

Oracle BI 12c Upgrade at LGI

Francesco Tisiot,
Principal Consultant, Rittman Mead

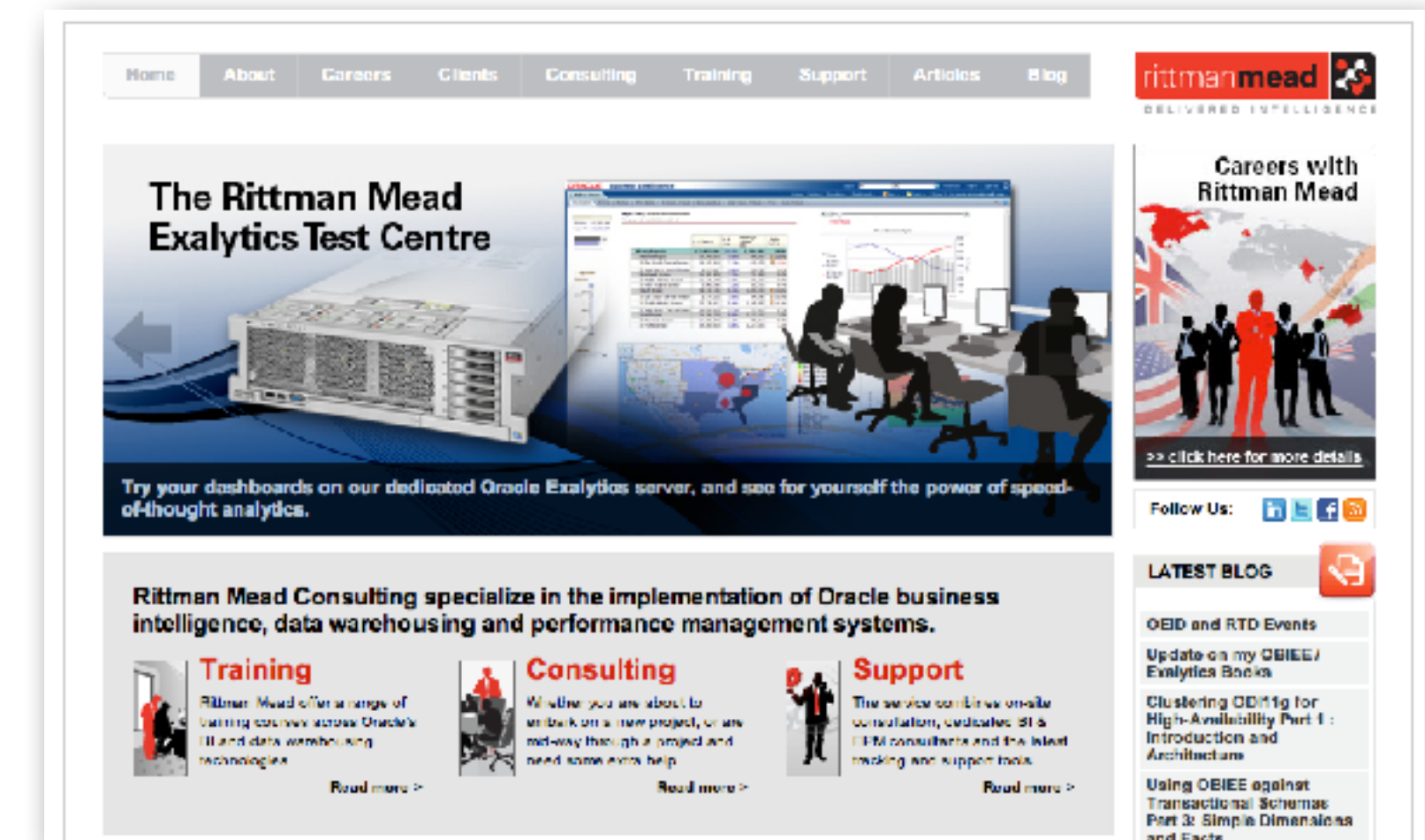
About the Speaker

- Francesco Tisiot
- Principal Consultant at Rittman Mead
- Based in Verona, Italy
- Writer for Rittman Mead Blog
 - <http://www.rittmanmead.com/blog/>
- Over 9 years of experience in BI
- Email: francesco.tisiot@rittmanmead.com
- Twitter: @FTisiot



About the Rittman Mead

- Oracle BI and DW Gold partner
- *Winner of five UKOUG Partner of the Year awards in 2013, 2014, 2015 - including BI*
- World leading specialist partner for technical excellence, solutions delivery and innovation in Oracle BI
- Approximately 100 consultants worldwide
- All expert in BI, DW and Big Data
- Offices in US (Atlanta), Europe
- Skills in broad range of supporting tools:
 - OBIEE, OBIA, ODI, Essbase, Oracle OLAP,
 - GoldenGate, Endeca
 - Big Data
- Partnership with Cloudera and Amazon



cloudera

amazon
web services

The background features a dark blue, isometric illustration of a server room and office environment. On the left, there are several server racks. In the center, a computer monitor displays a gear icon, with a keyboard in front of it. To the right, a laptop shows a line graph on its screen. Various other icons like folders, a magnifying glass, and a gear are scattered throughout the scene, all rendered in a lighter shade of blue.

Who is Liberty Global?

- EAT Offers to Buy Remaining Reynolds Stake for \$47 Billion
- GE Profit Falls as Revenue Growth Less Than Expected
- Microsoft Soars on Cloud Gains
- SpaceX Explosion Investigation Focuses on Fueling

BUSINESS

Sky, Discovery/Liberty Global, Others Circle Formula One

A winning bid could come in the next few weeks and value the racing series at \$8 billion or more

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SKY DISCOVERY/LIBERTY GLOBAL

Formula One Holdings [+ Add to myFT](#)

Liberty Media closes in on F1 stake

John Malone's cable TV group is in talks with owner CVC Partners over 10-15% share



Mercedes Nico Rosberg leads at the start of the Italian Grand Prix on Sunday © Reuters

Mercedes Nico Rosberg leads at the start of the Italian Grand Prix on Sunday © Reuters

Sport | Formula 1

[Formula 1](#) | [Race calendar](#) | [Driver standings](#) | [Constructor standings](#) | [A-Z](#)

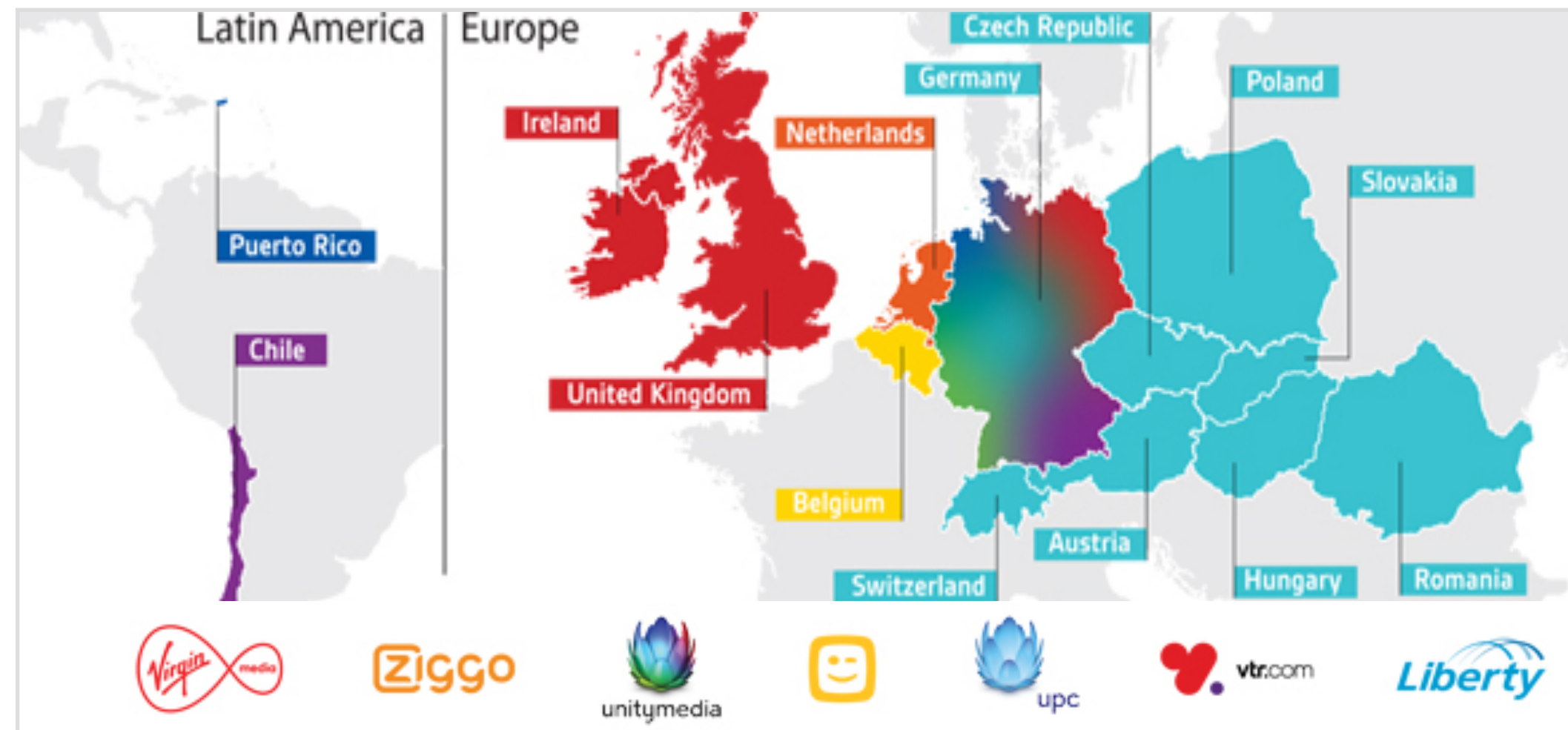
Home > Sport > Formula 1

Formula 1 sale to Liberty Media to go ahead next week, Bernie Ecclestone tells trade magazine



Liberty Global

- ▶ Country Operations
 - ▶ Active in 14 countries

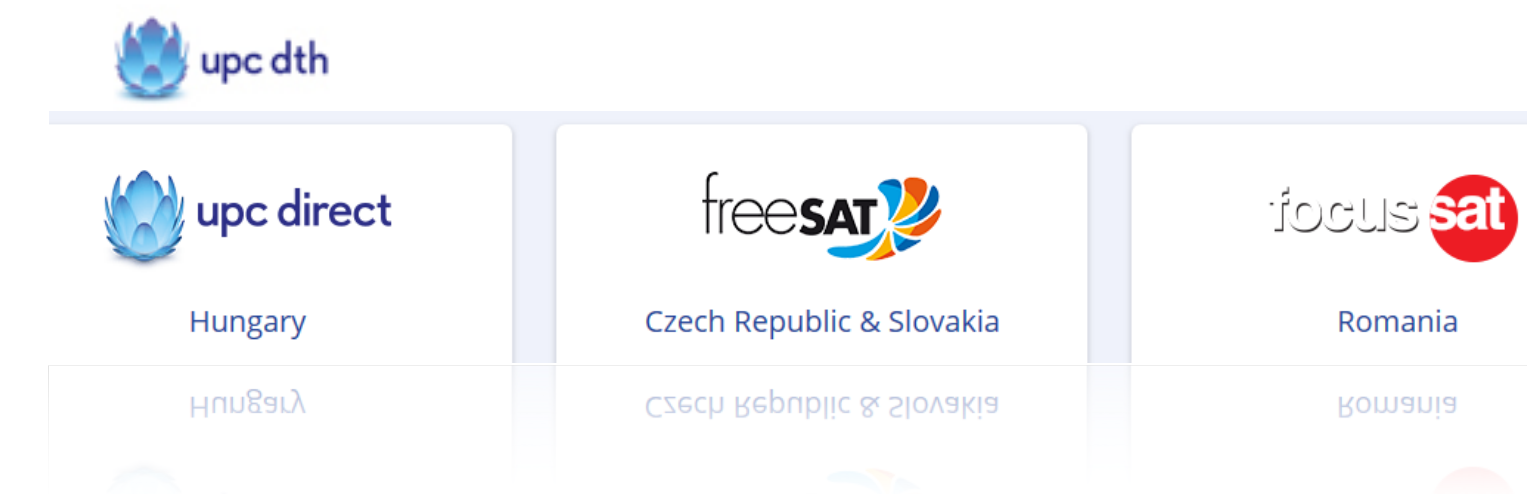


- ▶ As of March 31st, 2016:
 - ▶ 54 million homes passed
 - ▶ 27 million customers
 - ▶ 57 million RGUs (video, internet, and voice subscribers)
 - ▶ 7 million mobile subscribers and 6 million WiFi access points
 - ▶ Revenue: \$18.4 billion

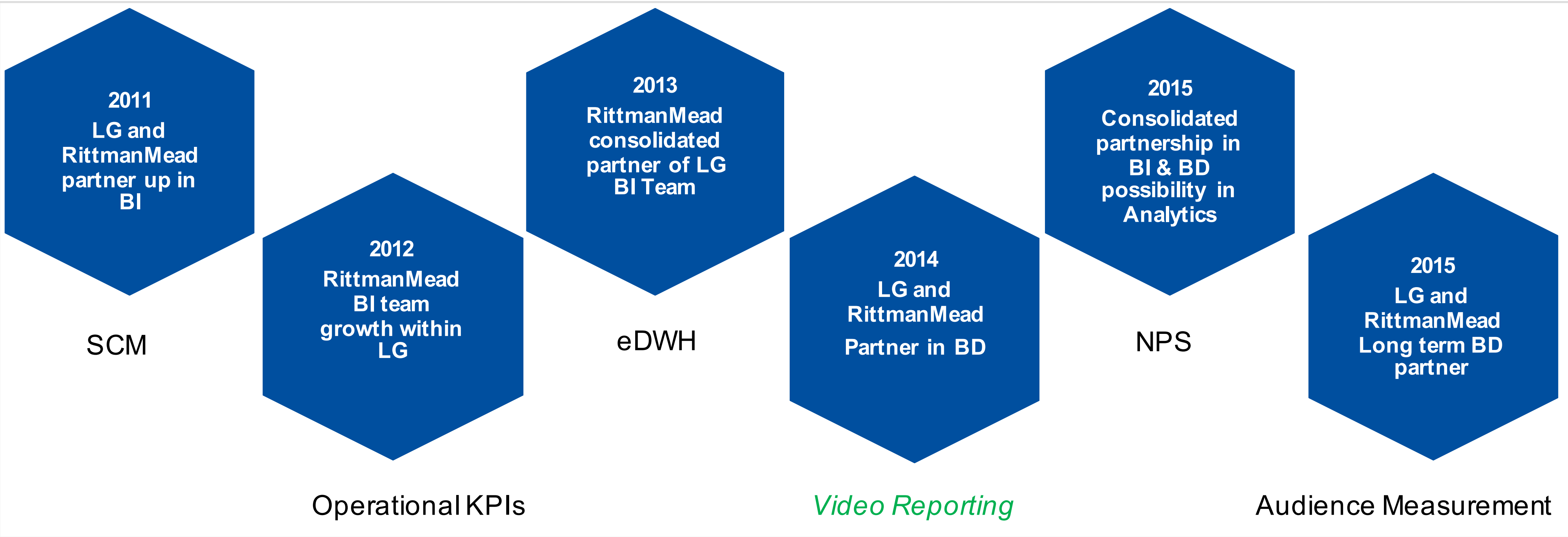
- ▶ Liberty Global Ventures



- ▶ Digital to Home



Rittman Mead and LGI

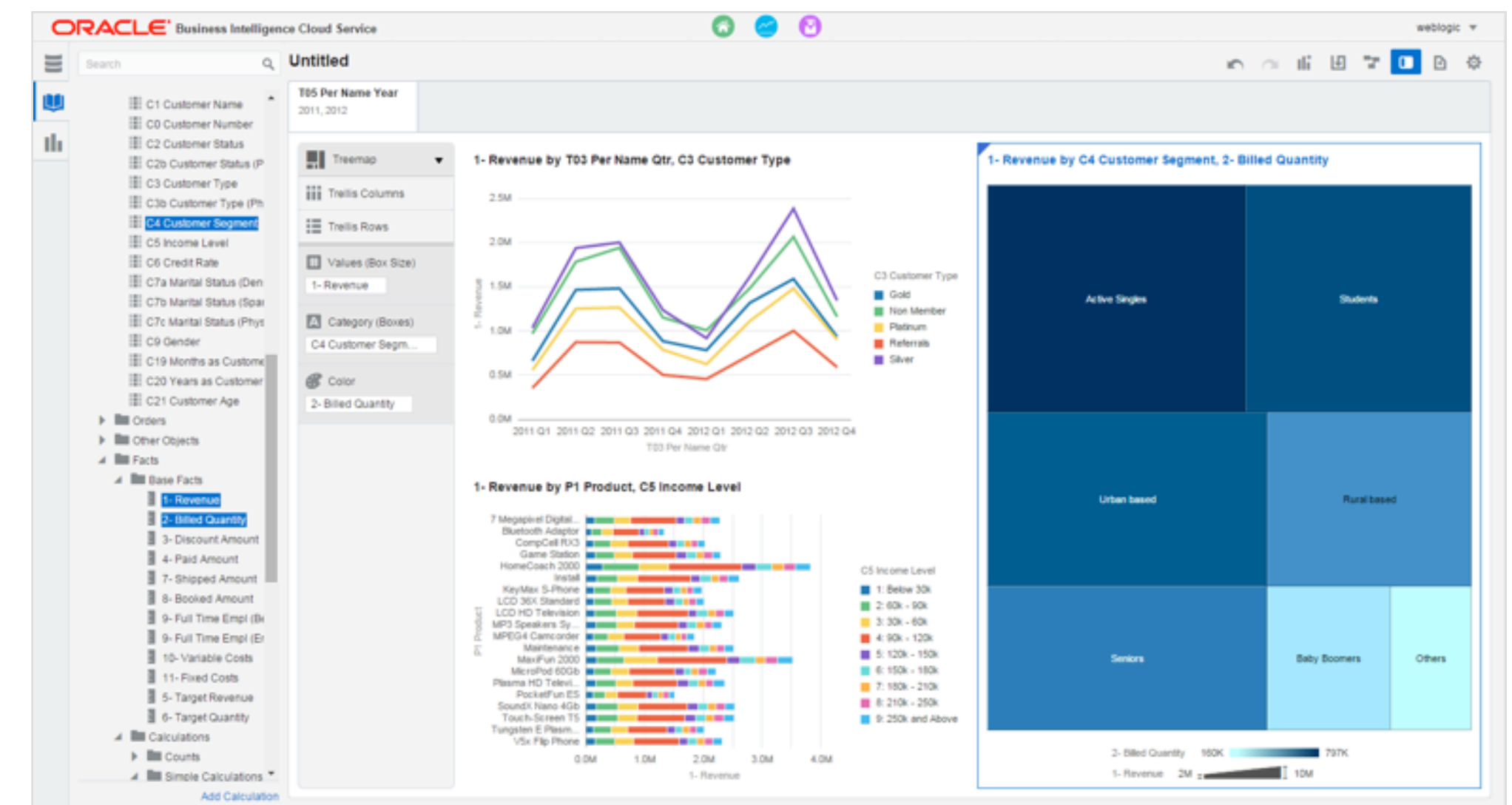




Why Upgrading?

OBIEE12c New Features

- ▶ Simplify and lower cost of admin and operations
- ▶ Improve user experience
- ▶ Enable advanced analytics for everyone
- ▶ Support more data sources
- ▶ Enhance mobile experience
- ▶ Data Visualization
- ▶ Data Mashups
- ▶ Updated Look and Feel
- ▶ Enhanced Big Data Connectivity

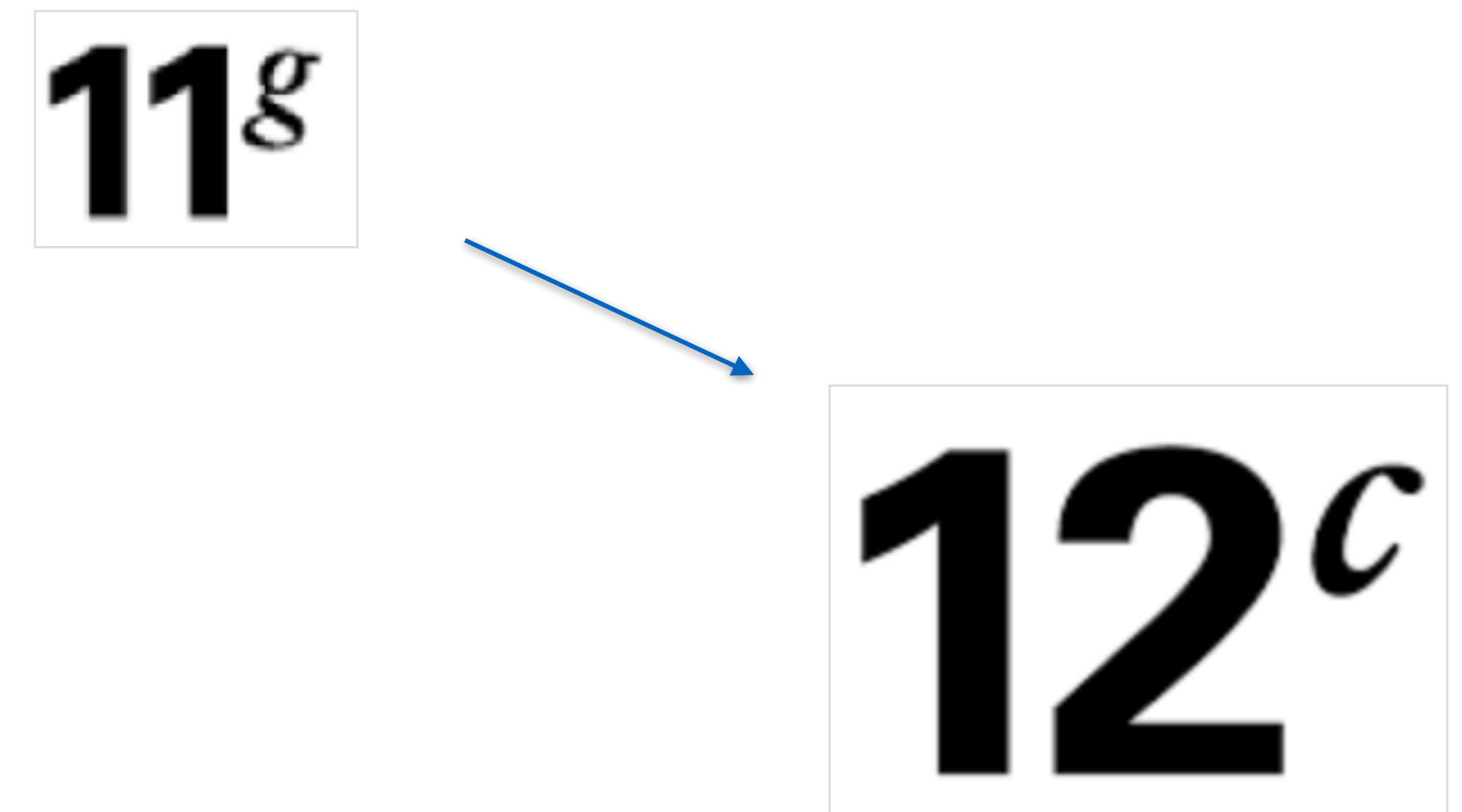


The background features a dark blue, isometric illustration of a server room. On the left, several server racks are visible. In the center, a computer monitor displays a gear icon, with a keyboard in front of it. To the right, a laptop shows a line graph on its screen. Various other icons like folders, a magnifying glass, and a gear are scattered throughout the scene, connected by faint lines, suggesting a complex IT or data environment.

OBIEE12c Installation

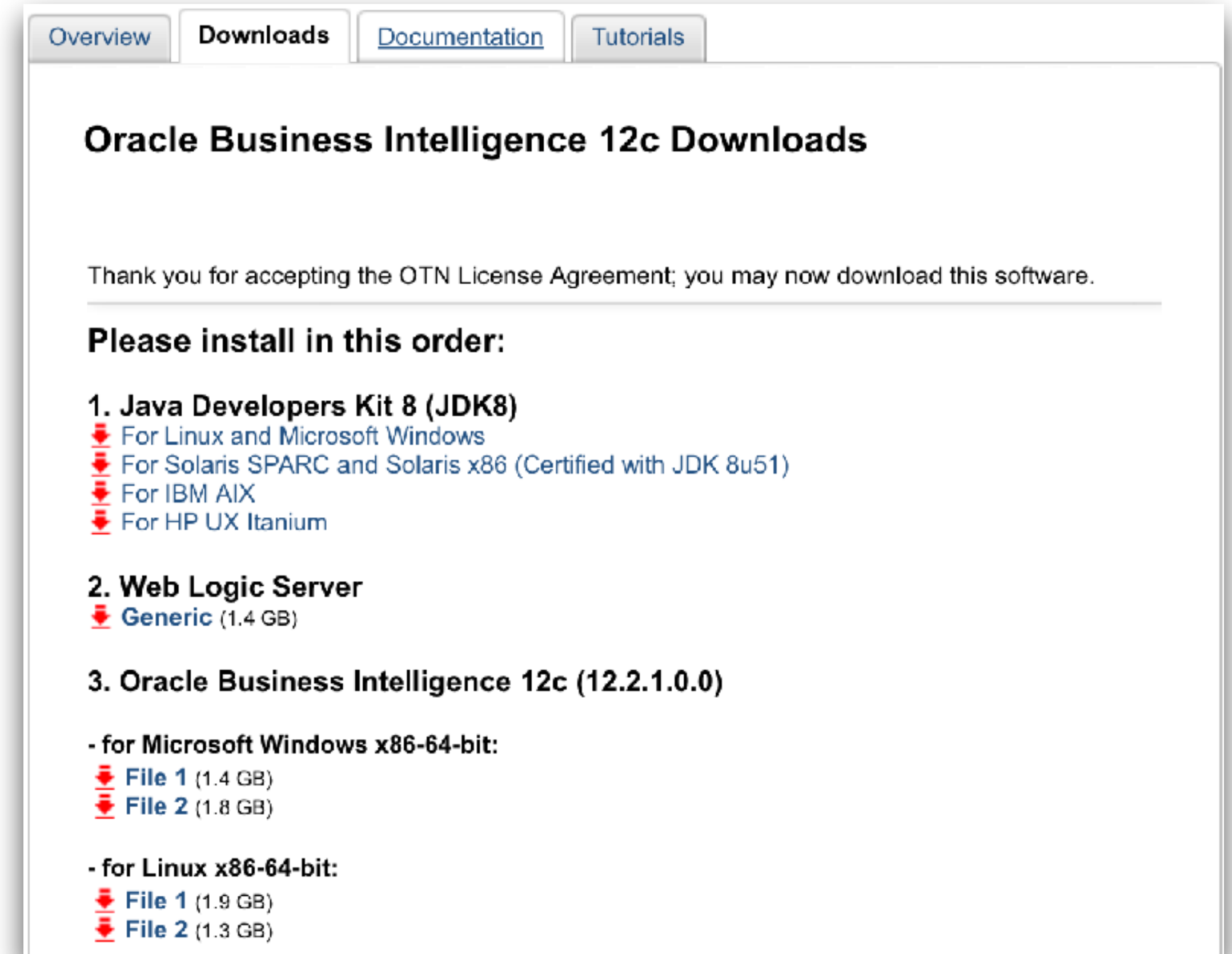
Prerequisites

- Migration Tool works with 11.1.1.7 and 11.1.1.9
- Prerequisites Checks
 - OEL6
 - JDK 1.8+
 - Browser Versions - IE11.* FF 31+
 - Database - 12.1.0.1+ 11.2.0.4+
- Review Server Capacity
 - Additional Server Load - Visual Analyser / Data Mashup



Installation

- No In-place migration option
- Software Download through [Oracle's Website](#)
- Installation Steps
 - JDK 8
 - Weblogic 12c
 - OBI 12c Deployment
 - OBI 12c Configuration



The screenshot shows the Oracle Business Intelligence 12c Downloads page. It features a navigation bar with tabs for Overview, Downloads, Documentation, and Tutorials. The main heading is "Oracle Business Intelligence 12c Downloads". Below the heading, there is a message: "Thank you for accepting the OTN License Agreement; you may now download this software." The page then lists the installation order:

- 1. Java Developers Kit 8 (JDK8)**
 - For Linux and Microsoft Windows
 - For Solaris SPARC and Solaris x86 (Certified with JDK 8u51)
 - For IBM AIX
 - For HP UX Itanium
- 2. Web Logic Server**
 - Generic (1.4 GB)
- 3. Oracle Business Intelligence 12c (12.2.1.0.0)**
 - for Microsoft Windows x86-64-bit:
 - File 1 (1.4 GB)
 - File 2 (1.8 GB)
 - for Linux x86-64-bit:
 - File 1 (1.9 GB)
 - File 2 (1.3 GB)

An isometric illustration on a dark blue background depicting a migration process. It features several server racks on the left, a central desktop computer with a monitor showing a gear icon, a laptop on the right displaying a line graph, and various icons representing data storage (cylinders), folders, and documents. Arrows indicate the flow of data and information between these elements.

Migration

Upgrade



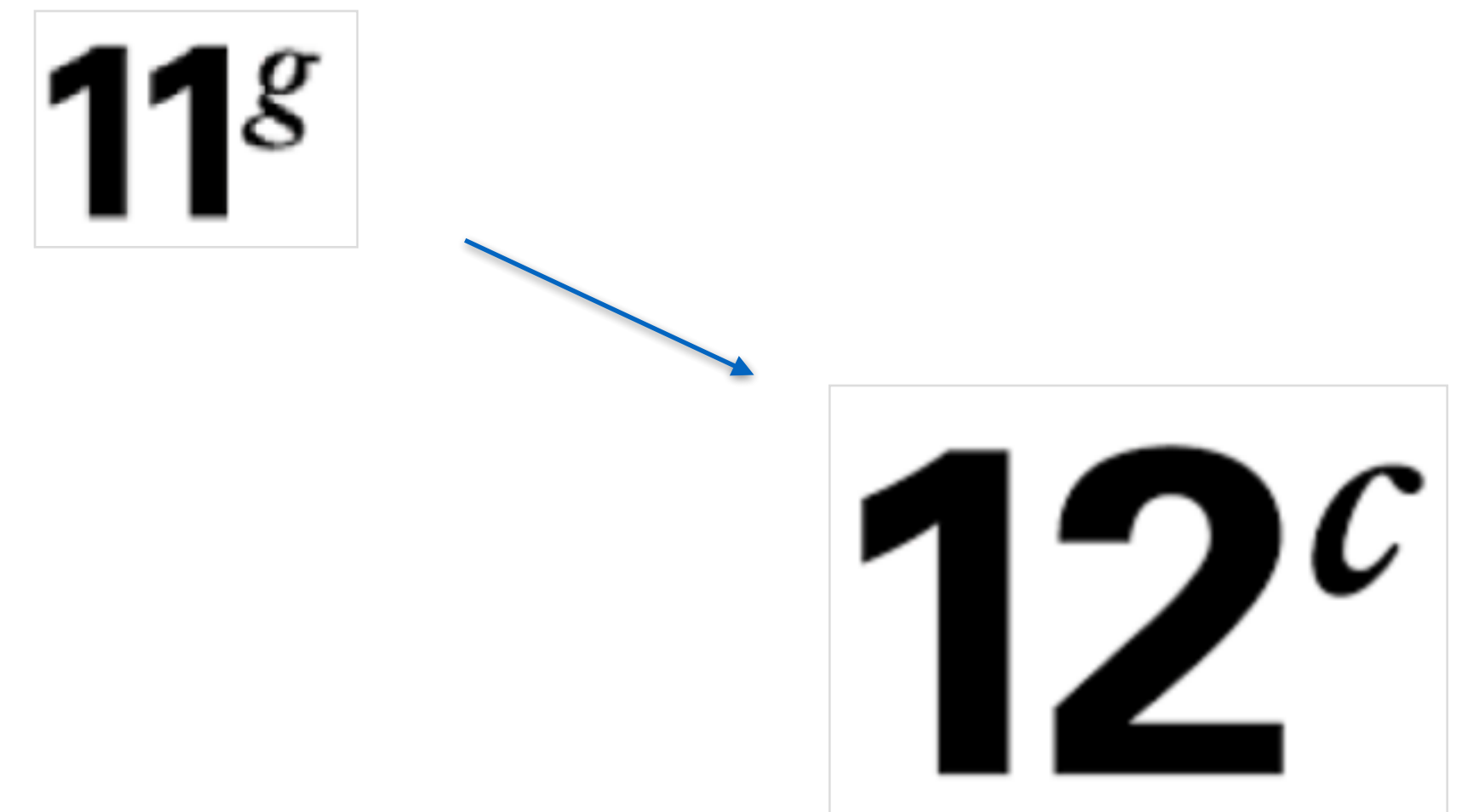
Migration

- Migration Utility

- Compatible only with 11.1.1.7 and 11.1.1.9

- Migration Steps

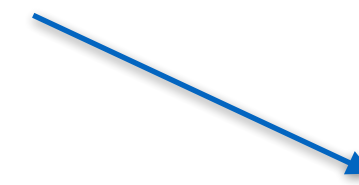
- Export Migration utility jar file from 12c installation
- Create 11g export bundle
- Stop 12c Services
- Import the export bundle in 12c
 - Import during Configuration phase or with migration-tool.sh
- Start 12c Services



Migration Utility Includes

- Migration Utility includes
 - Roles/Policies
 - Repository
 - Catalog (including BIPublisher content)

11^g

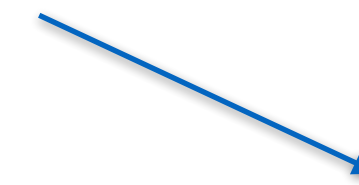


12^c

Migration Utility Doesn't Include

- Console settings
- SSL
- Security Realm Configuration (Authentication, Authorisation)
- Local WL User and Groups
- Additional Deployments
 - Apex, AnalyticsRes
- Usage Tracking
- Agent Schedule
- BI Publisher Schedule and Configuration (Set of steps defined)
- Single component (BIPS, BIS) Configuration
- Additional Configurations (UserScripts.js)

11^g

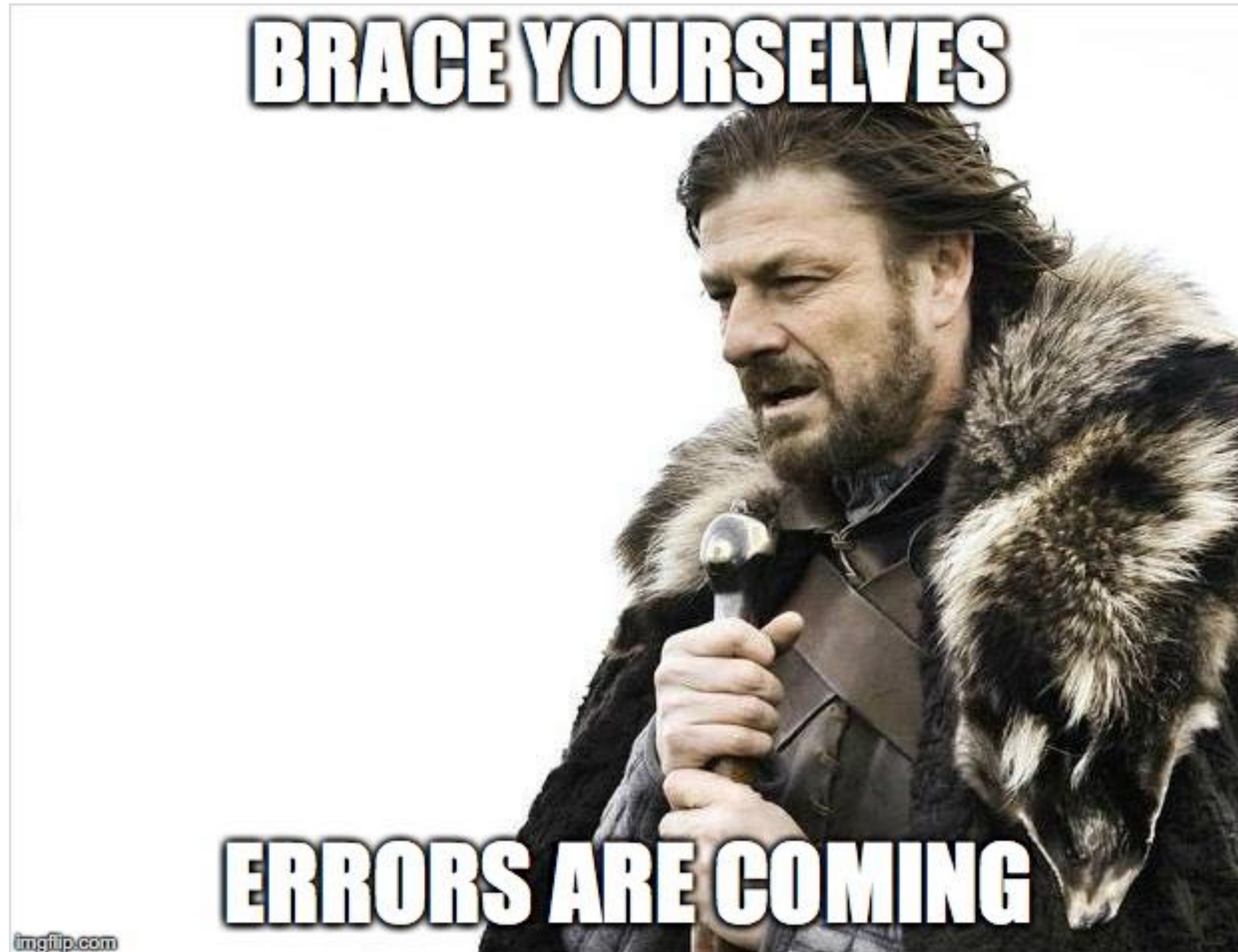


12^c



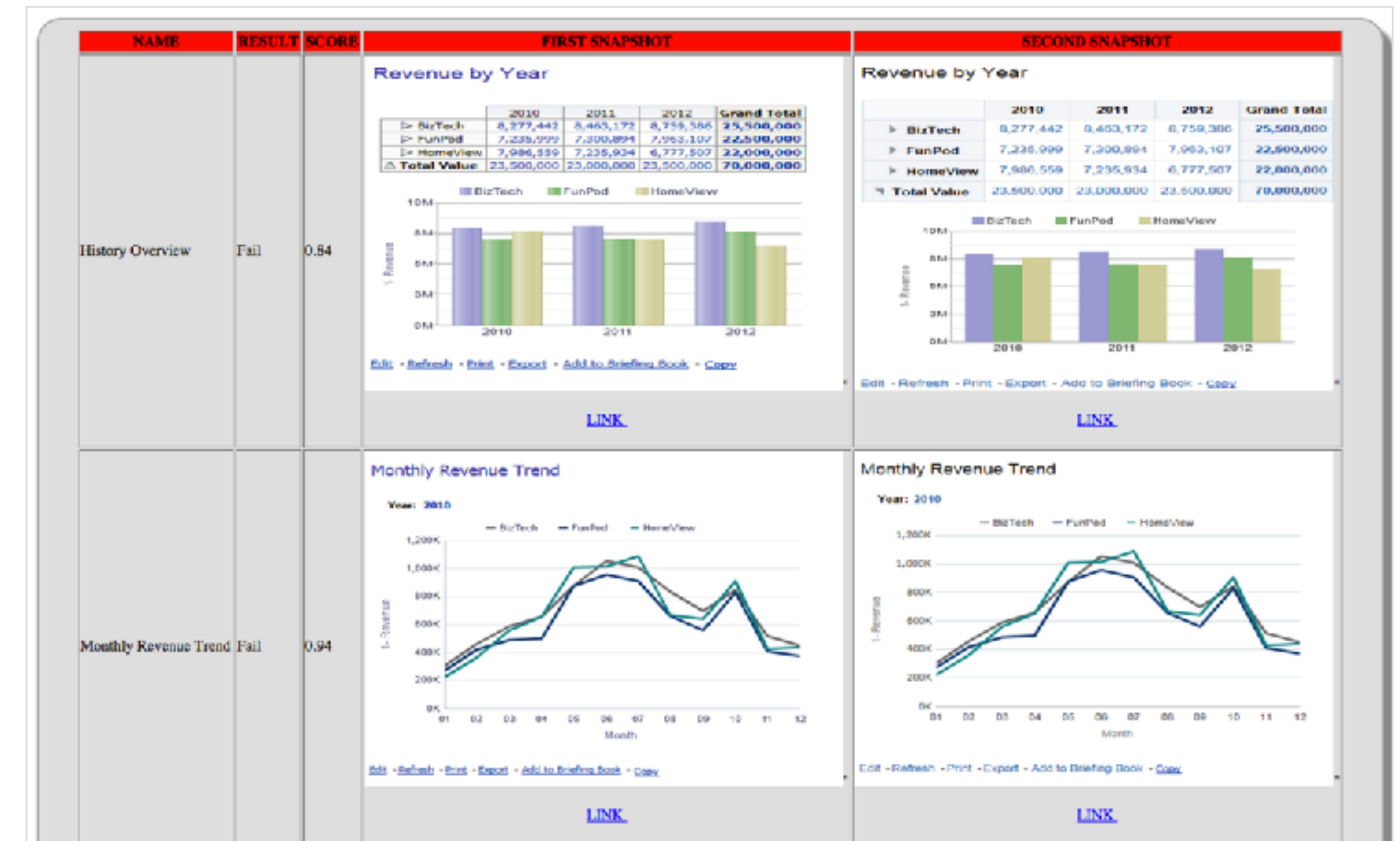
Testing

Validation



Baseline Validation Tool

- Baseline Validation Tool
 - Compatible with 11.1.1.7 and 11.1.1.9
- Automated Testing
 - Report: Analysis of the Data
 - Dashboard: Analysis of the Data
 - LogicalQuery: Logical SQL Match
 - Catalog: All objects check and security
 - UI: Dashboard rendering
- Compares two Baselines
 - Pre and Post Upgrade
 - Can be done on the whole Catalog or only a part of it
 - Specific Dashboards can be selected
- Can be used to validate changes between environments



Baseline Validation Tool

• Configuration File

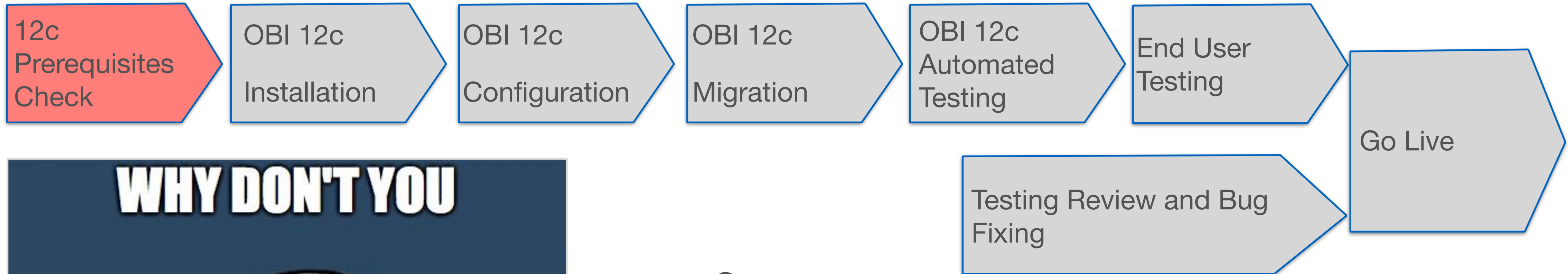
- PreUpgrade and PostUpgrade
- OBIEE's Analytics URL
- Test details
 - Type of Test
 - Type of Browser to Use for UI Comparison
 - Part of The Catalog to scan
 - Number of Concurrent Threads
 - Thresholds
 - Small differences can be expected (e.g. in logos)
 - Timeouts

```
<?xml version='1.0' encoding='UTF-8' ?>
<TestConfiguration>
  <Deployment name='PreUpgrade' description='First Test Target'>
    <Server>
      <!-- AnalyticsURL Needs to point to the analytics page -->
      <!-- ex: <AnalyticsURL>http://servername:9704/analytics/</AnalyticsURL> -->
      <!-- ex: <AnalyticsURL>https://servername/analytics/</AnalyticsURL> -->
      <!-- If you are using a test certificate on the server for SSL and want to
           to bypass SSL certificate validation, set the IgnoreSSLCertErrors to true.
           This setting is strictly for Test environments only -->
      <AnalyticsURL>https://server11:port/analytics/</AnalyticsURL>
      <UserName>Username</UserName>
      <Password>Password</Password>
      <IgnoreSSLCertErrors>false</IgnoreSSLCertErrors>
    </Server>
  </Deployment>
  <Deployment name='PostUpgrade' description='Second Test Target'>
    <Server>
      <!-- AnalyticsURL Needs to point to the analytics page -->
      <!-- ex: <AnalyticsURL>http://servername:9704/analytics/</AnalyticsURL> -->
      <!-- ex: <AnalyticsURL>https://servername/analytics/</AnalyticsURL> -->
      <!-- If you are using a test certificate on the server for SSL and want to
           to bypass SSL certificate validation, set the IgnoreSSLCertErrors to true.
           This setting is strictly for Test environments only -->
      <AnalyticsURL>https://server12:port/analytics/</AnalyticsURL>
      <UserName>Username</UserName>
      <Password>Password</Password>
      <IgnoreSSLCertErrors>false</IgnoreSSLCertErrors>
    </Server>
  </Deployment>
  <Test>
    <TestPlugin name='com.oracle.biee.bvt.plugin.catalog' enabled='true'>
      <Test name='GetCatalogTest' enabled='true'>
        <Parameter name='CatalogRoot' value='/shared/ABC' />
      </Test>
    </TestPlugin>
    <TestPlugin name='com.oracle.biee.bvt.plugin.ui' enabled='true'>
      <Parameter name='CatalogRoot' value='/shared/ABC' />
      <!-- how many threads to spawn to load reports, should be greater than 0, less than 50 -->
      <Parameter name='ThreadQueueSize' value='50' />
      <!-- Timeout for loading each report in MSecs should be between 5 secs and 10 mins -->
      <Parameter name='ThreadTimeout' value='300000' />
      <!-- Which BrowserType to use to load reports, Firefox, InternetExplorer. Leave empty for default browser -->
      <Parameter name='BrowserType' value='InternetExplorer' />
      <Test name='FindHotRenderedComponents' enabled='true'>
        <!-- ScoreThreshold should be between 0.00 and 1.00 -->
        <Parameter name='ScoreThreshold' value='0.95' />
        <Parameter name='DisablePluginImageTemplate' value='' />
      </Test>
      <Test name='FindReportSnapshotDifferences' enabled='true'>
        <!-- ScoreThreshold should be between 0.00 and 1.00 -->
        <Parameter name='ScoreThreshold' value='0.95' />
      </Test>
      <Test name='FindDashboardSnapshotDifferences' enabled='true'>
        <Parameter name='PromptInputFile' value='DashboardPrompts.txt' />
        <Parameter name='ScoreThreshold' value='0.95' />
      </Test>
    </TestPlugin>
  </Test>
</TestConfiguration>
```



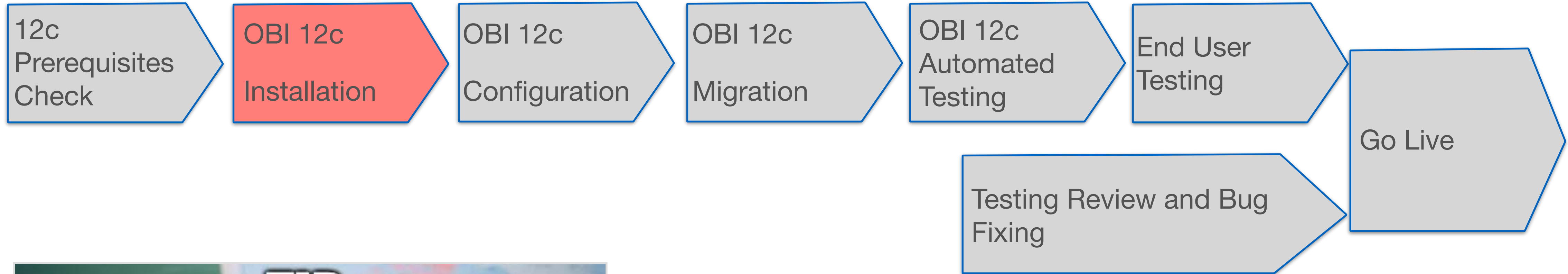
Migration Plan

Migration Steps



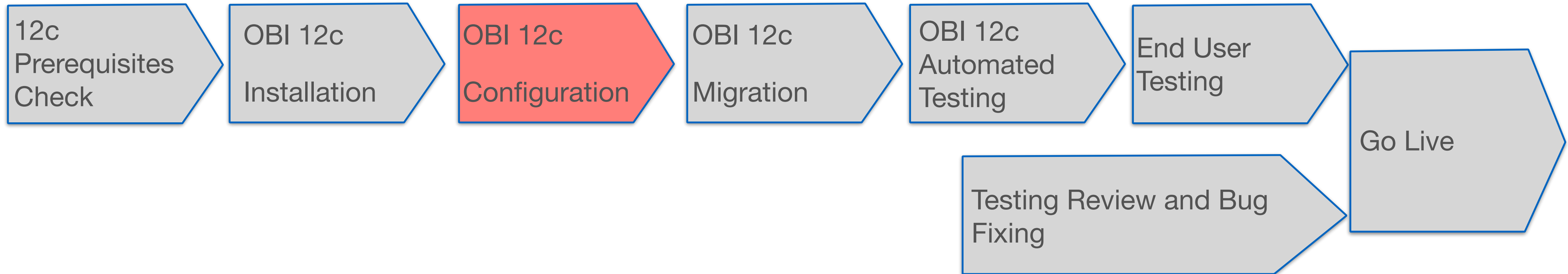
- Server
 - OS
 - Packages
 - Capacity
- Browser
- Database
- 11g Version in supported list (11.1.1.7+)

Migration Steps



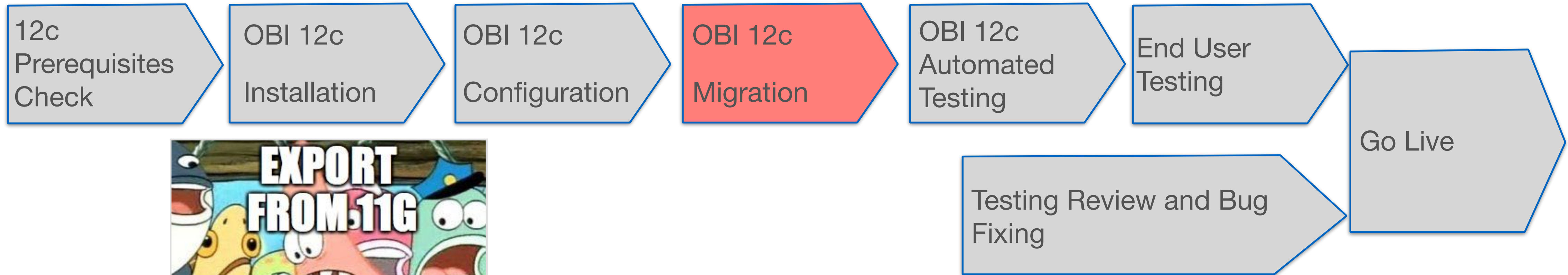
- JDK 1.8
- Weblogic 12c
- OBIEE 12c
 - Deployment
 - RCU
 - Configuration

Migration Steps



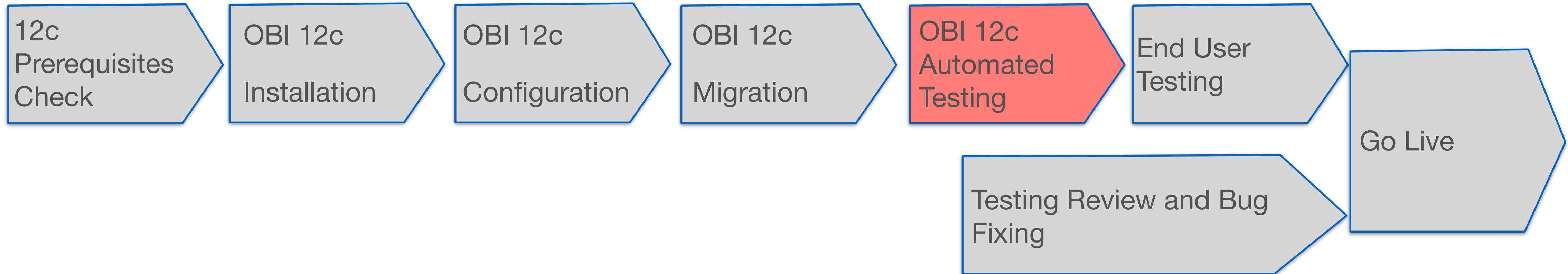
- Console Configuration
 - SSL
 - Security Provider(s)
 - Local WL Users
 - Additional Deployment(s)
 - Components (BIPS, BIS, ...) Settings
 - Additional Configuration (Mapviewer, Apex)

Migration Steps



- Create 11g Export Bundle
- Import Bundle in 12c
- Migrate BIP Settings and Schedule
- Migrate Agents Schedule

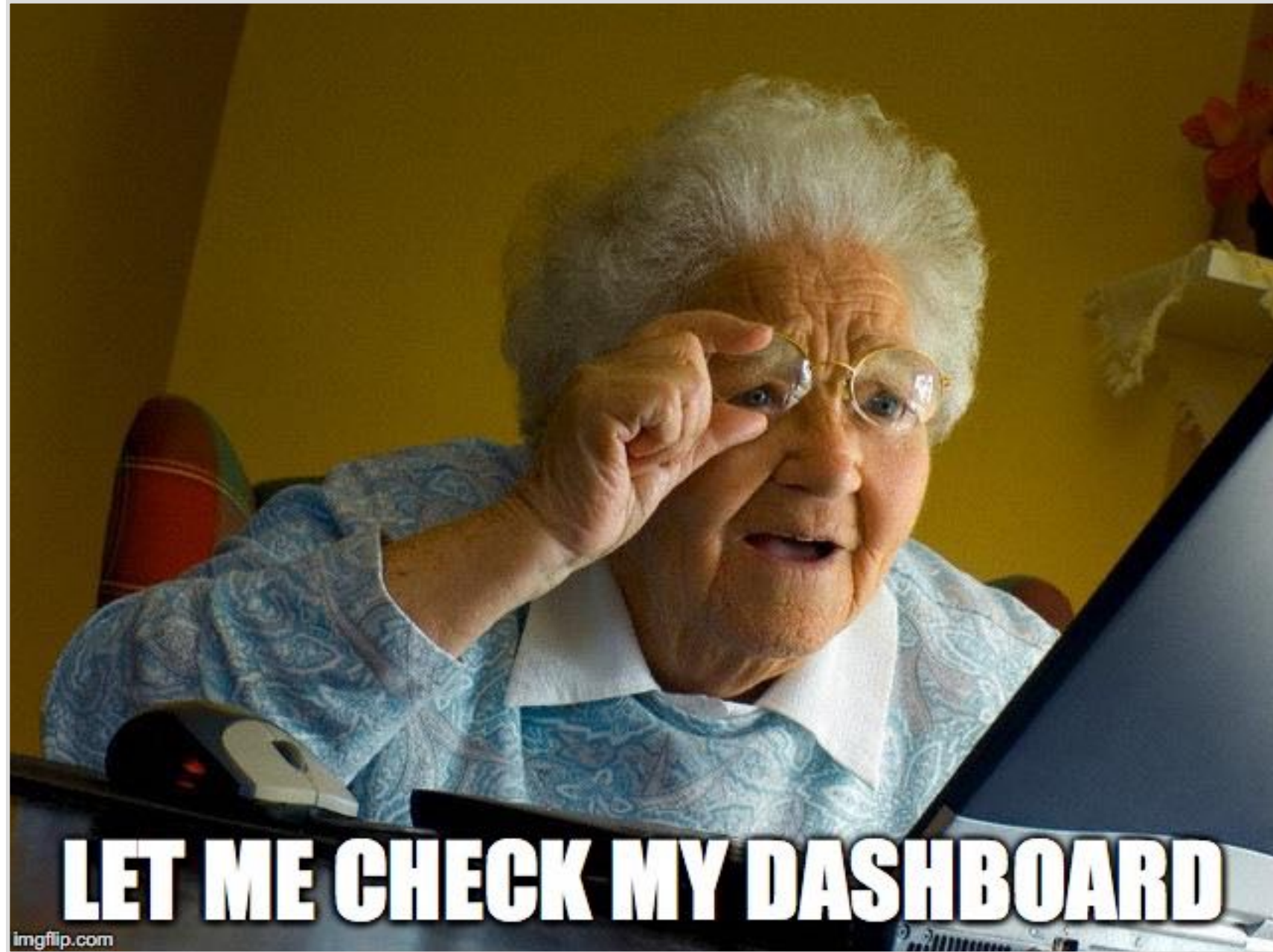
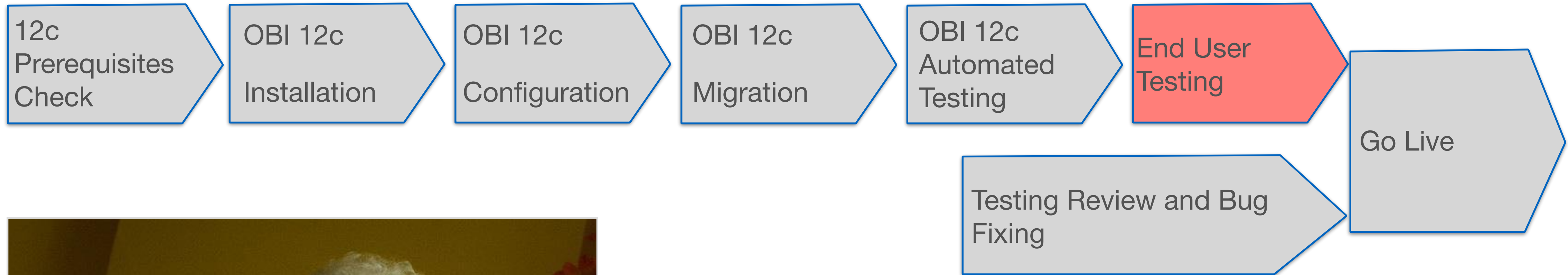
Migration Steps



• Baseline Validation Tool

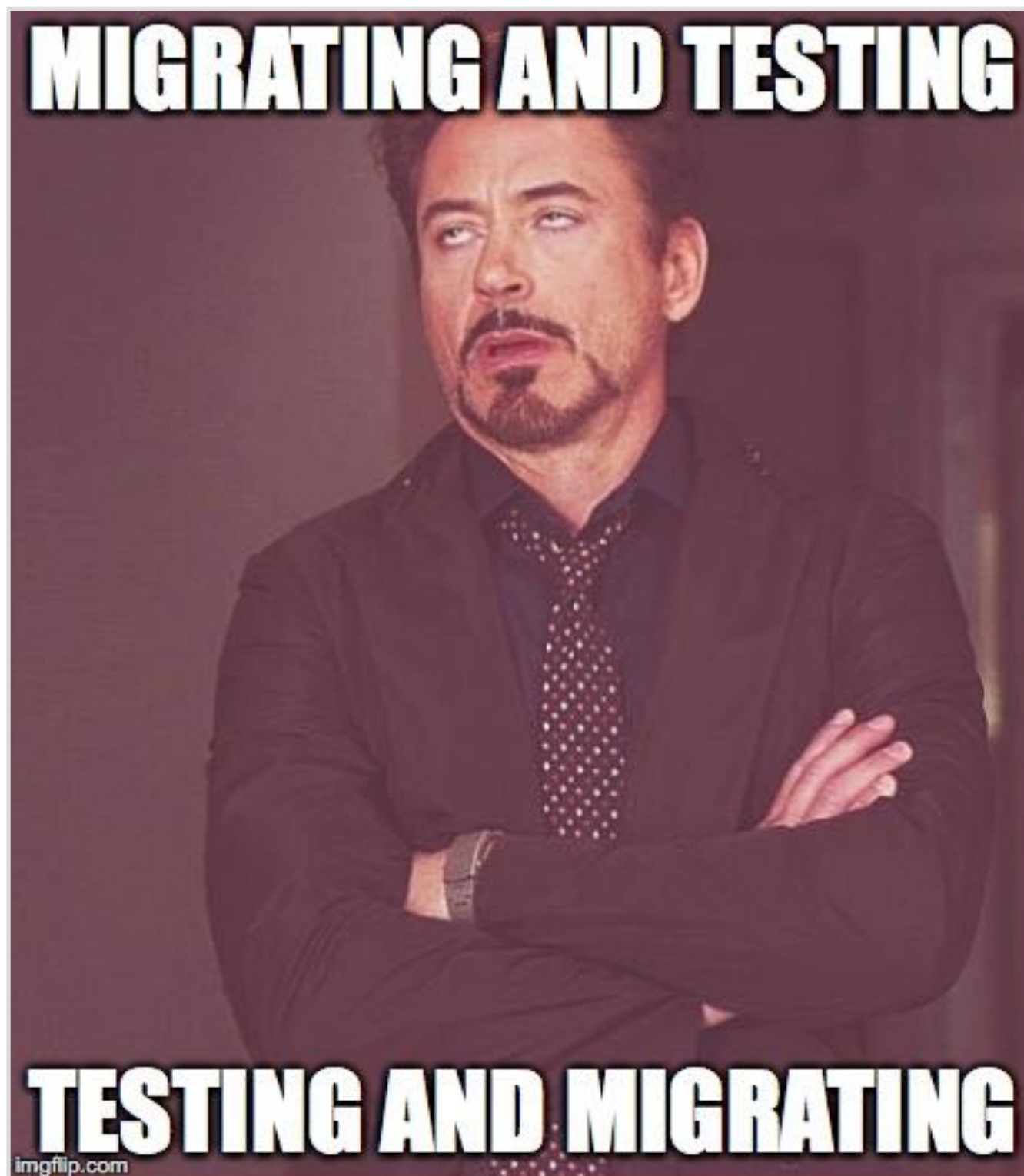
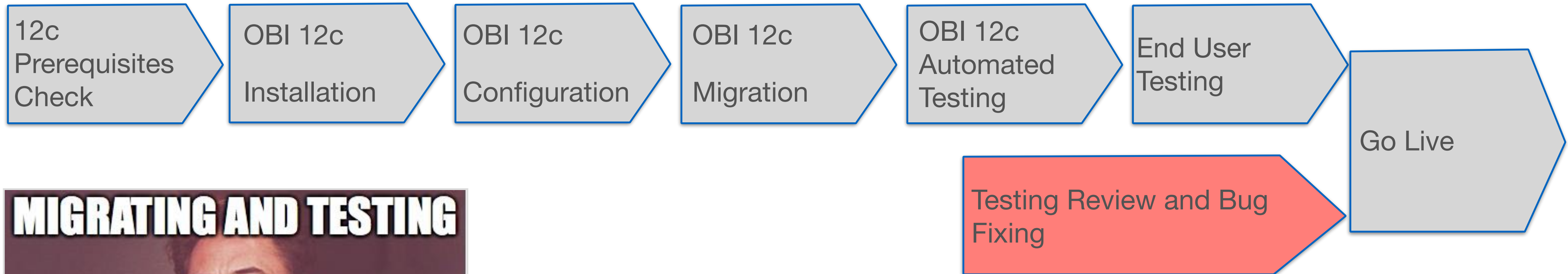
- Select the features
- Select the list of Dashboard Pages and Analysis
- Set the BVT Configuration File
- Create the Baselines
- Compare Results

Migration Steps



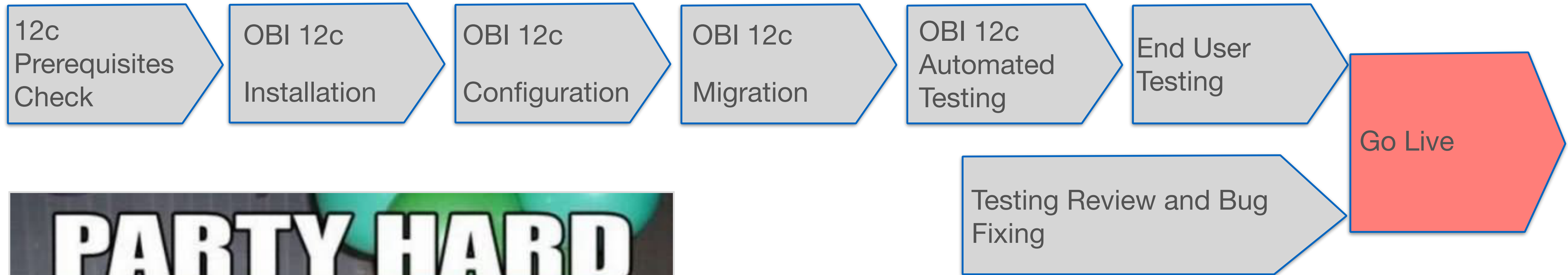
- Not all testing can be performed automatically (e.g. actions)
 - Selected End Users perform additional testing
 - Collect Feedback

Migration Steps



- Analyse Baseline Validation Tool output
 - Refine BVT parameters (e.g. Threshold)
 - Scan other parts of the Catalog
 - re-execute BVT if needed
- Analyse Feedback from End User Testing
- Fix bugs and issues

Migration Steps



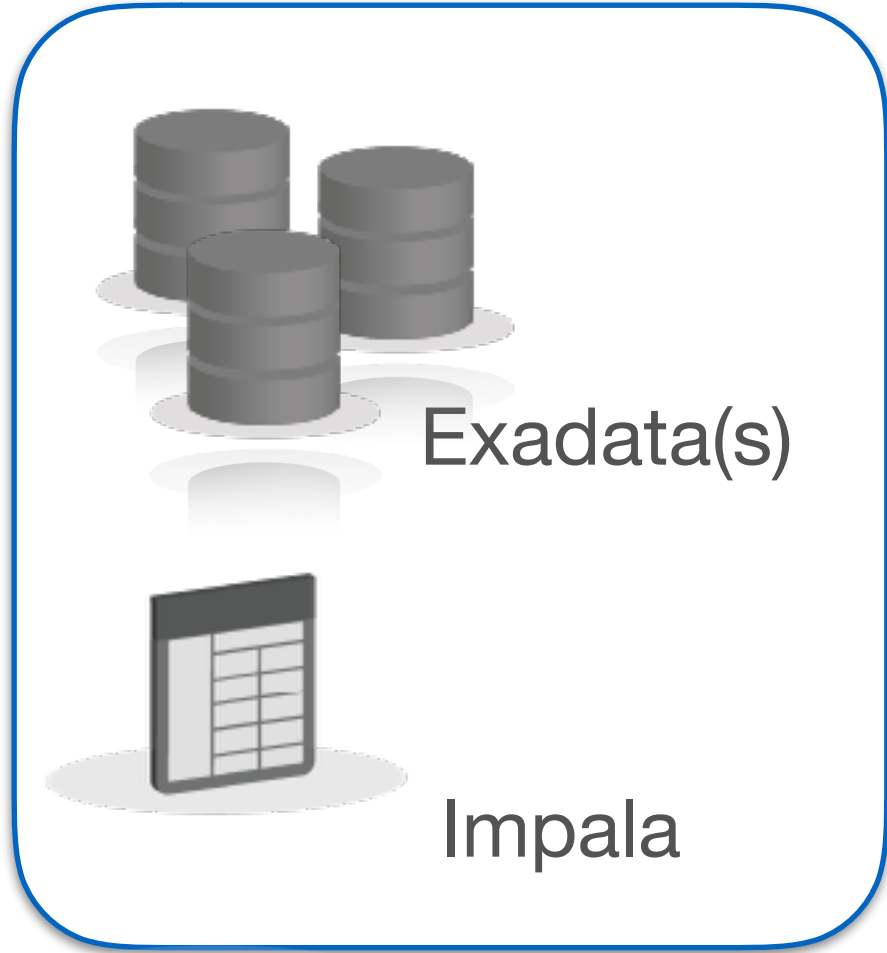
- Redirect Users to 12c Environment



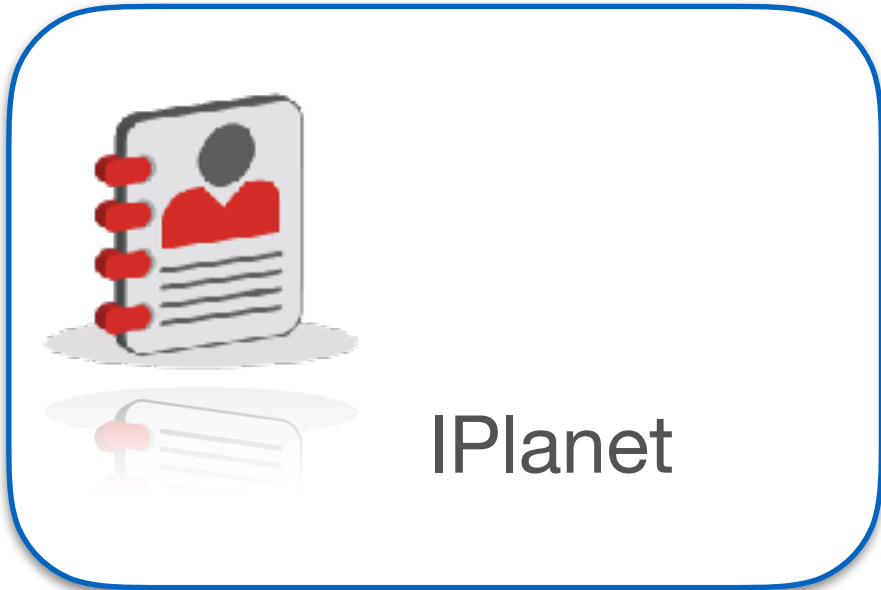
Pre Upgrade Configuration at LGI

Pre Upgrade Configuration

Data Sources



LDAP



DEV



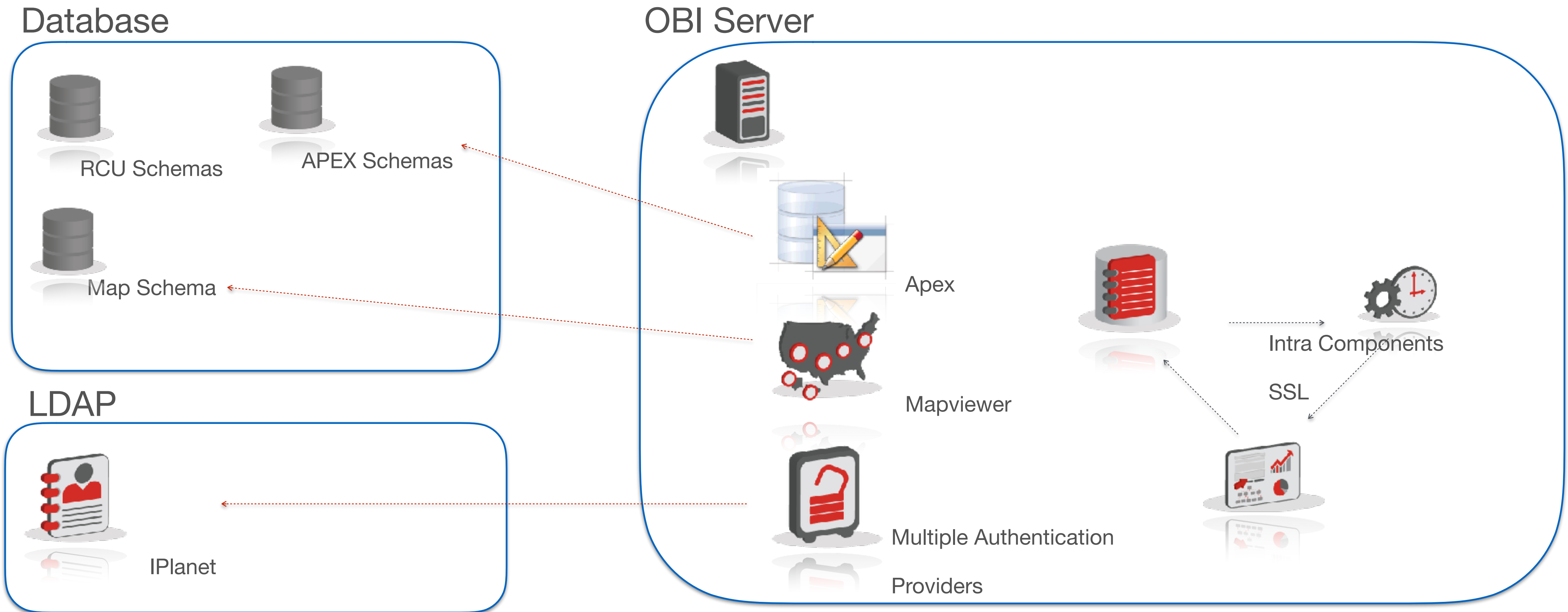
UAT



PROD



Single Server View





Migration Plan at LGI

Migration Details at LGI

- Same box installation

- ▶ 12c Installed where 11g is running

- No Space constraints
 - OS Compatible

- ▶ 12c Automated Testing done during out of business hours

- BVT can run a # of parallel threads

- ▶ Go Live -> Switch 12c Managed Server ports to the default used in 11g

- Bugs fixed in DEV promoted to UAT and Production

- ▶ Archive and Unarchive

- Same Date or Week Environments Go Live

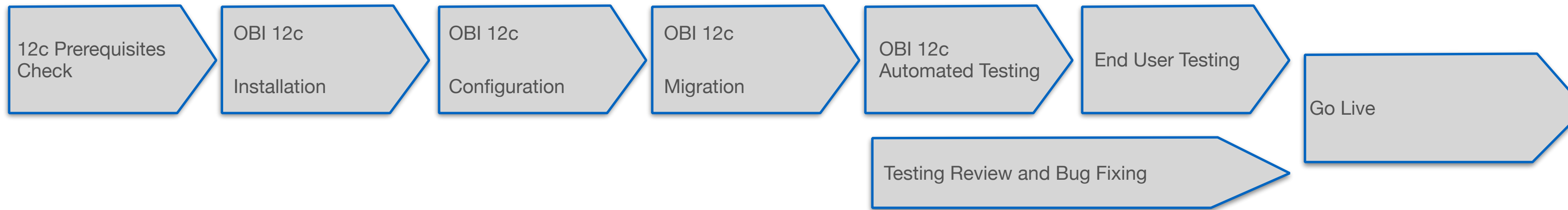
But....



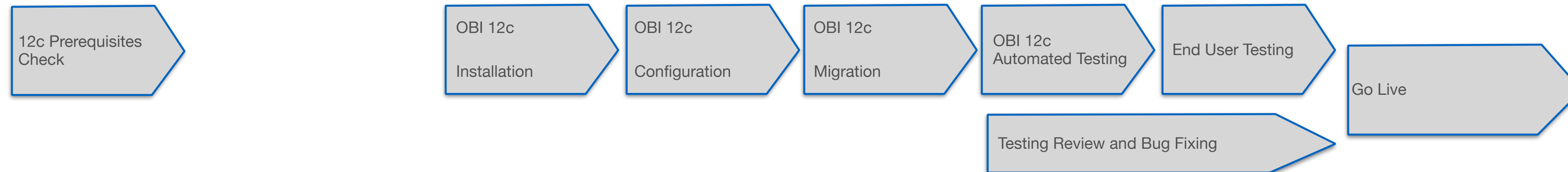
- Exalytics Image on OEL5
 - ▶ Upgrade Plan over Weekend
 - Backup old OEL5 env
 - Installed OEL6 Exalytics Image
 - Reconfigured OBI 11.1.1.9
 - ▶ Backup Plan
 - Use UAT as Production
 - ▶ Apache server redirecting traffic

Migration Steps

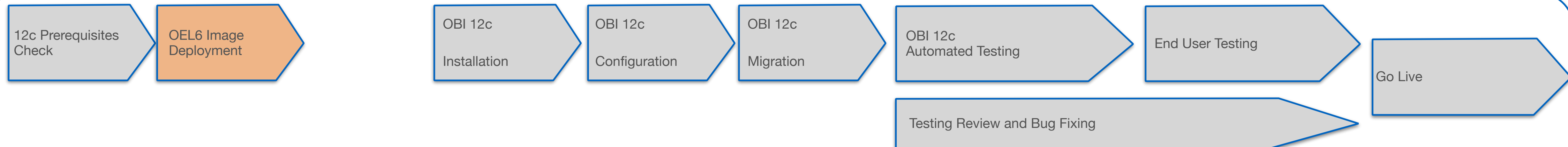
DEV



UAT



PROD



Migration Key Points

- Prerequisite analysis must be done Upfront for all environments
- DEV Configuration is a First Milestone for
 - ▶ Security Integration
 - ▶ SSL
 - ▶ Single Component Configuration
- 11g Bundle Export and Import in 12c can be performed multiple times
 - ▶ Checklist of all errors and solution can be created and migration completely tested
- BVT
 - ▶ Thresholds can be fine-tuned in DEV and UAT
 - ▶ Can be run for a single Catalog folder
 - ▶ List of Relevant Dashboard

Migration Key Points

- User Testing is done in DEV, UAT and PROD
- Not all the features can be Tested Automatically
 - ▶ DEV User Testing
 - Aimed at Power users, Global testing of the environment
 - ▶ UAT User Testing
 - Dashboard and Analysis Creators from the Affiliates use UAT as development environment.
 - Catalog Artefacts (Dashboards) are created directly in UAT
 - ▶ PROD User Testing
 - Analyst work directly in Production, mostly creating analysis on the fly

After Migration Initiatives

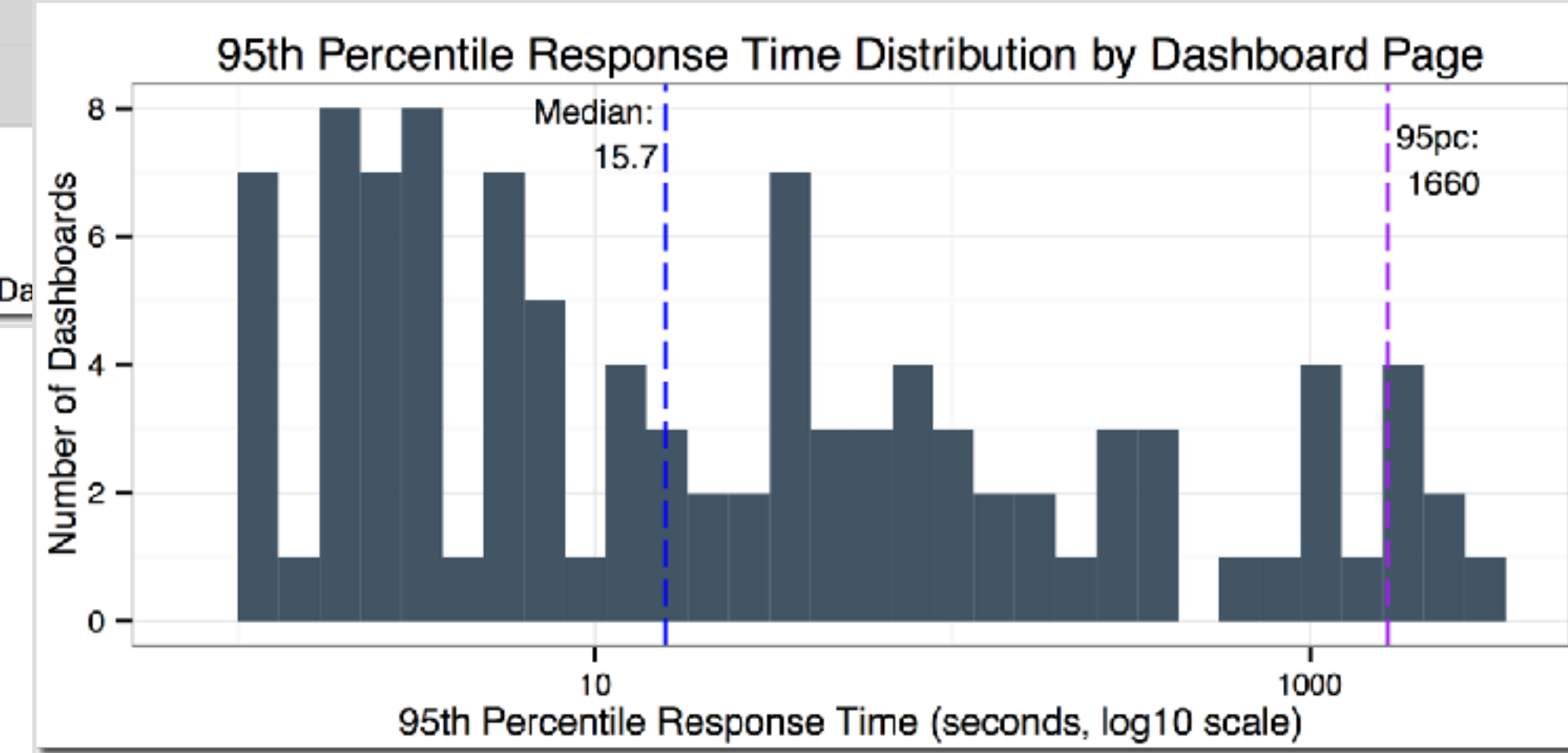
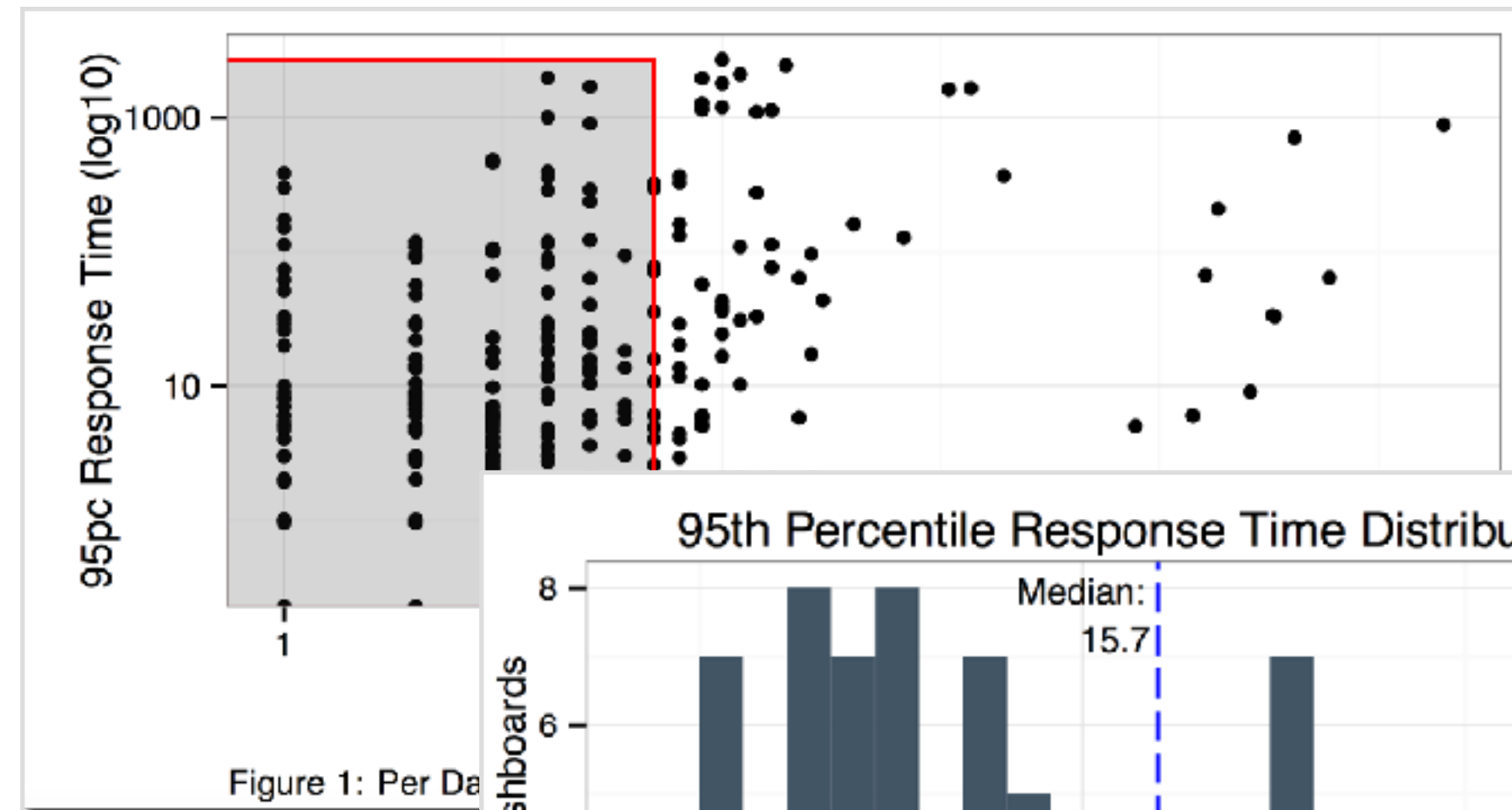
- Performance Analytics

- ▶ System evaluation
- ▶ Diagnostic Toolkit
- ▶ Custom Dashboard
- ▶ Ongoing support

- Commentary - Chit Chat

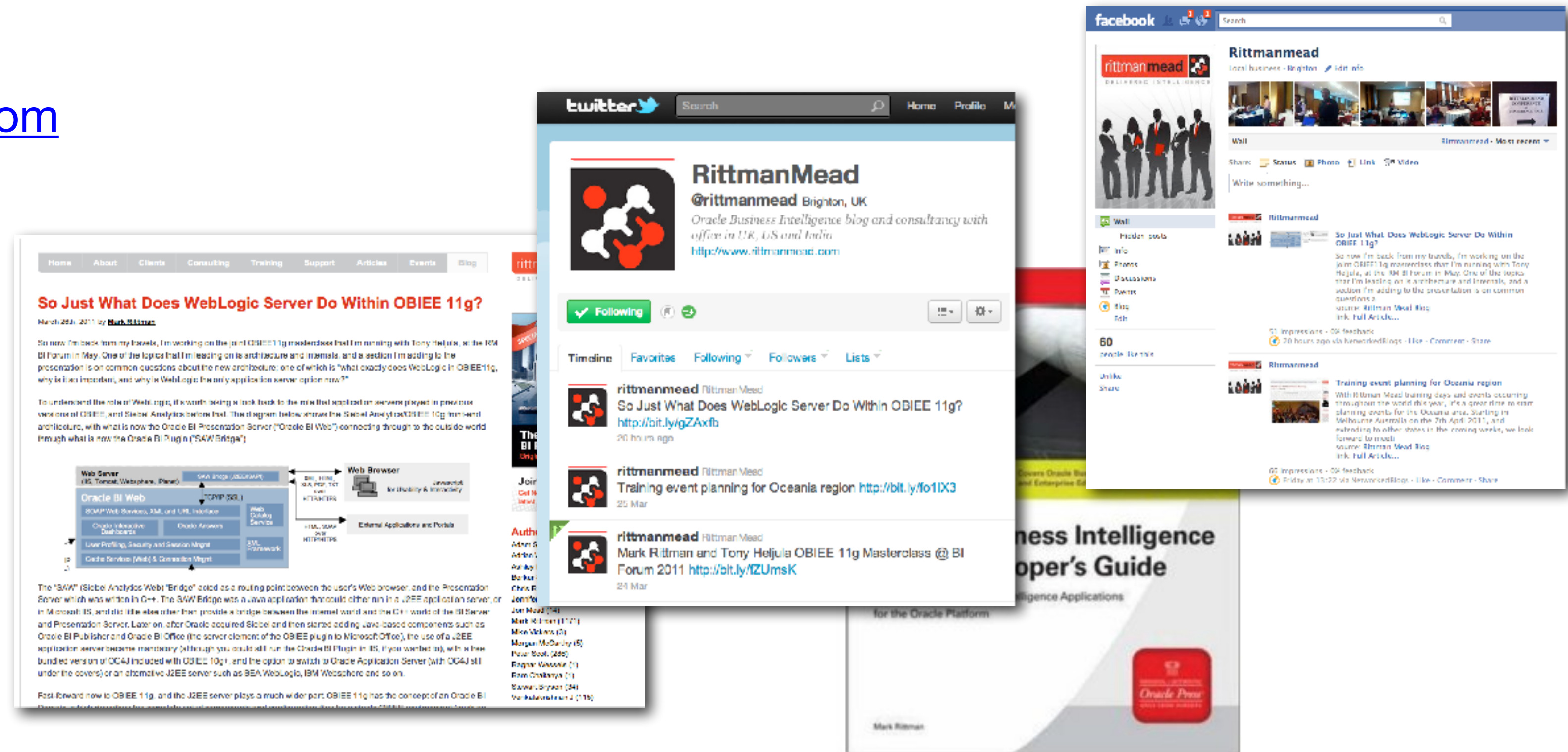
- ▶ Conversation Capabilities into Dashboards


- 12c Training



Thank you for Attending

- Thank you for attending this presentation, and more information can be found at <http://www.rittmanmead.com>
- Contact us at info@rittmanmead.com
- Follow-us on Twitter (@rittmanmead) or Facebook (facebook.com/rittmanmead)
- Email: francesco.tisiot@rittmanmead.com
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