6.1 to V8 (AVP-2776)

Lab requirements

System and Software required for the attendee to complete the lab:

- WebSphere Application Server V6.1.0.X
(Already installed and running)
- WebSphere Application Server Version
8.0.0.2 installed and ready for use:





What this lab is about:

- This lab is provided **AS-IS**, with no formal IBM support.
- This lab will provide an introduction to and a demonstration of the migration of a WebSphere Application Server installation from WebSphere Application Server Network Deployment Version 6.1 to WebSphere Application Server Network Deployment Version 8.0. It will give an overview of the migration process, while preparing you for developing your own migration plans in your organization.
- This lab will:
 - Utilize the Configuration Migration Tool and/or WASPreUpgrade and WASPostUpgrade commands on the command line to achieve a seamless migration
 - Walk through a practical migration example for a two node clustered Network Deployment WebSphere topology with sample V6.1 applications



Starting Scenario for Lab

- WebSphere Application Server V6.1.0.41 is installed and running.
- WebSphere Application Server Version 8.0.0.2 is installed and ready for use:
 - WebSphere Customization Tool Kit is installed
 - Configuration Migration Tool

Prerequisites Hosts & WebSphere Topology



- This lab requires a single host machine. Within the lab instructions, it is assumed to be set up in the following manner:
- **WebSphere Topology: 6.1**
 - Single Host (Two Nodes)
 - Network Deployment (ND) environment
 - 1 Cell, 2 Nodes
 - Clustered Servers across two Nodes (2 Clusters)
 - Single Server and Proxy
 - Web Service Application deployed to Clusters
 - Stand alone server with EJB-3 Application

WebSphere Application Server Lab Topology





Application Topology:

Application Name	Technology / Type	deployed	URL
EJB3CounterSampleApp	EJB-3 & JPA	impactAVPSingleserver	http://localhost:80/ejb3sample/counter
WSSampleClientSeiApp	Web Services application Client Application	Cluster1	http://localhost:80/wssamplesei/demo
WSSampleServicesSeiApp	Web Services application Service Application	Cluster2	





What you will learn from the Lab:

- **During this lab, you will learn to do the following:**
 - Migrate a deployment manager profile using the Configuration Migration Tool.
 - Migrate an application server profile using the Configuration Migration Tool.
 - Migrate an application server profile using the command line.
 - Lastly, verify the success of a migration.

For more information about product migration, see the following WebSphere Application Server V8 information center topic:

Migrating product configurations

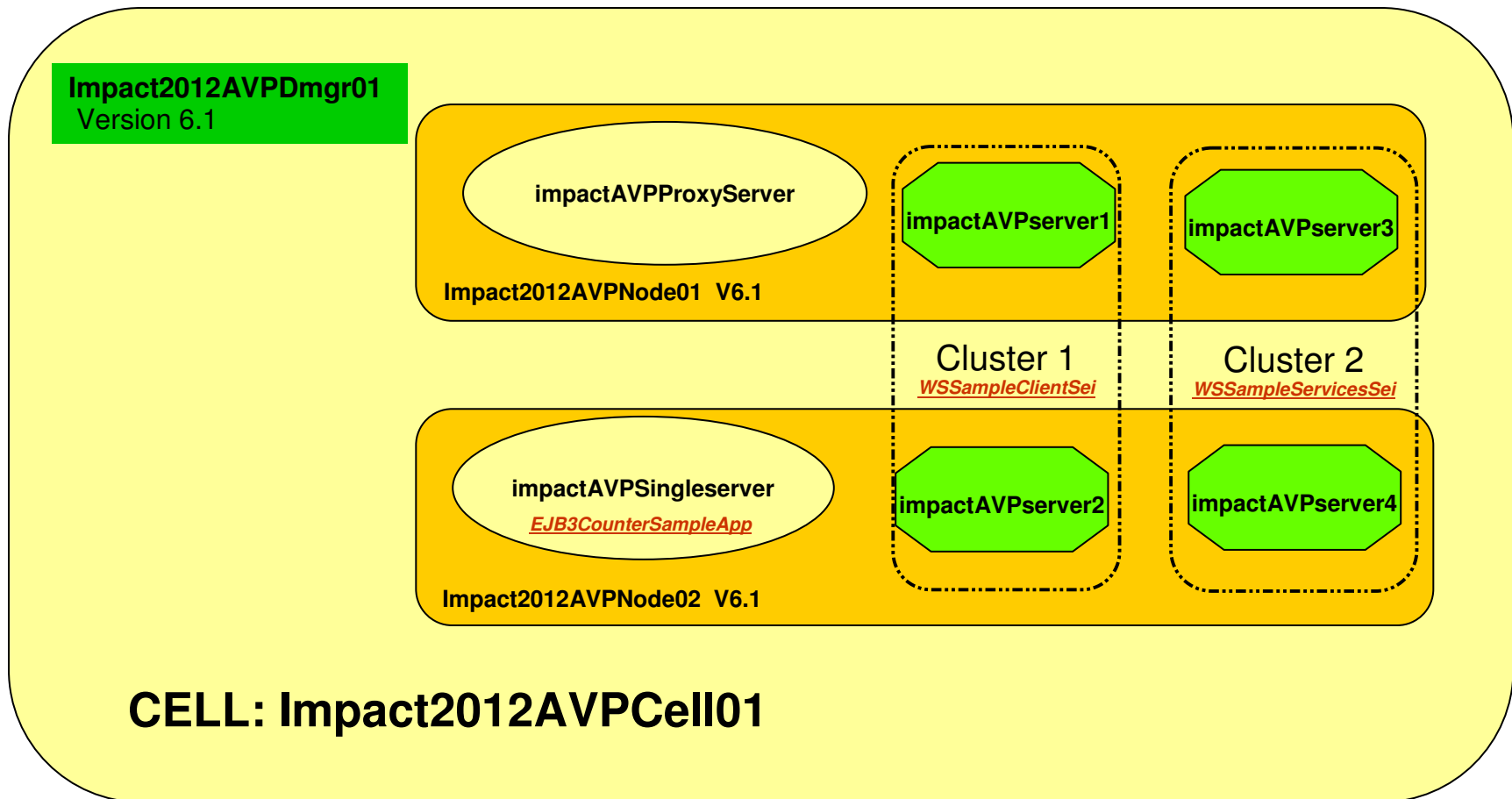
http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.migration.nd.doc/info/ae/ae/tmig_admin.html





Start view

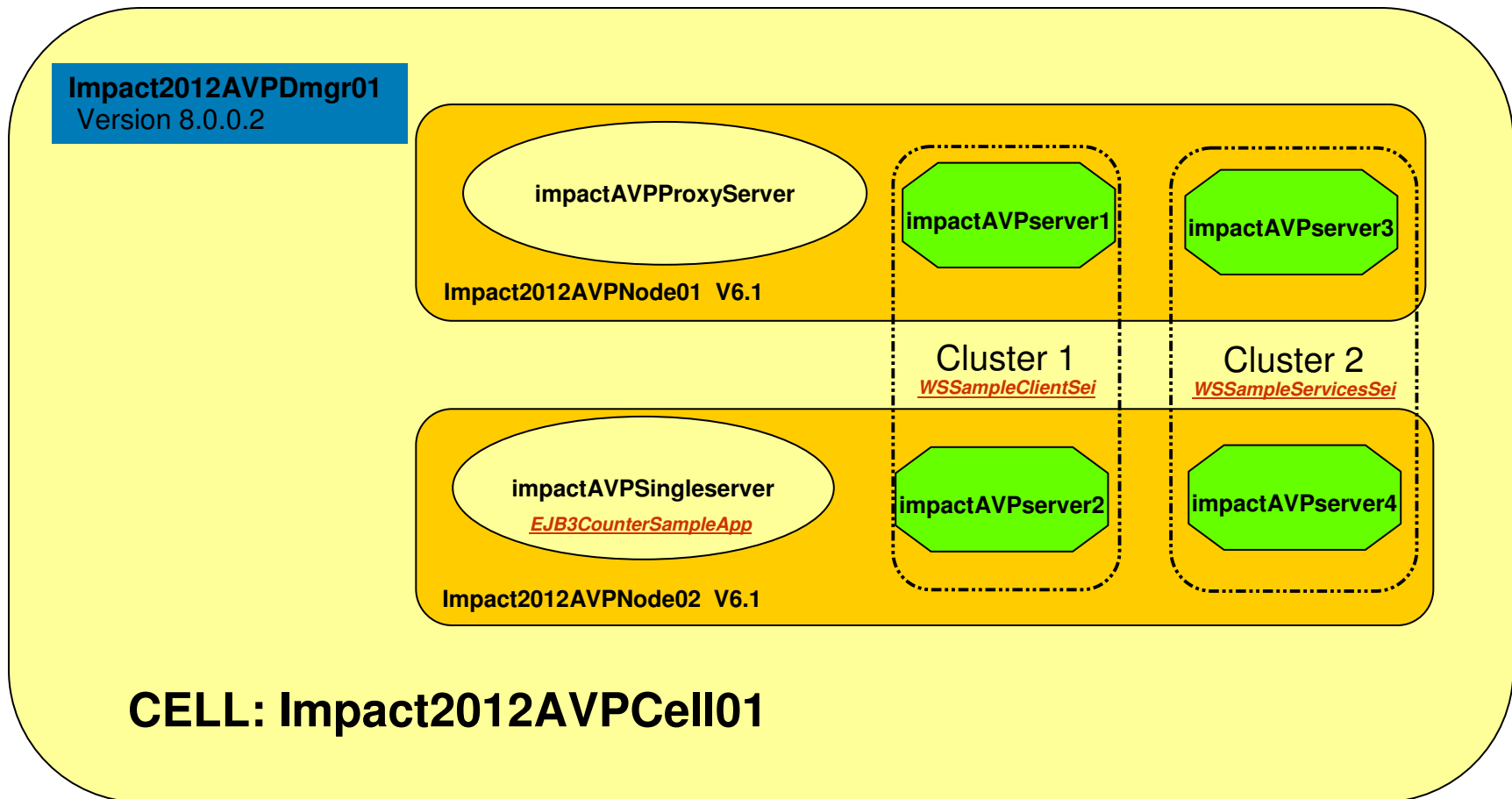
V6.1 ND cell, 2 Nodes 2 Clusters, 1 proxy Server and 1 stand alone Server





Step 2 - Migrate Deployment Manager 6.1 to 8.0

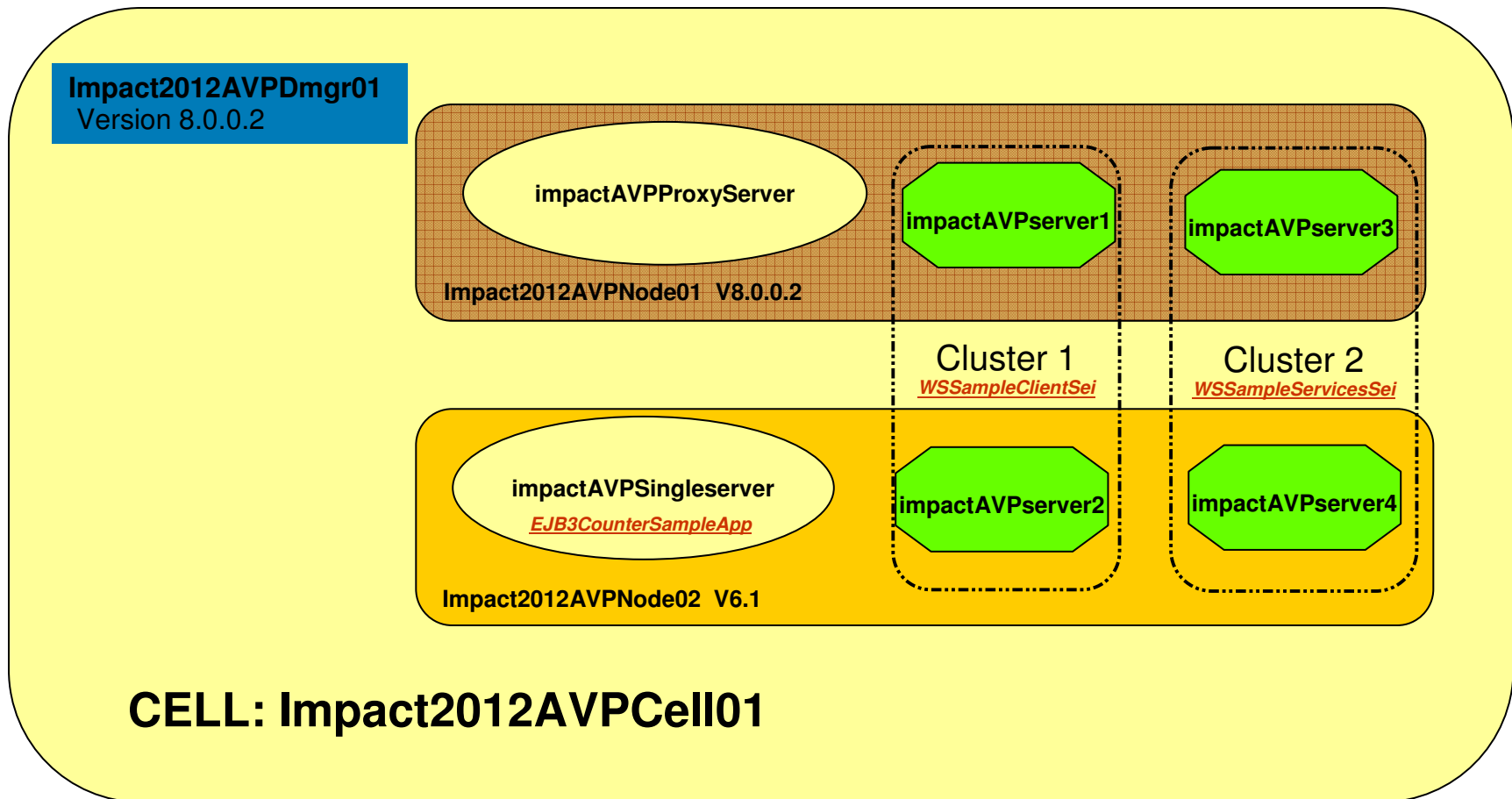
V8.0 ND cell (Mixed Cell)





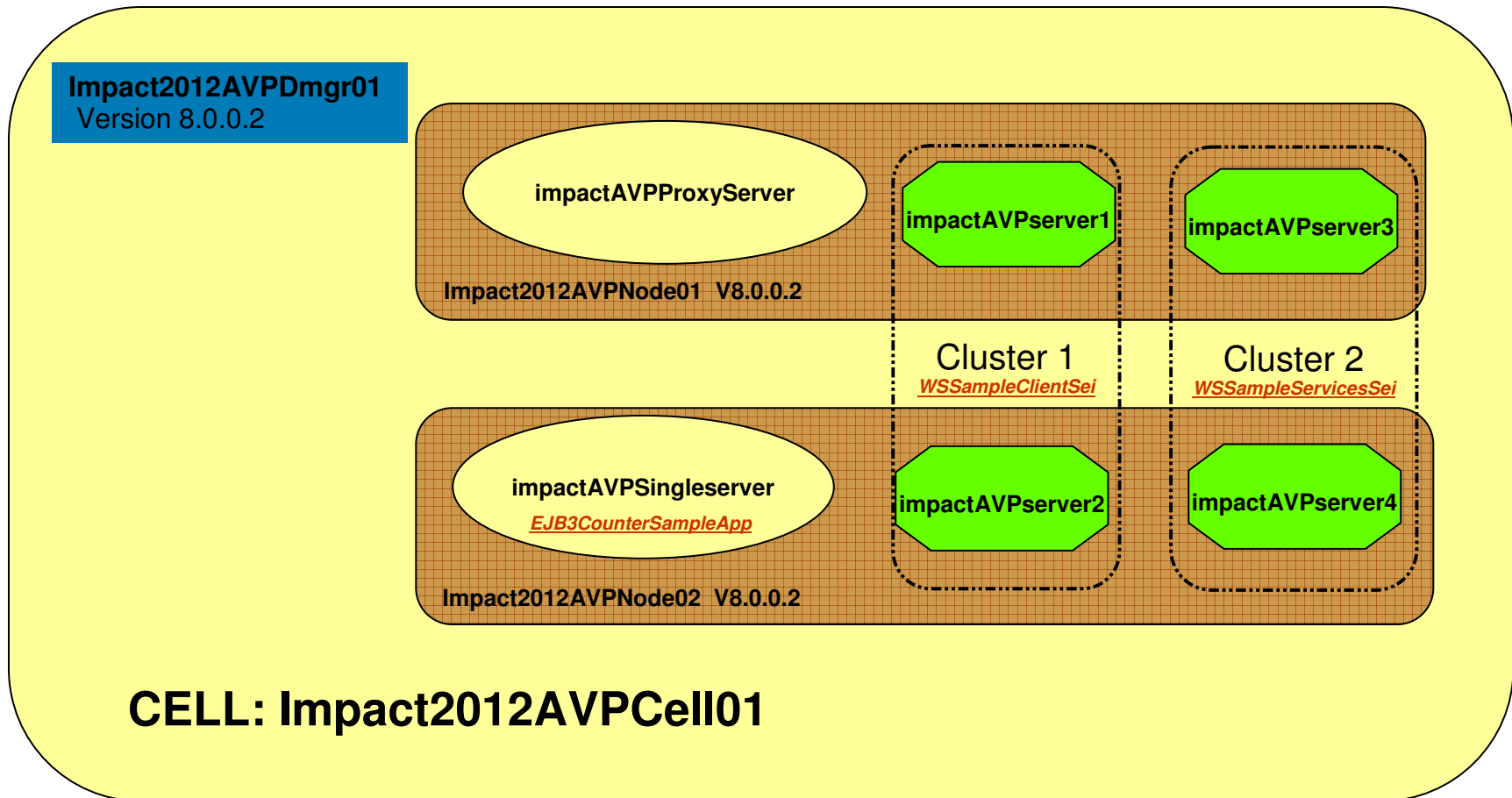
Step 3 - Migrate Impact2012AVPNode01 6.1 to 8.0

V8.0 ND cell (Mixed Cell)





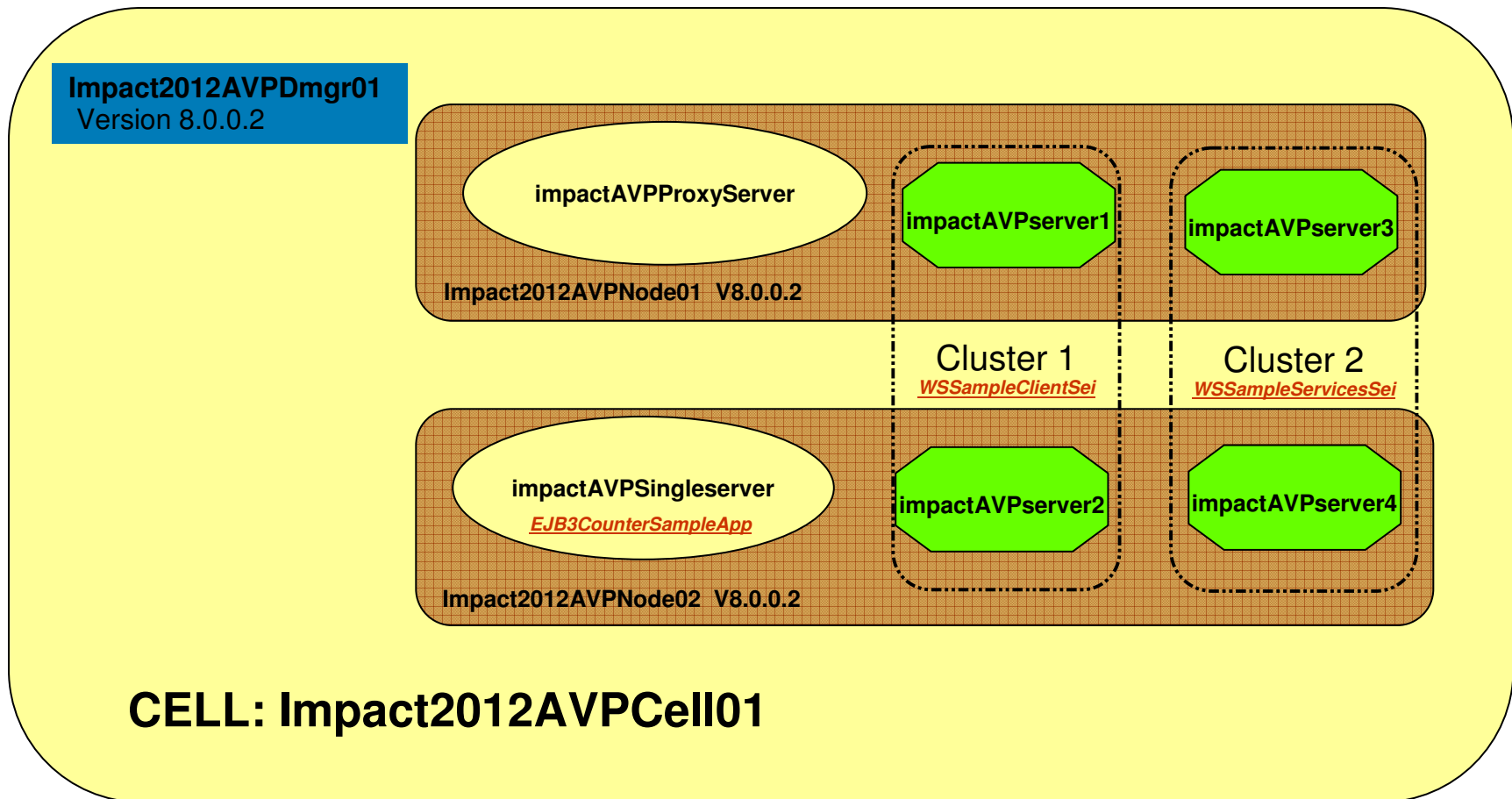
Step 4 - Migrate Node2 (Impact2012AVPNode02) 6.1 to 8.0 V8.0 ND cell (Migrated Version 8.0.0.2 ND cell)





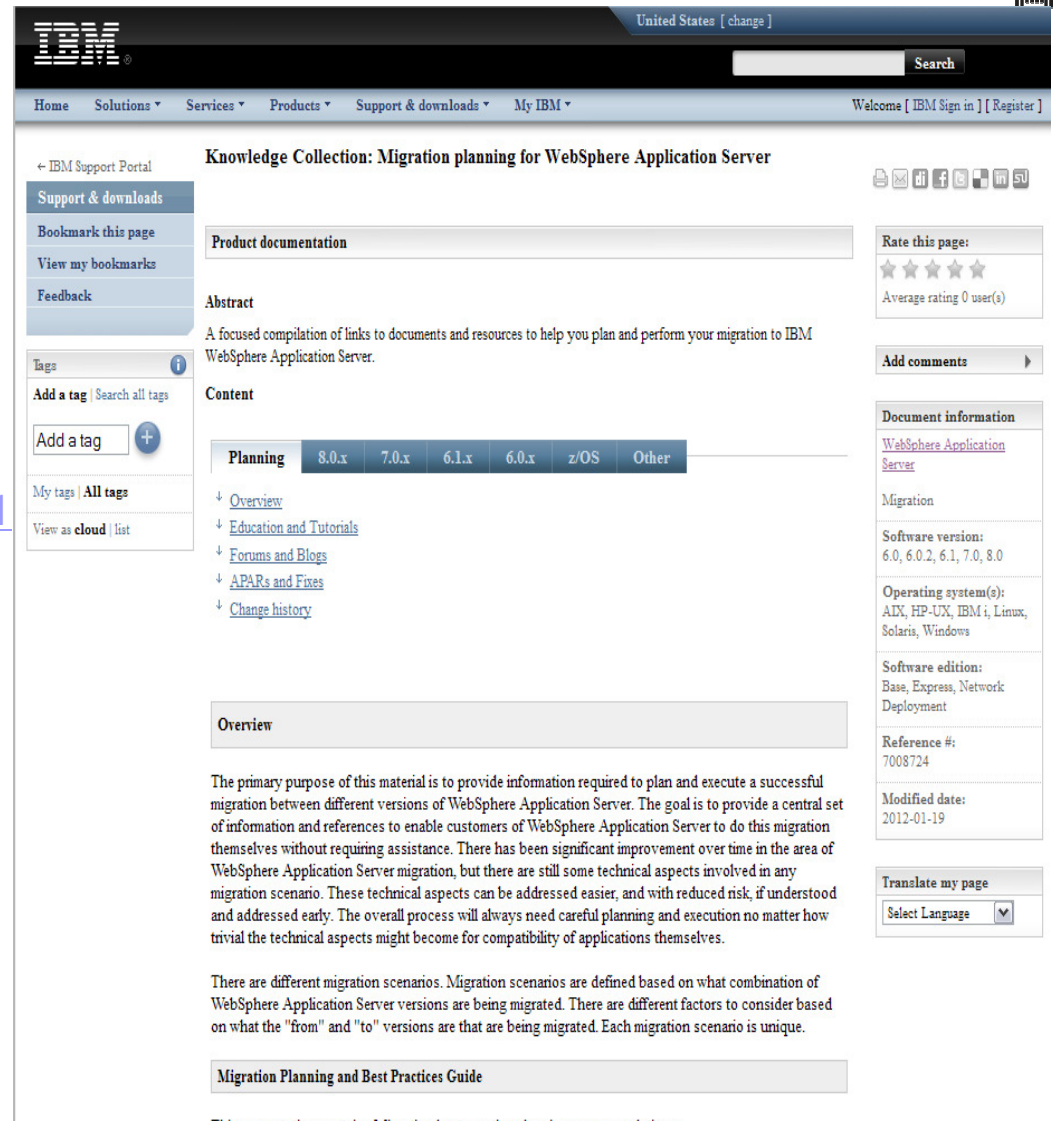
Final view

Migrated Version 8.0.0.2 ND cell



Enablement

- This information and more is available online!
- Includes general planning with detailed notes and WebSphere AppServer version specific information
- Updated with timely information
- IBM Migration Knowledge collection
 - <http://www-1.ibm.com/support/docview.wss?rs=180&uid=swg27008724>
- Google: “websphere application server migration”



The screenshot shows the IBM Support Portal interface. At the top, there's the IBM logo and navigation links like Home, Solutions, Services, Products, Support & downloads, and My IBM. The main heading is "Knowledge Collection: Migration planning for WebSphere Application Server". Below this, there's a "Product documentation" section with an "Abstract" and "Content" area. The "Content" area has tabs for "Planning", "8.0.x", "7.0.x", "6.1.x", "6.0.x", "z/OS", and "Other". Under "Planning", there are links for "Overview", "Education and Tutorials", "Forums and Blogs", "APARs and Fixes", and "Change history". The "Overview" section contains text about the purpose of the migration material. At the bottom, there's a "Migration Planning and Best Practices Guide" section.





Questions





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- Go to impactsmartsite.com from your mobile device
- From the Impact 2012 Online Conference Guide:
 - Select Agenda
 - Navigate to the session you want to give feedback on
 - AVP-2776 Migrating WebSphere Application Server 6.1 to 8.0
 - Select the session or speaker feedback links
 - Submit your feedback

Thank You...





References

- WebSphere Training and Technical Enablement
 - <http://www-01.ibm.com/software/websphere/education/>
- IBM Education Assistant
 - <http://www.ibm.com/software/info/education/assistant/>
- The Ideal WebSphere Development Environment
 - http://www.ibm.com/developerworks/websphere/techjournal/0312_beaton/beaton.html
- Supported software information
 - <http://publib.boulder.ibm.com/infocenter/prodguid/v1r0/clarity/index.html>
 - <http://www.ibm.com/software/webservers/appserv/doc/latest/prereq.html>
- IBM Support Policy Change: Announcing the "5 plus 3" support policy
 - <http://www-1.ibm.com/support/docview.wss?uid=swg21256700>
- Web Server plug-in technotes and Merge tool
 - <http://www-1.ibm.com/support/docview.wss?uid=swg21160581>
 - <http://www-01.ibm.com/support/docview.wss?uid=swg21139573>
 - http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/index.jsp?topic=/com.ibm.websphere.base.doc/info/aes/ae/twsv_configsimplelb.html





References

- What's new in v8 (Concept, Planning)
 - http://www.ibm.com/developerworks/websphere/techjournal/1106_alcott/1106_alcott.html
 - <http://www.redbooks.ibm.com/redbooks/pdfs/sg247957.pdf>
- Software and Hardware prerequisites
 - http://www.ibm.com/software/webservers/appserv/was/network/requirements/?S_CMP=rnav
- Best Practices for Configuring and Managing Large WAS Topologies.
 - http://www.ibm.com/developerworks/websphere/library/techarticles/0710_targetopologies/0710_targetopologies.html
 - <http://www-1.ibm.com/support/docview.wss?uid=swg27010606>
- IBM Techdocs Whitepapers on WAS Migration case studies
 - <http://www-03.ibm.com/support/techdocs/atmastr.nsf/WebIndex/WP101455>
- High Availability Manager Tuning Technote
 - http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&dc=DB520&q1=High+Availability&uid=swg21251873&loc=en_US&cs=utf-8&lang=en
- JDK Compatibility
 - <http://java.sun.com/javase/technologies/compatibility.jsp>
- WebSphere AppServer API Deprecations, removals and stabilizations
 - http://publib.boulder.ibm.com/infocenter/wasinfo/v7r0/topic/com.ibm.websphere.nd.doc/info/ae/ae/rmig_deprecationlist.html





References

- WebSphere Application Server V7 Migration Guide
 - <http://www.redbooks.ibm.com/redpieces/abstracts/redp4635.html?Open>
- WebSphere Application Server Migration Toolkit
 - http://www.ibm.com/developerworks/websphere/downloads/migration_toolkit.html
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27020784>
- WebSphere Application Server version 8.0 Information center:
 - <http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp>Education Assistant:
 - http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp?topic=/com.ibm.iea.was_v8/plugin_coverpage.html
- Migration Specific:
 - <http://www14.software.ibm.com/webapp/wsbroker/redirect?version=matt&product=was-nd-dist&topic=welc6topmigrating>
 - http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp?topic=/com.ibm.iea.was_v8/was/8.0/Installation.html
- Knowledge Collection: Migrating to WAS 8.0
 - <http://www-01.ibm.com/support/docview.wss?uid=swg27008725>
- IBM Support Assistant Information and Downloads:
 - <http://www-01.ibm.com/software/support/isa/>





Backup Slides





Migration Considerations





Migration Overview

Migration is the action of moving from an existing release to a newer release. When doing a WebSphere Application Server migration, consider it a complete project because it is more than just applying a new product version.

A WebSphere Application Server migration impacts the following components of your infrastructure:

- Applications
- Middleware
- Operating systems

For information about the removed, deprecated, and new features of WebSphere Application Server V8, see the WebSphere Application Server Version 8 Information Center at the following address, and search for *removed features*, *deprecated features*, and *new features*:

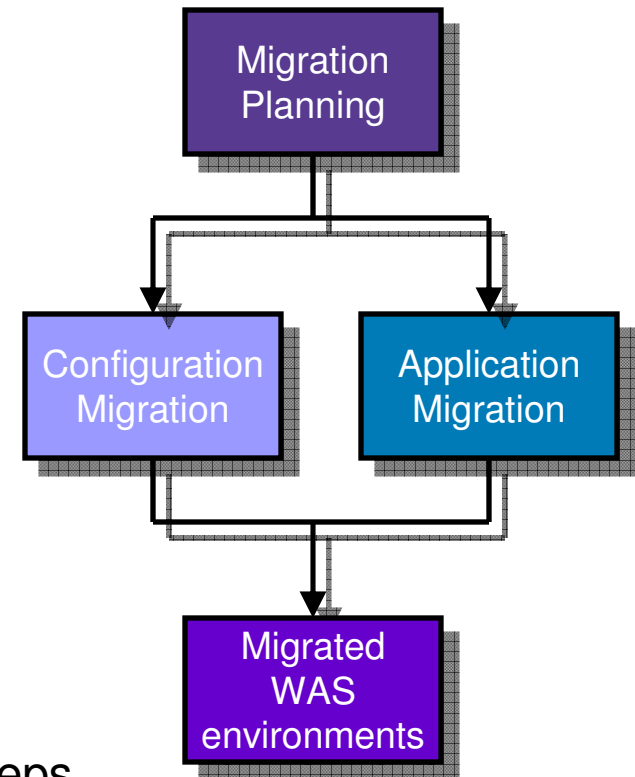
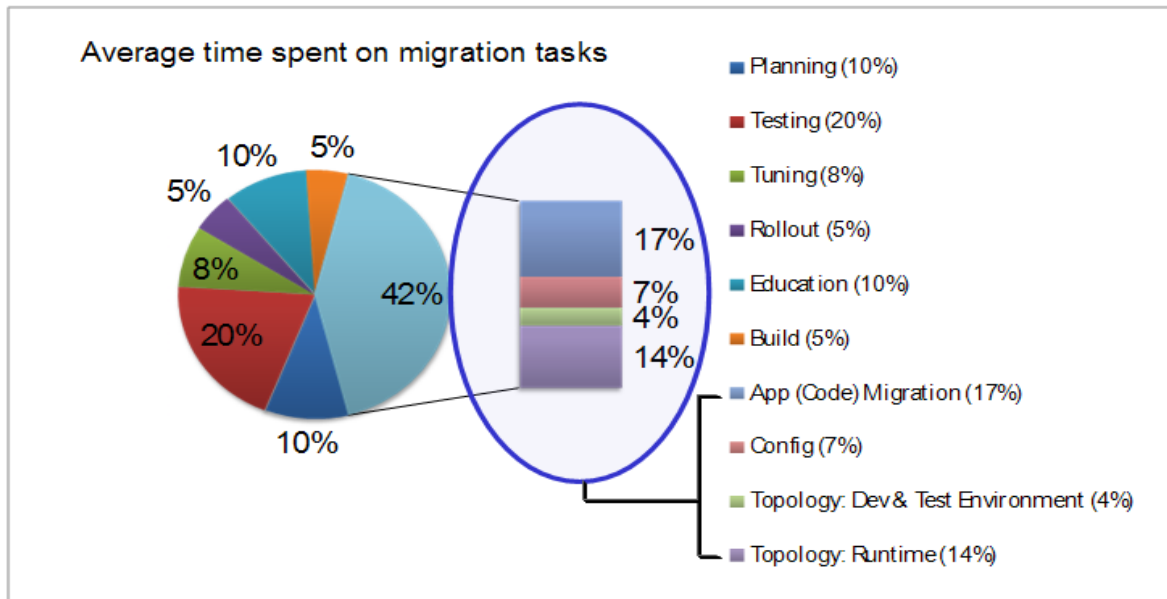
<http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp>

By reviewing this information, you will have a better understanding of the areas impacted by migration.





Migration Aspects



- The whole migration process involves a variety of steps
 - Migration process needs planning and cannot compromise day-to-day business
- Each situation is unique
 - There is no one standard plan

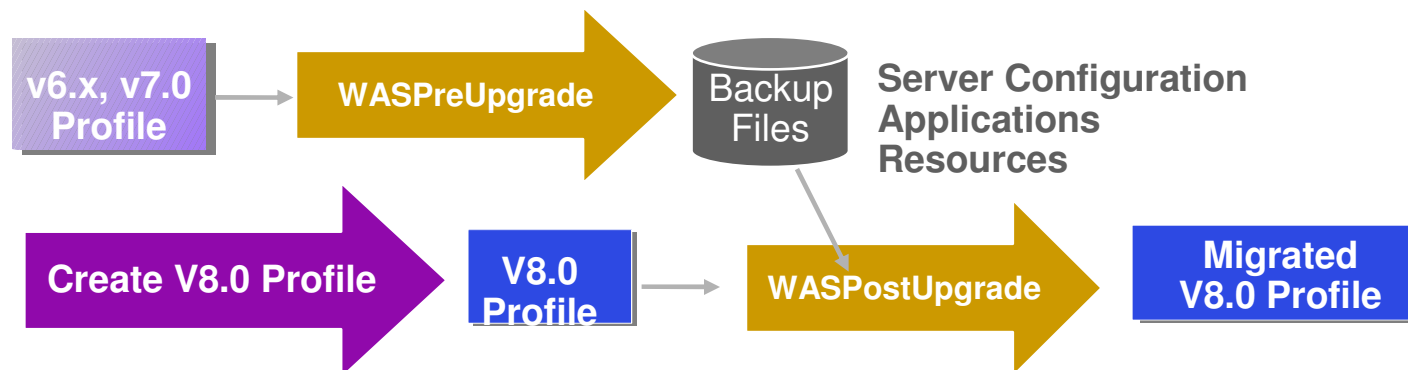


Configuration Migration Tooling



Migrate WebSphere environments faster with minimized risk

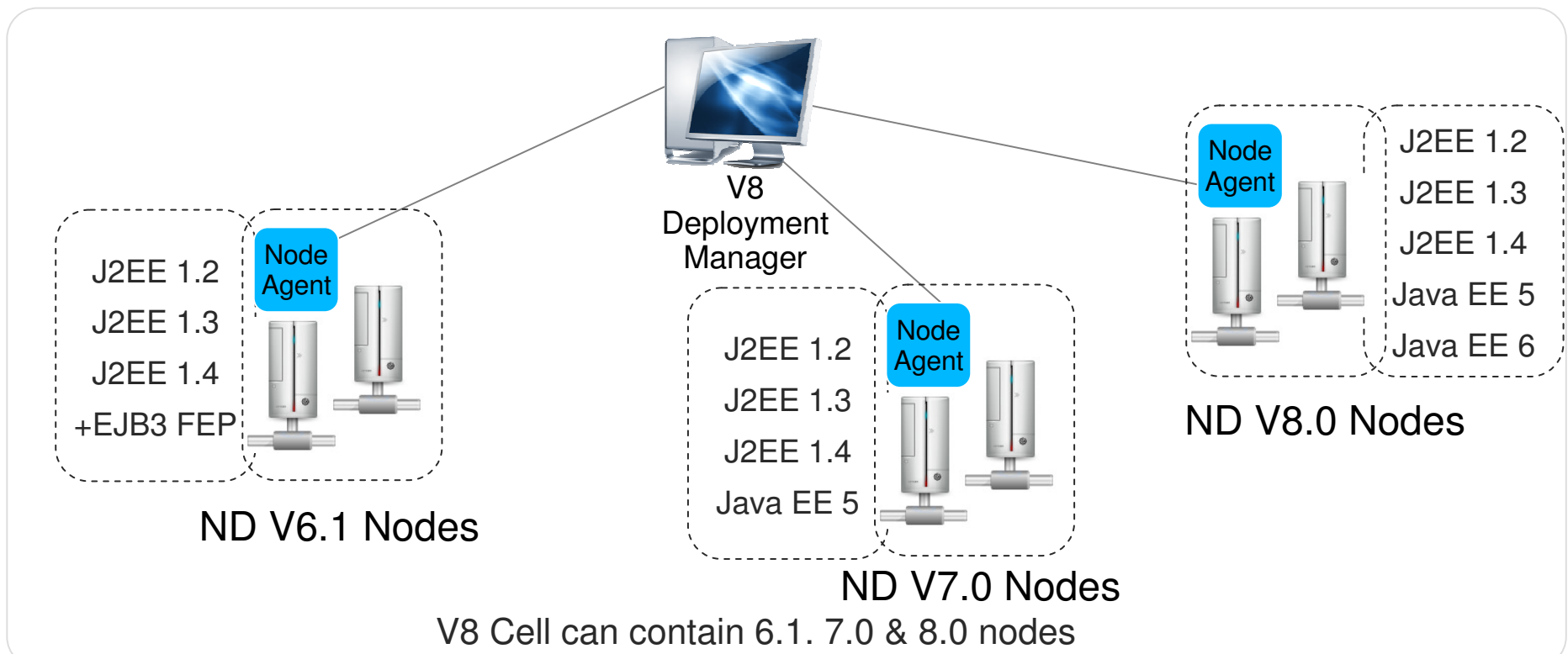
- Assists administrators in moving their configuration when migrating
 - Merges old configuration with new configuration
 - Provides deep functionality, e.g. “Lights-on” WAS migration
 - Especially useful for customers that have large topologies
 - Large telecom customer recently used the tool when migrating a 500+ JVM environment
- Provides a framework for Stack product migration
- Already in use by Commerce, Portal, WPS and Virtual Enterprise



Continued Mixed Version Support

Support for existing infrastructure in new V8 deployments to save time, money and reduce risk

WAS Network Deployment V8 Cell



Support for existing Java EE applications in new V8 deployments to continue achieving value from existing investments



ISMP vs. Installation Manager

- ❑ ISMP – former installation technology
 - ▶ Install, Uninstall and Update processes required different programs
 - ▶ Each Feature Pack required separate install program
 - ▶ Fix pack in .pak format
 - ▶ Obtaining Feature Pack or fix pack downloads is separate process
- ❑ IBM Installation Manager (IM)
 - ▶ Single interface to install, update, uninstall many IBM software products
 - ▶ Use local or Web repositories
 - ▶ Ability to download packages integrated into IM
 - ▶ Single IM instance can manage multiple products
 - ▶ Replaces dedicated installers and uninstallers and maintenance tools
 - ▶ Simplifies product maintenance



Application Migration Tooling

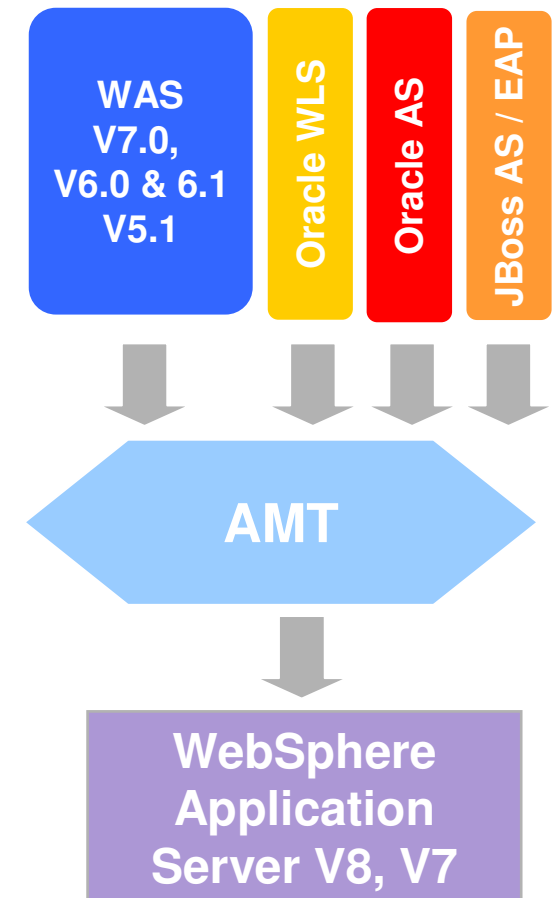
New!



Migrate applications from WebSphere & other Java EE application servers to WebSphere faster with minimized risk

- Migrate applications from older releases to WAS V8 or V7
- Migrate from Oracle or JBoss faster and easier to WAS V8 or V7
- Migrate applications up to 2x as fast
- Migrate web services up to 3x as fast
- Application Migration Tool
- Analyzes source code to find potential migration problems:
 - Removed features
 - Deprecated features
 - Behavior changes
 - JRE 5 & JRE 6 differences
 - Java EE specification changes or enforcements
 - Capable of making some application changes
 - Provides guidance on how to make required changes
 - Works with Eclipse or Rational Application Developer (RAD)

Get the Tool at No Charge:
<http://ibm.com/hqfkdj>





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