# Upgrade to AEM 6.5 – Best Practices

Venkat Vedagiri – Multi Solution Architect – Principal Technical Development Manager

# Challenges in AEM Upgrades

- Not all projects are the same
- Lack of good planning.
- Lift and shift projects

Adobe

# Why Upgrade to AEM 6.5?

## Features

- Connected DAM
- Fluid experiences – Content Services
- SPA Editor
- Visual Search
- Adobe Asset Link
- Adobe Stock integration
- Brand Portal Capabilities
- Smart Crop of Videos
- Automated forms conversion

**Any upgrade has two options**

- In Place upgrade (Adobe recommended)
- Fresh install

# In-place Upgrade

**Pros**

Adobe-/AEM-supported process.

No Content Migration

No risk of forgetting

ACLs/user.groups remain intact

Content revision history is preserved

**Cons**

Duration depends on the current version

You might be bringing a lot of unwanted content

Complex set up

Lost opportunity to remove content

# Fresh Install

**Pros**

- Fresh Start
- Not a complex set up
- Simpler server upgrade process with less points of failures

**Cons**

- Strong case to forget pieces of content to migrate
- Potential to miss important OSGi configs set via Felix console and not from code packages.
- Syncing large content packages
- Publishing the content
- Content revision history is lost
- ACLs/users/groups have to be recreated

# How to Upgrade to AEM 6.5

## Upgrade steps

- Pre-Upgrade Steps
- Migration Prerequisites
- Preparation of the AEM Quickstart jar file
- Content Repository Migration
- Troubleshooting Migration Issues
- Performing The Upgrade
- Deploy Upgraded Codebase
- Perform Post-Upgrade Checks and Troubleshooting

Adobe

**Pre upgrade Maintenance tasks**

- Ensure Sufficient Disk Space
- Fully Back Up AEM
- Back Up Changes to /etc
- Generate The quickstart.properties File
- Configure Workflow and Audit Log Purging
- Install, Configure, and Run The Pre-Upgrade Tasks
- Disable Custom Login Modules

Adobe

**Pre upgrade Maintenance tasks Contd...**

- Remove Updates From The /install Directory
- Stop Any Cold Standby Instances
- Disable Custom Scheduled Jobs
- Execute Offline Revision Cleanup
- Execute Datastore Garbage Collection
- Upgrade the Database Schema If Needed
- Delete Users that Might Hinder the Upgrade
- Rotate Log Files

# Upgrading Code and Customization

- Pattern Detector

- Develop Code base for 6.5

- Compile with 6.5 Uber.jar

- Update AEM customizations

- Deploy to 6.5 Environment

- QA Validation and Bug Fix

- Pattern detector scan the existing code base before upgrade to ensure that there are no code breakers involved in current code base.

- Pattern Detector is available for 6.1,6.,6.3,6.4

Adobe

# Upgrading Code and Customization
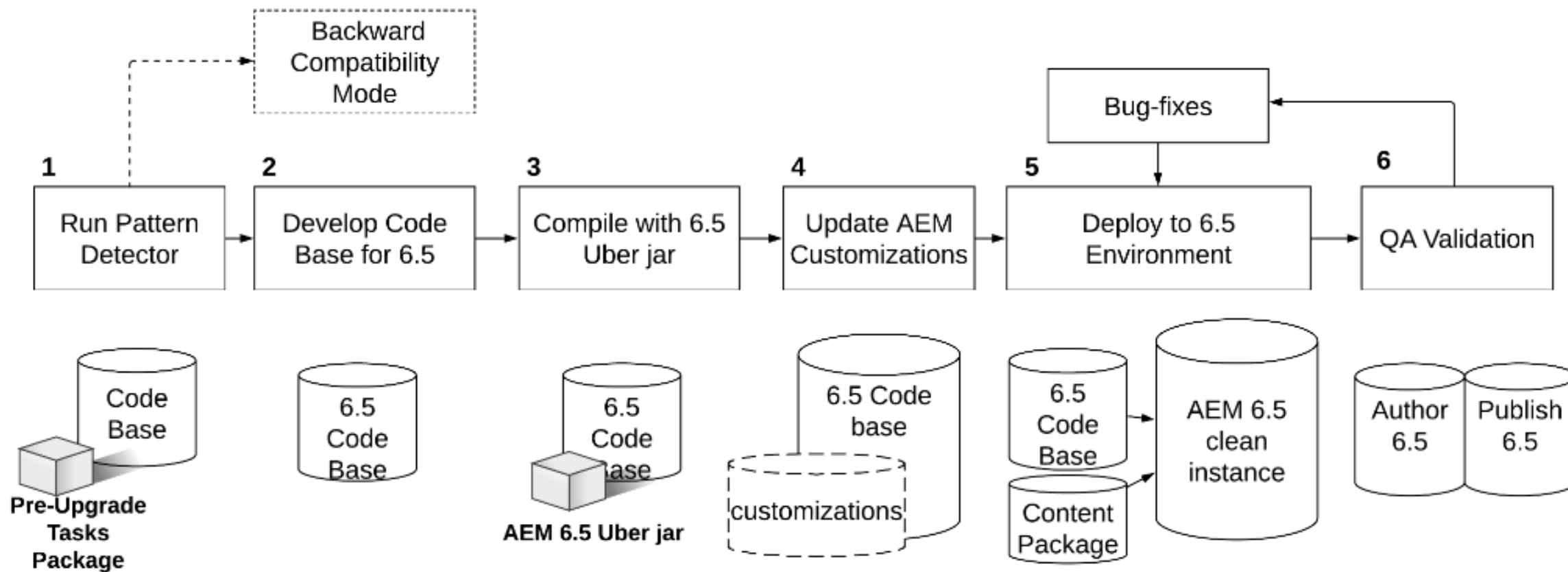


High Level steps for Upgrading Code Base

**Post Upgrade Checks**

- Verify logs for upgrade success
- Verify OSGi Bundles
- Verify Oak Version
- Inspect the PreUpgradeBackup folder
- Initial Validation of Pages
- Apply AEM Service Packs
- Migrate AEM features
- Verify Scheduled Maintenance Configurations
- Enable Replication Agents
- Enable Custom Scheduled Jobs
- Execute Test Plan

Adobe

# Post Upgrade Checks

- Verify logs for upgrade success
- Verify OSGi Bundles
- Verify Oak Version
- Inspect the PreUpgradeBackup folder
- Initial Validation of Pages
- Apply AEM Service Packs
- Migrate AEM features
- Verify Scheduled Maintenance Configurations
- Enable Replication Agents
- Enable Custom Scheduled Jobs
- Execute Test Plan

Adobe

**Usual suspects**

- Migrate content from production to lower environments before testing the upgrade.
- Smoke test using the comprehensive test plan early on in the process.
- Remove all obsolete code.
- Test all OSGi services and external integrations.
- Test all JCR queries
- Test all data APIs (web services).
- Test all AEM code overlays and tight integrations.
- Review and potentially update component and page dialogs.
- Review and update all uses of deprecated APIs

**Usual suspects**

- Review OSGi configurations made from the Felix console
- Review workflow modifications made from the AEM UI.
- Add ACLs for tags
- Determine ACLs and User Groups.
- Upgrade LDAP authentication integration, if applicable.
- Upgrade personalization engine from Client Context to ContextHub.
- Review third-party packages and upgrade if necessary.
- Upgrade dispatcher version and associated configurations.
- Test all web server (e.g. Apache) redirect and rewrite rules.

Adobe

Create a standardized framework

**MAKE IT AN EXPERIENCE**