

# IBM Sterling Selling & Fulfillment Solution Upgrade Strategy and Execution – 8.5 to 9.2

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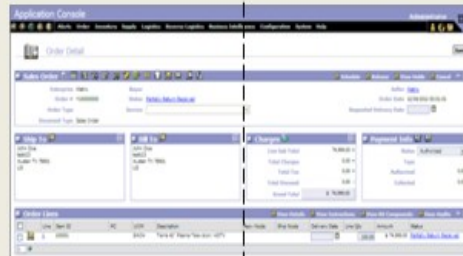
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- **Overview of Sterling 9.2 Upgrade**
- **Upgrade phases**
- **High level upgrade steps**
- **Upgrade Strategy**
- **Performance Considerations**
- **Case Study**

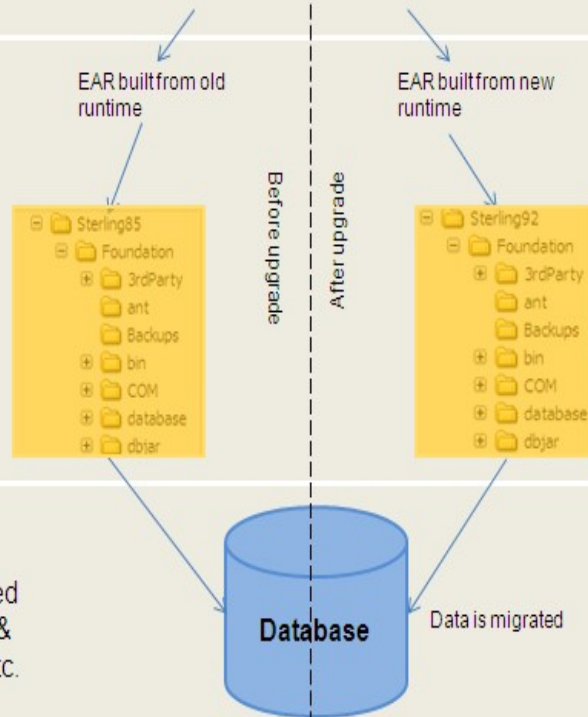
## Presentation:

After upgrade is completed, EAR is built from new 9.2 runtime and deployed in application server



## Application:

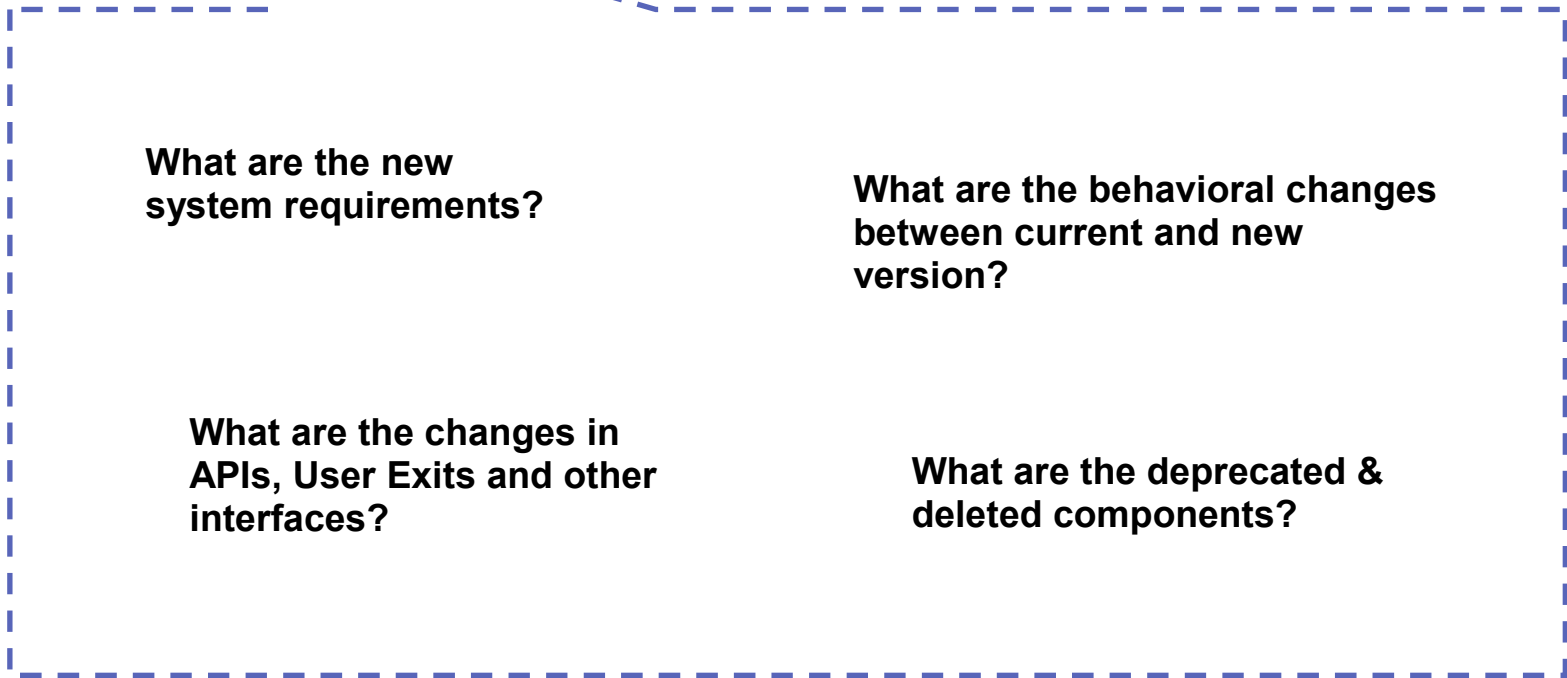
When SSFS is installed in upgrade mode, new 9.2 runtime gets created which has the code for new features

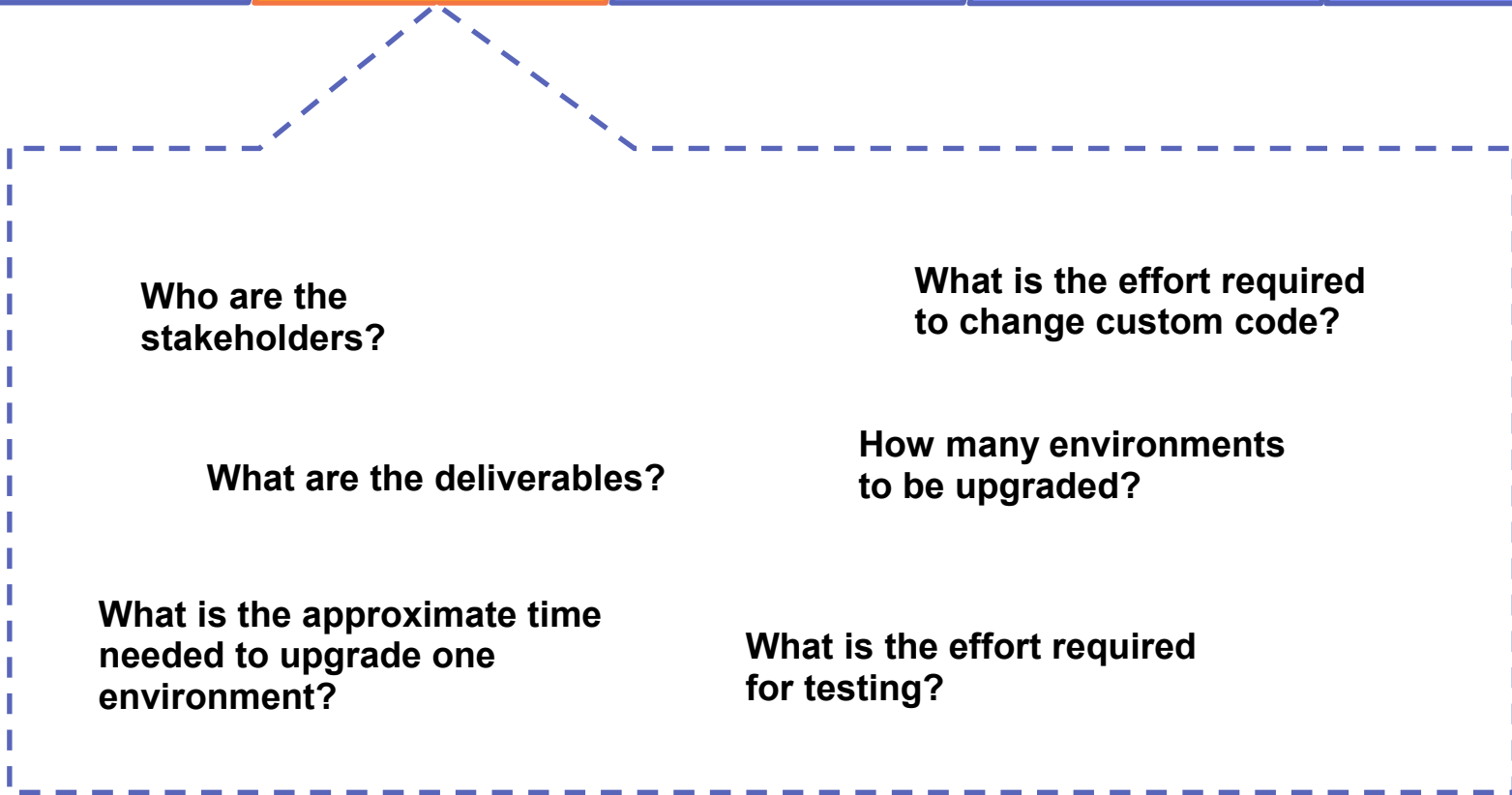


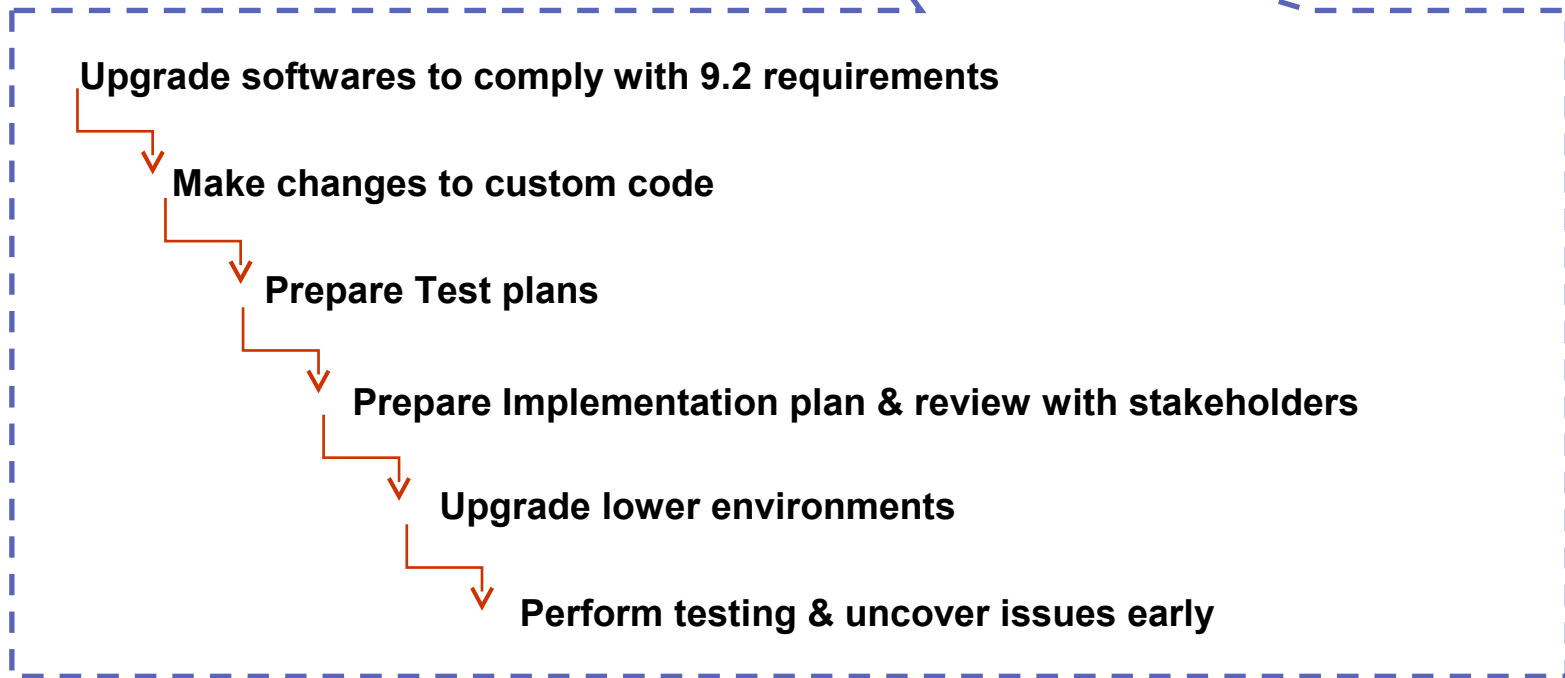
## Data:

The same 8.5 database is migrated to have new tables, new indexes & new columns for existing tables etc. to support 9.2 features

- File upgrade + Data migration
- Two types of Upgrade
  - Single hop -> 8.5 to 9.0  
*(when customer wants to upgrade from 8.5 to 9.0)*
  - Multi hop -> 8.5 to 9.0 to 9.1 to 9.2  
*(when customer wants to upgrade from 8.5 to 9.2)*
- File upgrade
  - New foundation runtime gets created
  - Extensions from old runtime gets copied to new runtime
- Data migration
  - Schema migration
  - Factory setup migration
  - Custom data migration









- **In this phase, validate the draft implementation plan prepared earlier**
- **Perform end-to-end upgrade process in a “production-like” environment**
- **Monitor all activities and fine-tune implementation plan as needed**
- **Capture metrics and estimate approximate system down time**





- **Perform upgrade in production environment per the detailed implementation plan**
- **After upgrade, ensure**
  - **all critical agent servers & functionalities are working as expected**
  - **no errors are found in logs**

# High level Upgrade steps

## Verify

- Availability of disk space to install new 9.2 runtime
- Supported versions of database, JDK etc.
- Database parameters as mentioned in upgrade guide
- ...

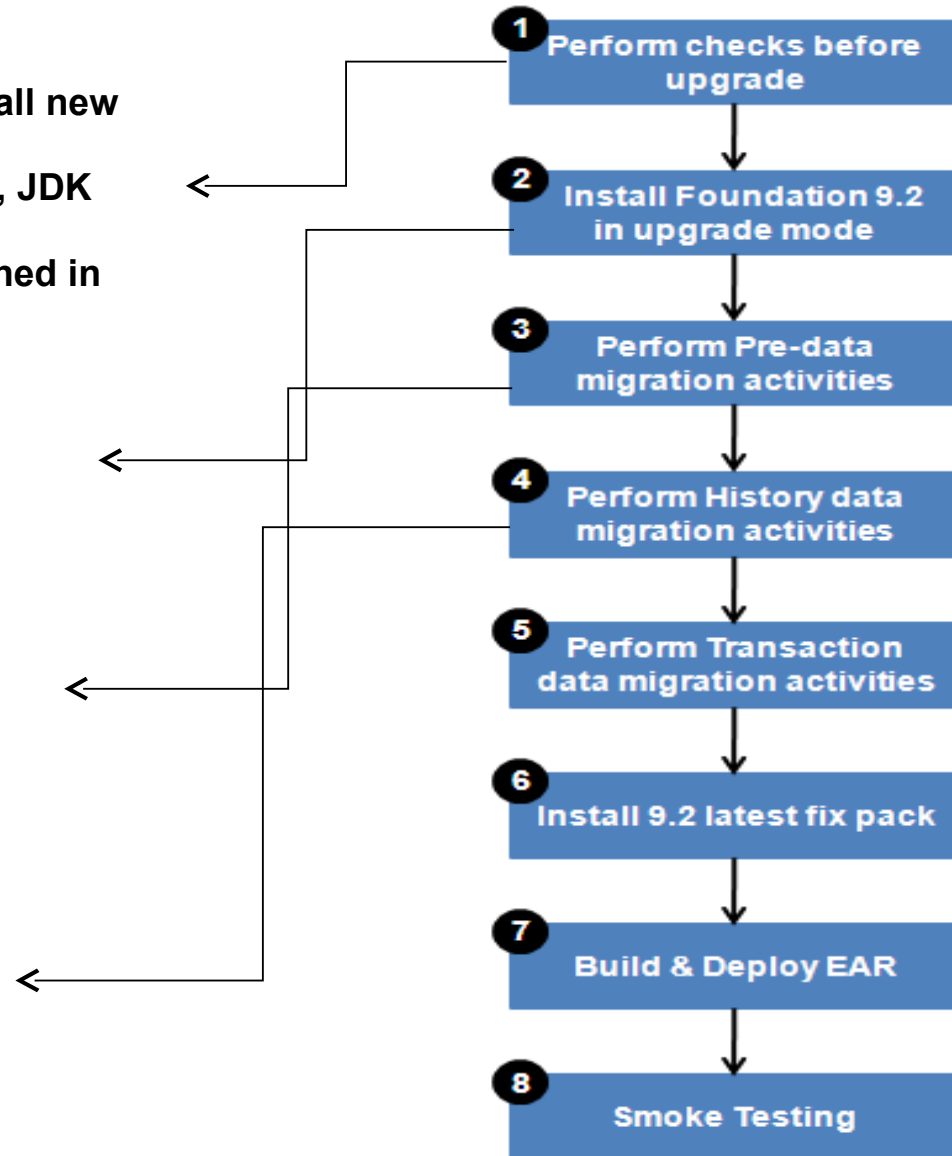
## Install SSFS 9.2 in Upgrade mode

## Execute ANT targets:

- copyextensions
- installPCAs
- initupgrade
- migration-validation

## Execute ANT targets:

- alter-history-tables
- install-history-indexes
- upgrade-history-tables
- run-history-drop



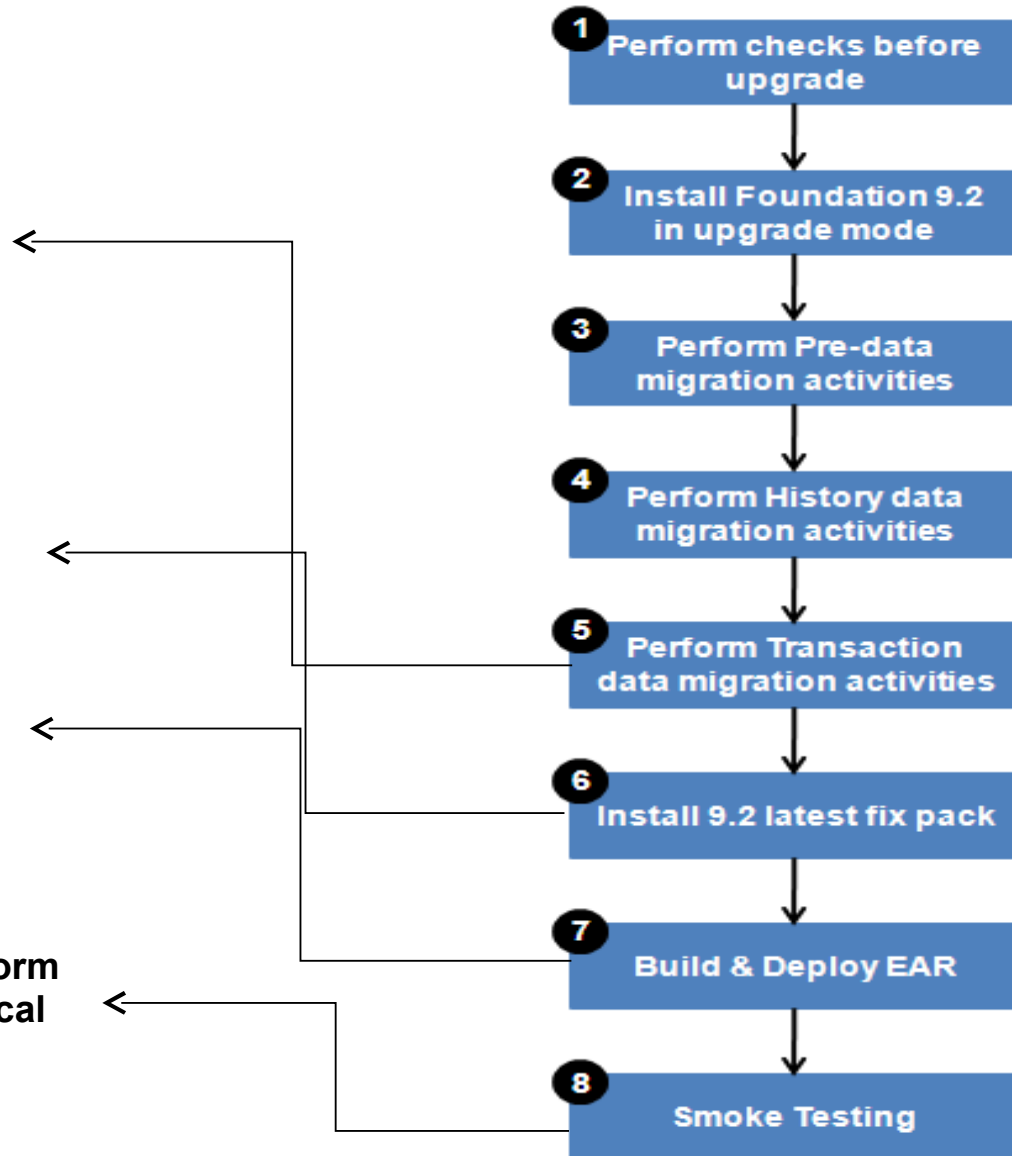
## Execute ANT targets:

- alter-transaction-tables
- install-transaction-indexes
- upgrade-transaction-tables
- run-transaction-drop
- dbclassgen
- migrate-doc-params
- migrate-custom-doc-types

Install 9.2 latest fix pack

Build the new 9.2 EAR and  
deploy in application server

Once the application is up, perform  
smoke testing to ensure all critical  
components are working fine



## Key Considerations in defining the Upgrade Strategy

- Dependency on the Supported Stack
- Fix Pack Reconciliation
- Client Specific Pre-Releases
- JSP Reconciliation
- Regression Test Cases
- Change in Build script
- Number of Non-Production Environments
- Dependency on 3<sup>rd</sup> Party Software's
- Application Down Time

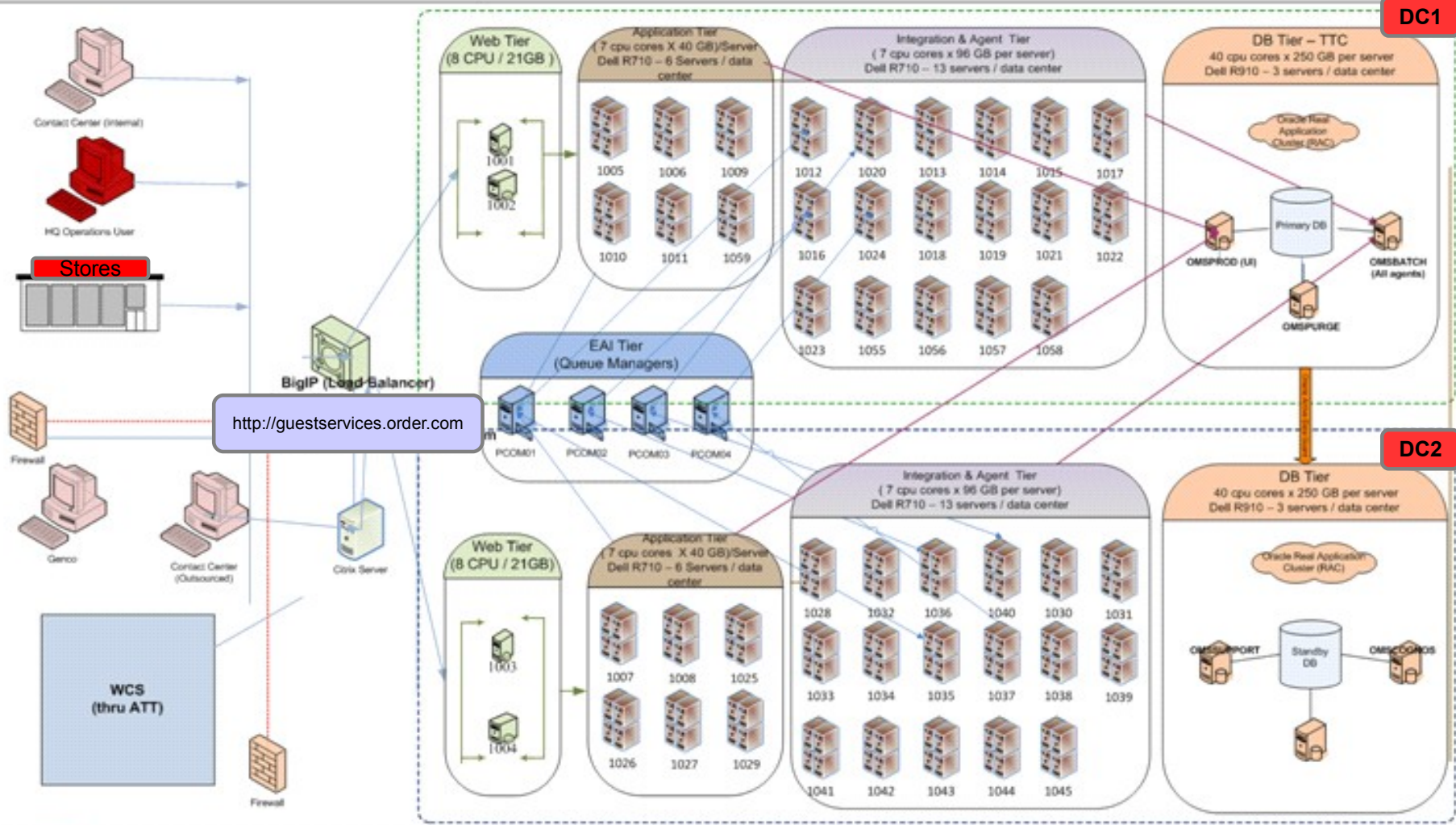
## Key Considerations in deriving the Application Down Time

- Number of Virtual Environments
- Number of OMS Instances
- Database Storage Size
- Deployment Architecture
- Production Cut-Off Plan
- Roll Back Strategy

## Key Performance Considerations

- Performance Baseline - existing OMS application
- Performance Baseline - upgraded OMS application
- Feature enhancements in Transaction
- Change in OMS Platform
- Archiving Optimization
- Impact of Caching

## OMS Physical Architecture – Peak Season



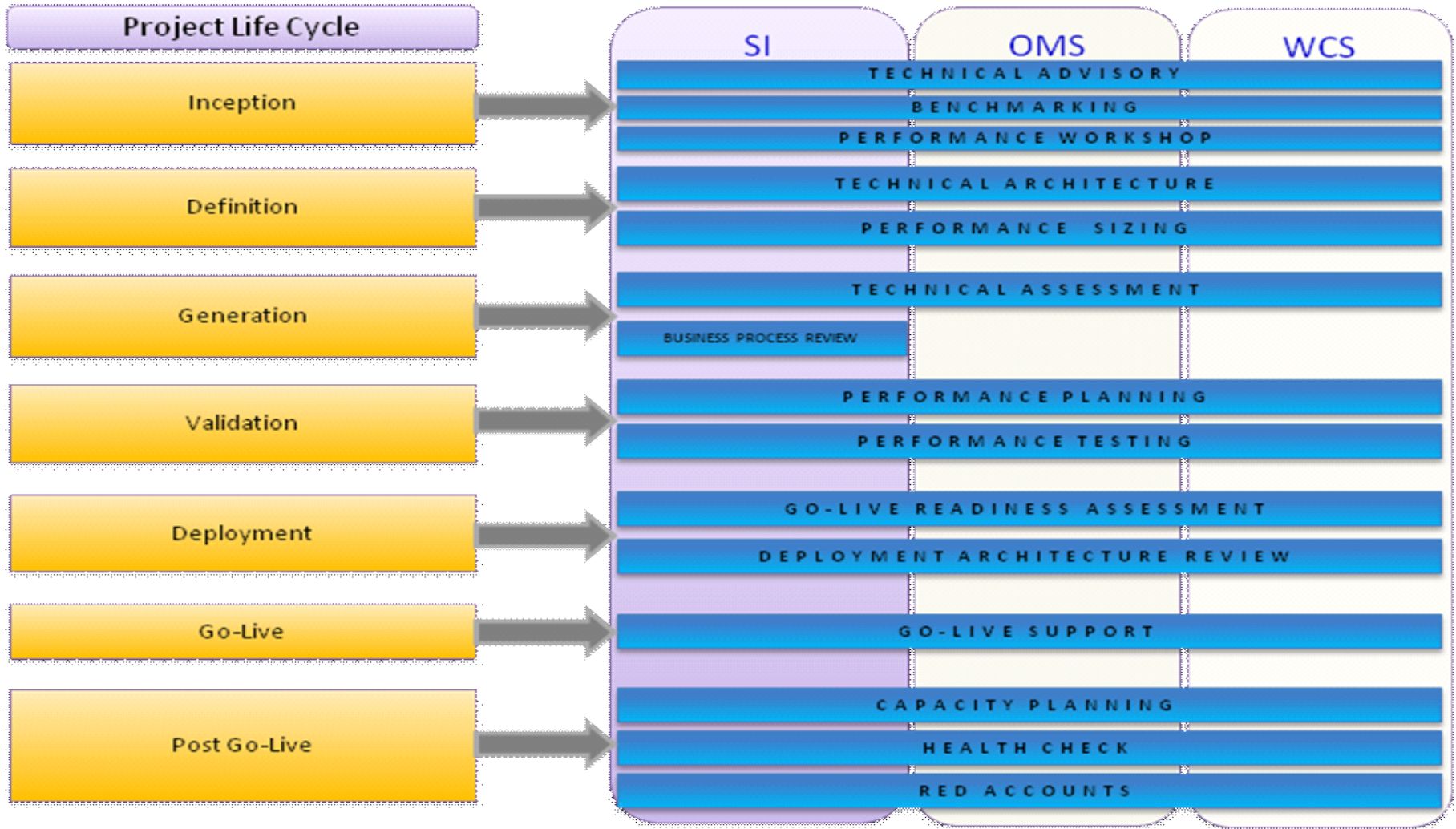
## ▪ Architecture Details

- 44 Virtual Environments
- Application Server: Websphere Application Server
  - 4 Clusters / Total 32 WAS instances
- Agent + Integration Servers
  - 180 JVM instances
- Database: Oracle 11g R2
  - Oracle Data Guard – Active/Passive
  - 3 Node RAC
- Integration: IBM MQ v7
  - 4 Active MQ Managers

## ▪ Upgrade Metrics

- Run1
  - Total Upgrade Time: 21:05:27
  - Total System Down Time: 16:26:10
- Run2
  - Total Upgrade Time: 17:05:27
  - Total System Down Time: 16:26:10
- Final Run
  - Total Upgrade Time: 08:35:15
  - Total System Down Time: 07:30:10





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