

# Designing User Experience Concepts in Multi-Stream Configuration Management



## InterConnect 2015

The Premier Cloud & Mobile Conference

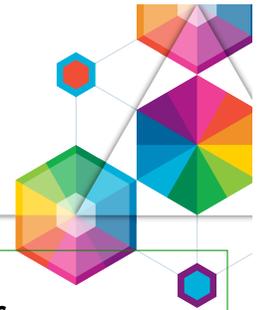
February 22 – 26

MGM Grand & Mandalay Bay | Las Vegas, Nevada

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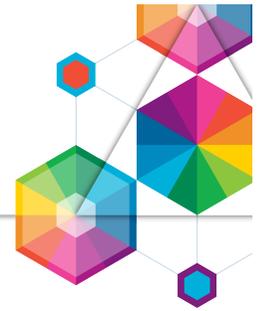
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# Agenda for this lab

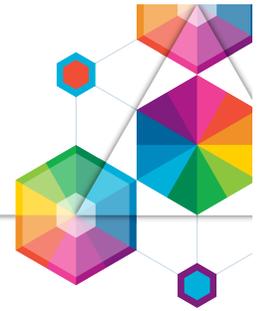
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- Introduction to this Design Lab (10 min)
- Configuration Management concepts (10 min)
- Hands-on Lab (2 h 30 min)
  - Part 1 - Exploring Components
  - Part 2 - Exploring Streams
  - Part 3 - Exploring Global Configurations
  - Part 4 - Working in a Configuration Context
  - Part 5 - Exploring Baselines
  - (Optional - Advanced Configuration Management)
- Summary and Conclusions (10 min)

## About this Lab

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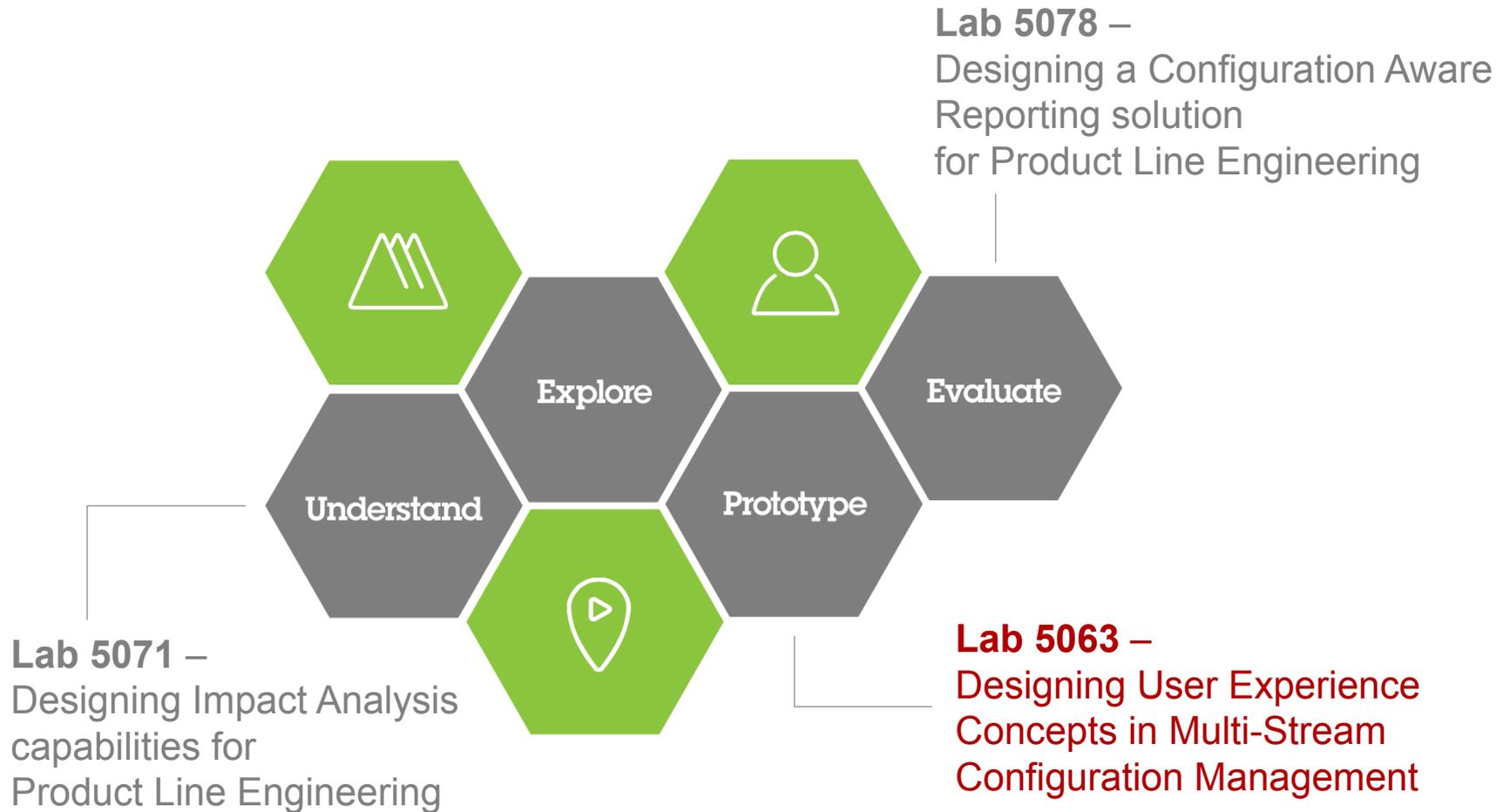
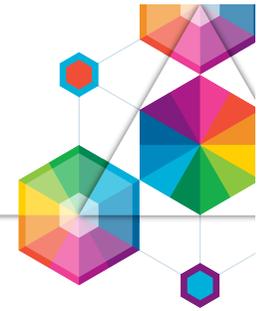
This is a Lab based on **IBM Design Thinking**

We will explore concepts and tools for  
**Multi-Stream Configuration Management**

In this lab we ask you to help us  
**validate the design of the user experience**

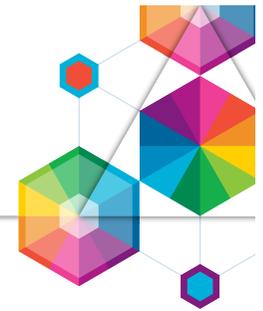
You will be using the **CLM 6.0 M7 Beta**  
for the hands-on exercises in this lab

# IBM Design Thinking



# Multi-stream Configuration Management

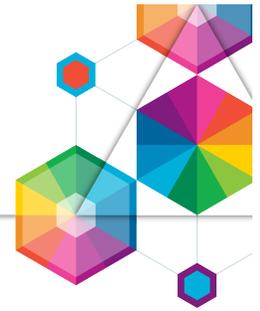
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- With minimal impact to current usage, team members can select a configuration related to their plan and be confident that they are using the right artifacts and links.
- Configuration Leads can define configurations of a product under development consisting of requirements, tests, designs and implementation.
- Teams work in a scalable environment with 1000s of configurations consisting of artifacts managed in multiple tools and links within and across those tools.

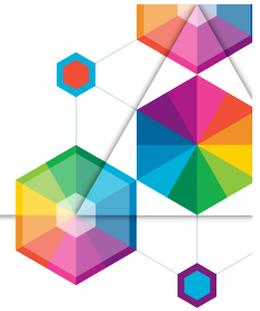
# Configuration Management Concepts

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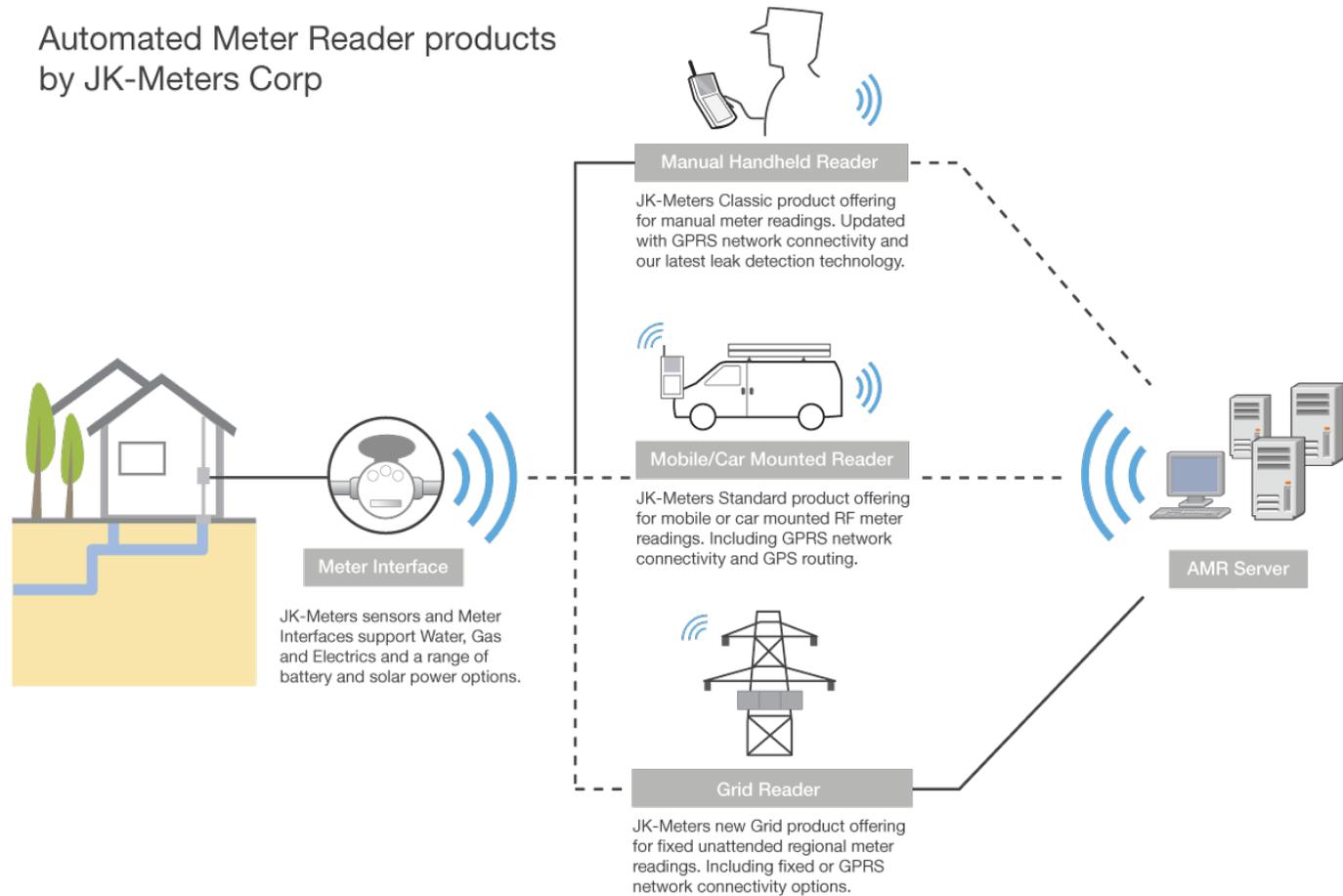


- **Component** – A unit of organization consisting of a reusable set of artifacts such as requirements, tests, designs and source code
- **Configuration** – A set of specific artifacts versions of a component
- **Stream** – A modifiable (mutable) configuration of a component
- **Baseline** – An un-editable (immutable) configuration of a component
  
- **Global Configuration** – A set of configurations
- **Contribution** – A configuration within the set of configurations making up a global configuration
  
- You will also use a **configuration context** to work with artifacts and links

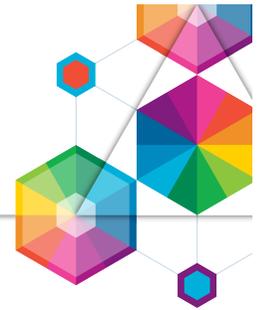
# Automated Meter Reader



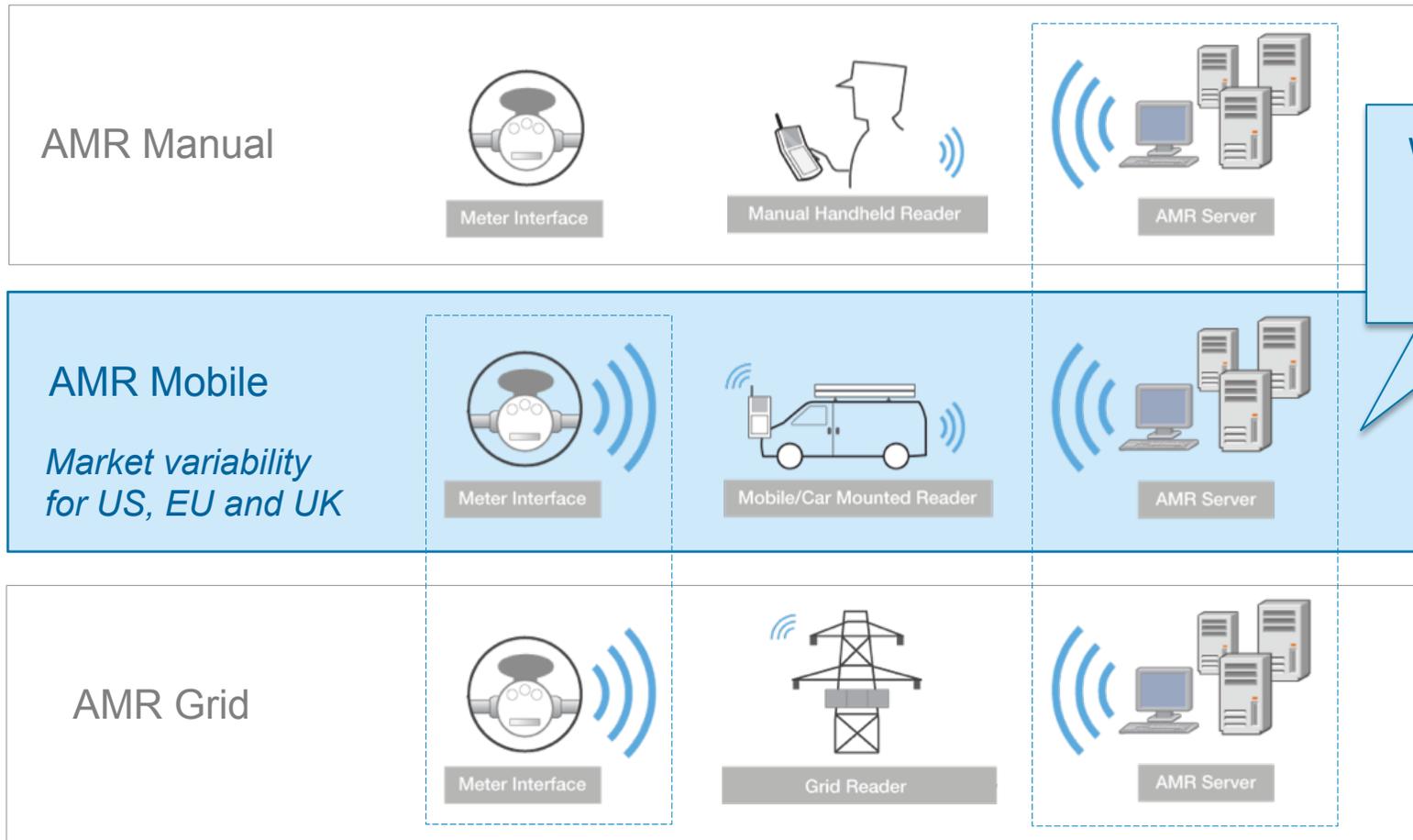
## Automated Meter Reader products by JK-Meters Corp



# Automated Meter Reader



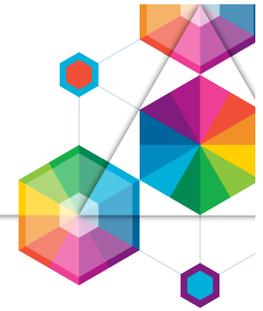
## AMR product line variability



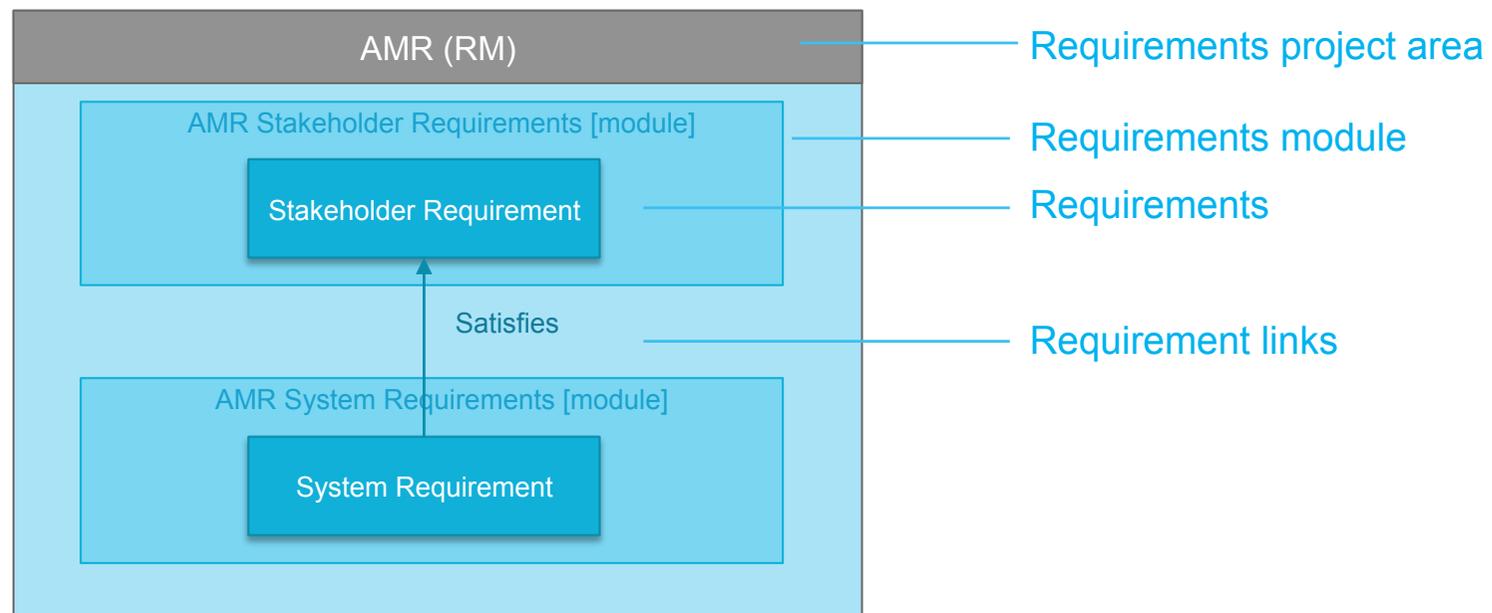
We will use the AMR Mobile product in this lab

Reuse of components

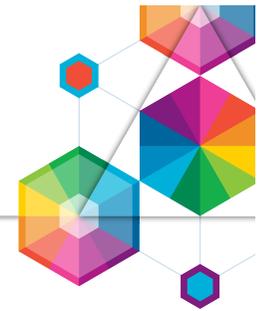
# Configuration Management Concepts



**Component** – A unit of organization consisting of a reusable set of artifacts and links

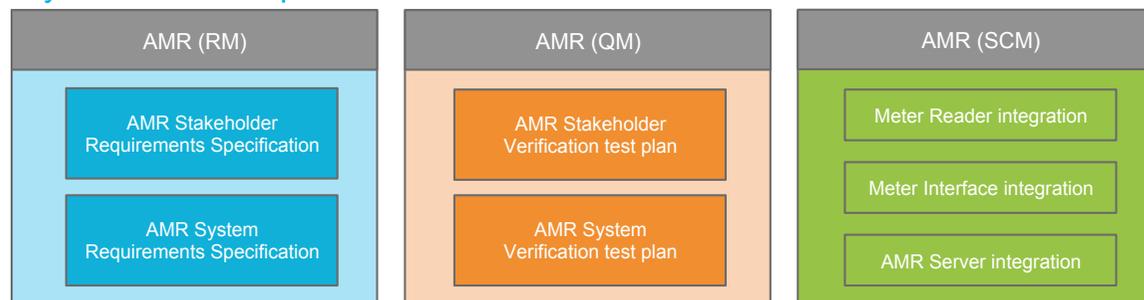


# Configuration Management Concepts

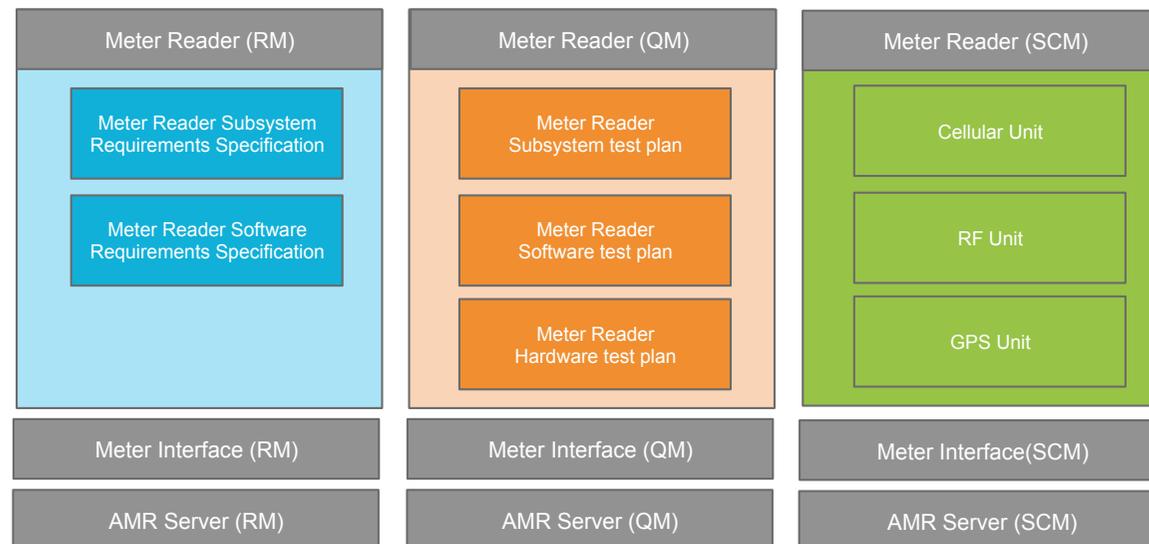


**Component** – A unit of organization consisting of a reusable set of artifacts such as requirements, tests, designs and source code

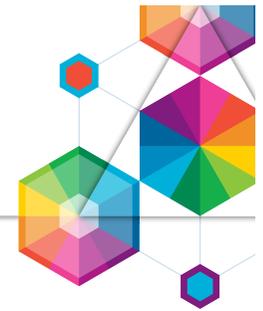
## System level components



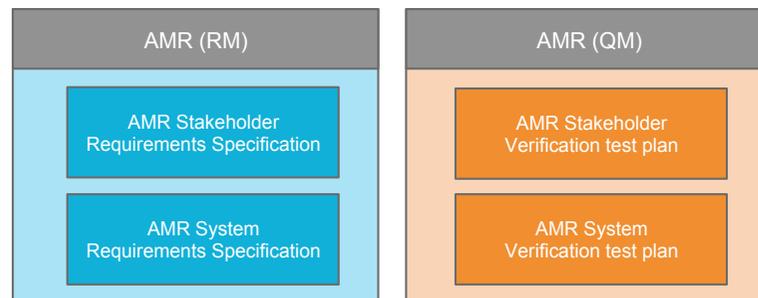
## Subsystem level components



# Part 1 - Exploring Components

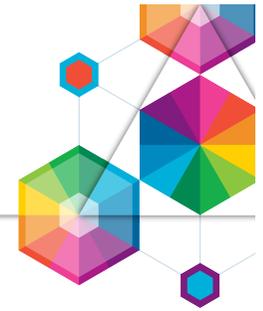


- In this part of the lab you will explore the system level **AMR (RM)** requirements and **AMR (QM)** test components in the AMR product line
- You will use **Rational DOORS NG** and **Rational Test Management** applications to explore domain artifacts



- The objective of this part is to understand how artifacts are grouped into domain project areas, requirements modules and test plans. You will also familiarize yourself with the RDNG and RQM tools
- **Time: 20 minutes**

# Material Provided



**InterConnect2015**  
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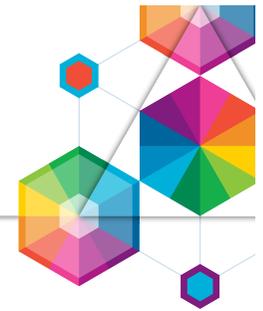
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**Lab DSE-5063**

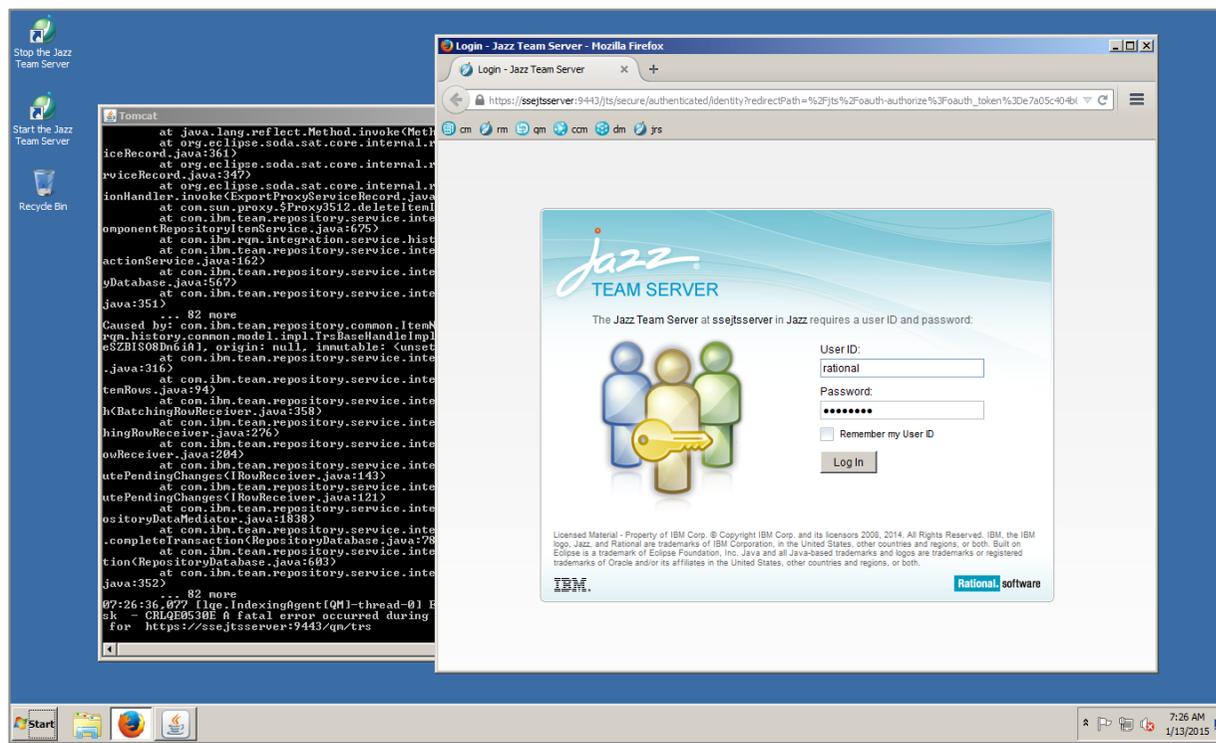
**Designing User Experience Concepts in  
Multi-Stream Configuration Management**

February 2015

# Lab Environment

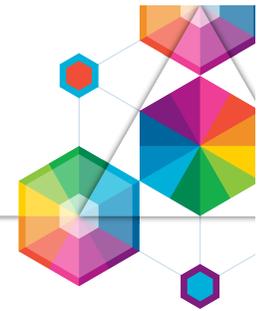


- You will be using a VMWare image with the tools installed locally  
All the tools are web based and accessed using a web browser
- The image and services on your machine has been started by the Lab staff  
Follow the steps in the Lab Handbook to log in  
Windows user: Administrator PW: Rati0nal  
Jazz server user: rational PW: rational



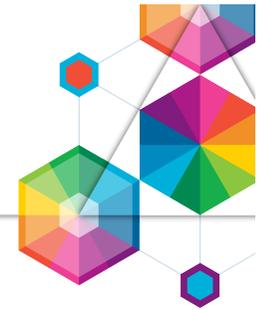
# Part 1 - Exploring Components

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- You have now explored requirements and test components  
Let's discuss the Concepts and User Experience
- Were you familiar with the concept of **Components** before this lab?
- Did you find it easy to understand the concept of Components in this lab?
- Did you find it easy to use Components in the tools when
  - Exploring requirements
  - Exploring tests
- **How can we improve the Concepts and User Experience for Components?**

# Part 2 - Exploring Streams and Baselines



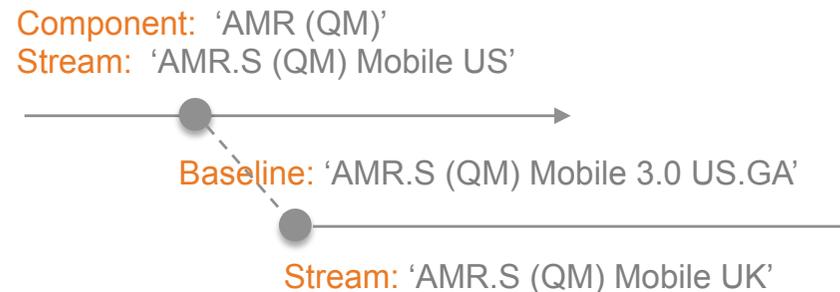
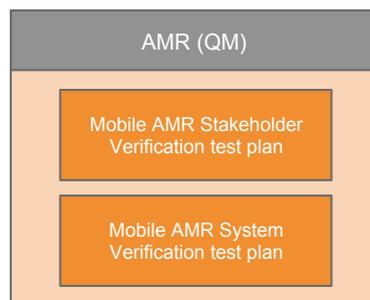
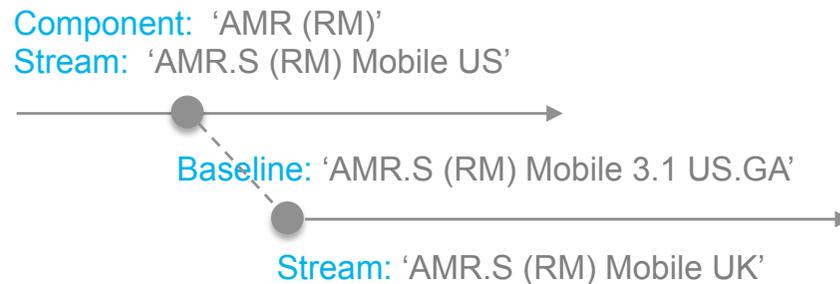
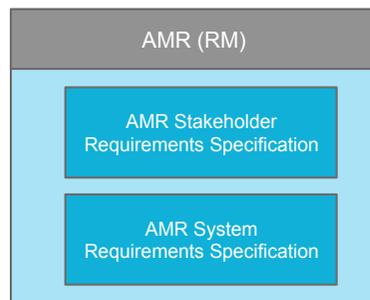
## More on Configuration Management Concepts...

**Component** – A unit of organization consisting of a reusable set of artifacts such as requirements, tests, designs and source code

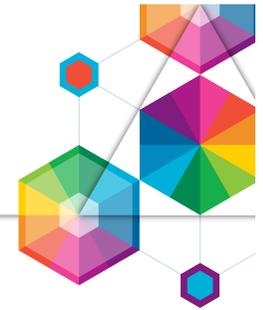
**Configuration** – A set of specific artifacts versions of a component

**Stream** – A modifiable (mutable) configuration of a component

**Baseline** – An un-editable (immutable) configuration of a component



# Part 2 - Exploring Streams and Baselines

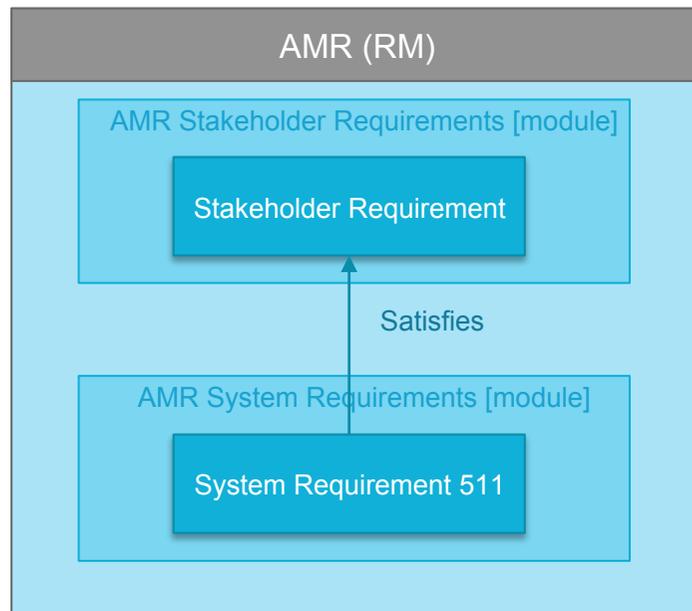


More on Configuration Management Concepts...

**Configuration** – A set of specific artifacts versions of a component

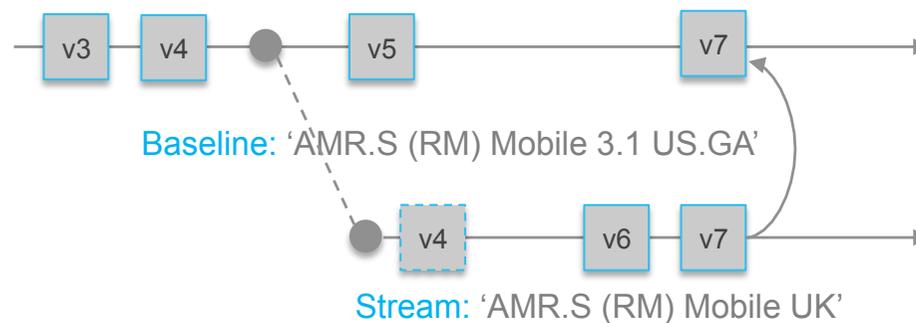
**Stream** – A modifiable (mutable) configuration of a component

**Baseline** – An un-editable (immutable) configuration of a component

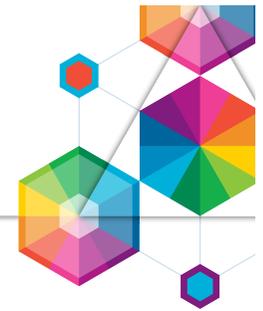


Component: 'AMR (RM)'  
Requirement: System requirement 511

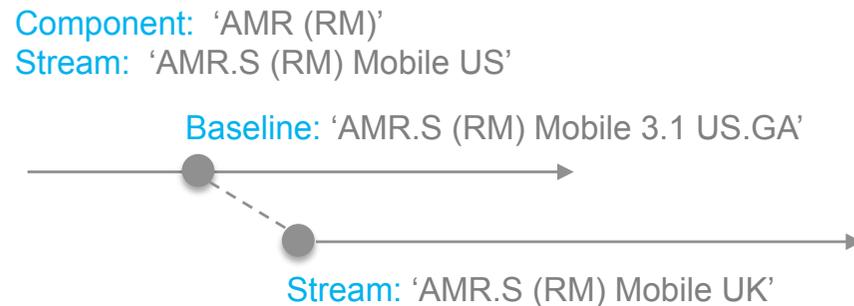
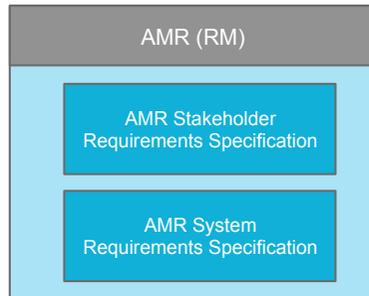
Stream: 'AMR.S (RM) Mobile US'



# Part 2 - Exploring Streams and Baselines



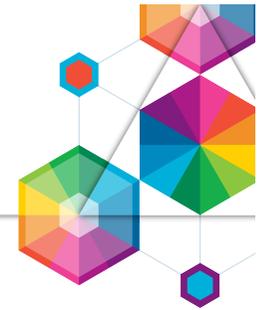
- In this part of the lab you will explore configurations of the system level **AMR (RM)** and **AMR (QM)** components
- You will create new streams for the Mobile UK variant by branching Mobile US configurations
- You will continue to use the **Rational DOORS NG** and **Rational Test Management** applications to explore streams and baselines



- The objective of this part is to understand component configurations and perform the steps to create streams
- **Time: 20 minutes**

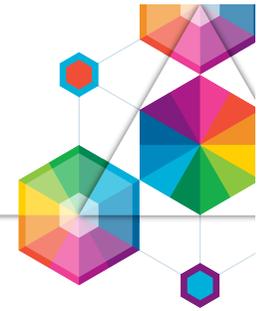
## Part 2 - Exploring Streams and Baselines

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- You have now explored requirements and test components  
Lets discuss the Concepts and User Experience
- Were you familiar with the concept of **Streams and Baselines** before this lab?
- Did you find it easy to understand the concept of Streams and Baselines in this lab?
- Did you find it easy to use Streams and Baselines in the tools when
  - Creating a requirement stream
  - Creating a test stream
- **How can we improve the Concept and User Experience for Streams and Baselines ?**

# Part 3 - Exploring Configurations



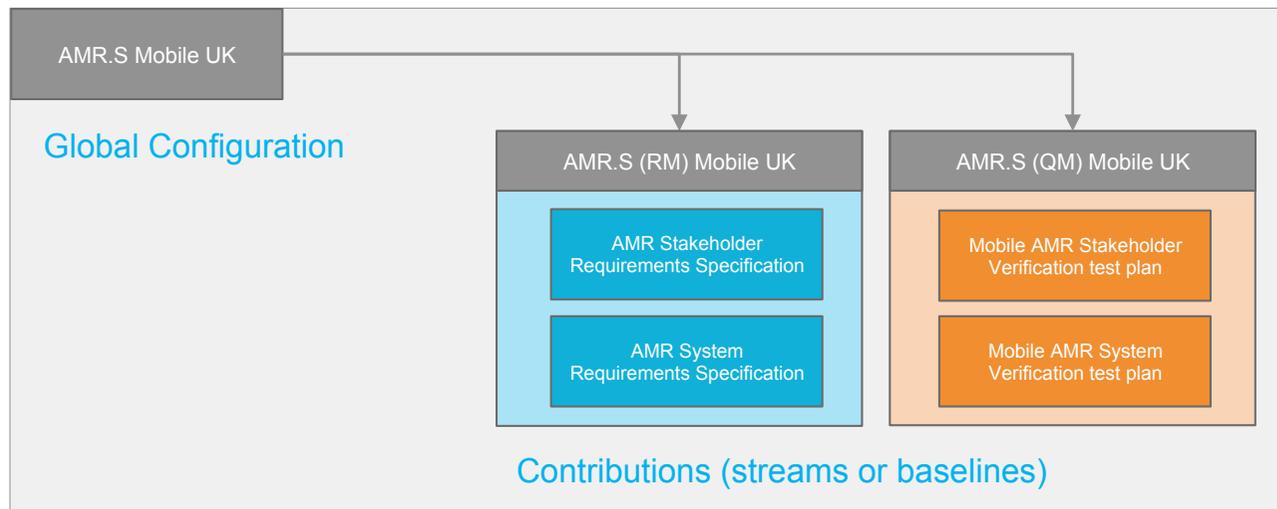
## More on Configuration Management Concepts...

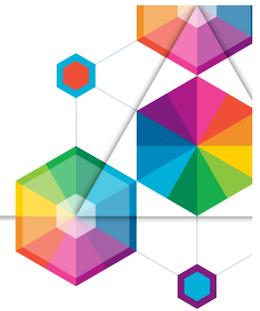
**Component** – A unit of organization consisting of a reusable set of artifacts such as requirements, tests, designs and source code

**Configuration** – A set of specific artifacts versions of a component

**Global Configuration** – A set of configurations

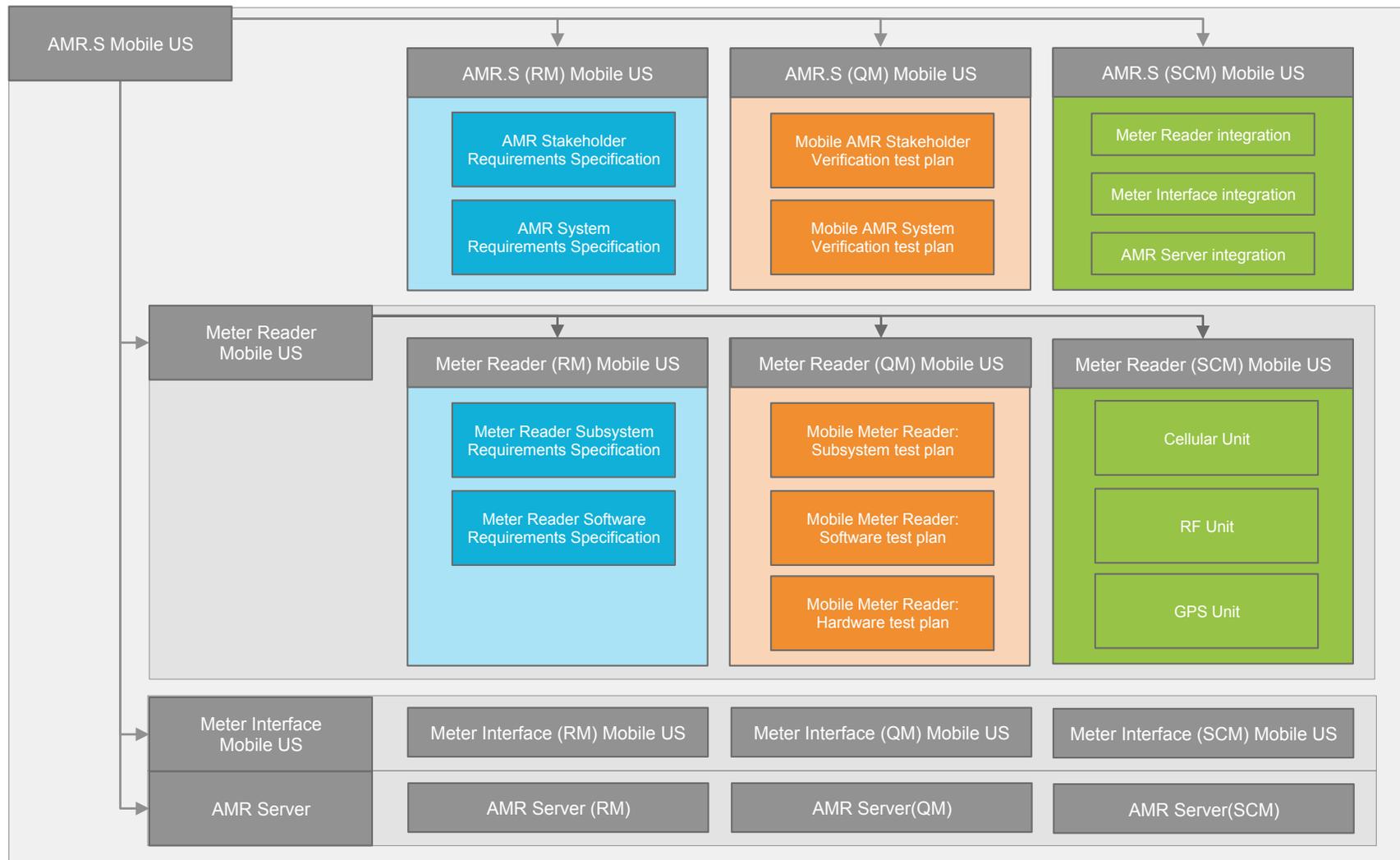
**Contribution** – A configuration within a set making up a global configuration



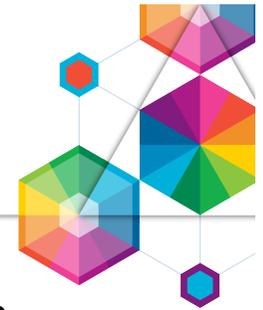


# Part 3 - Exploring Configurations

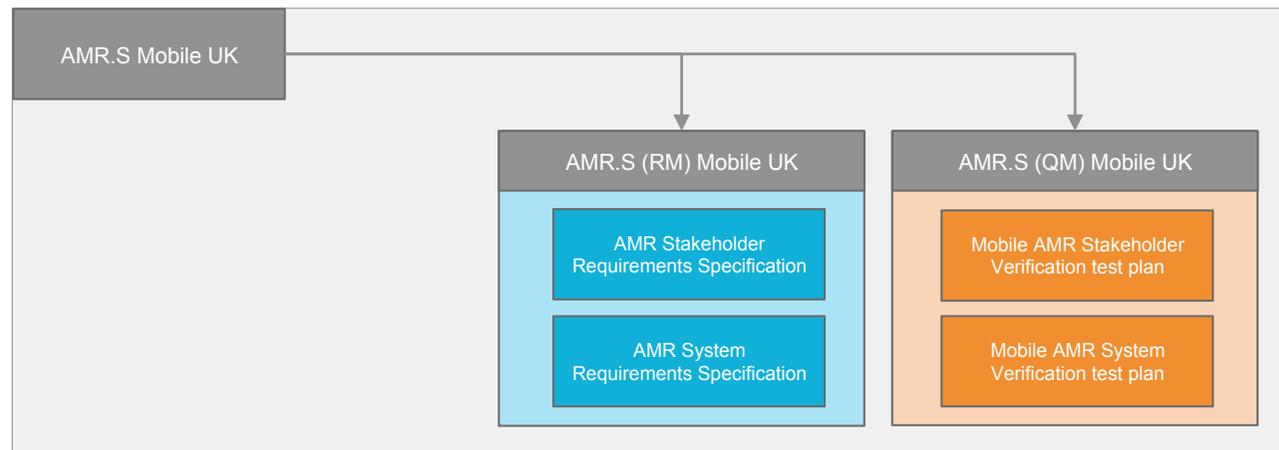
Global Configurations can be hierarchical



# Part 3 - Exploring Configurations



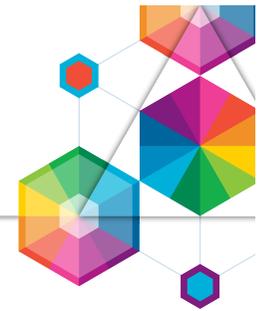
- In this part of the lab you will explore global configurations and contributions
- You will create new global configuration for the Mobile UK variant and add RM and QM contributions to the new global configuration
- You will use the **Rational Configuration Management** applications to explore global configurations and contributions



- The objective of this part is to understand how to create new global configurations and add / browse contributions
- **Time: 20 minutes**

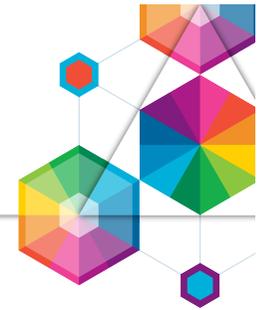
## Part 3 - Exploring Configurations

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- You have now explored requirements and test components  
Lets discuss the Concepts and User Experience
- Were you familiar with the concept of **Global Configurations** before this lab?
- Did you find it easy to understand the concept of Global Configurations in this lab?
- Did you find it easy to use Global Configurations in the tools when
  - Creating a new global configuration
  - Adding a configuration contribution
  - Exploring a hierarchical configuration
- **How can we improve the Concept and User Experience for Global Configurations ?**

# Part 4 - Working in a Configuration Context



With minimal impact to current usage, team members can select a configuration related to their plan and be confident that they are using the right artifacts and links

Susan  
Systems Engineer



Switch and  
Work in  
context

## Switch development context

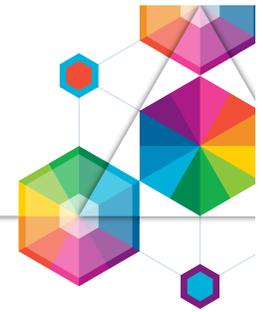
By selecting a configuration, related to a plan, a team members can get a workspace with consistent versions of artifact and their links

## Parallel work and control changes

Team members can work in a variant or private stream, then control how changes are shared

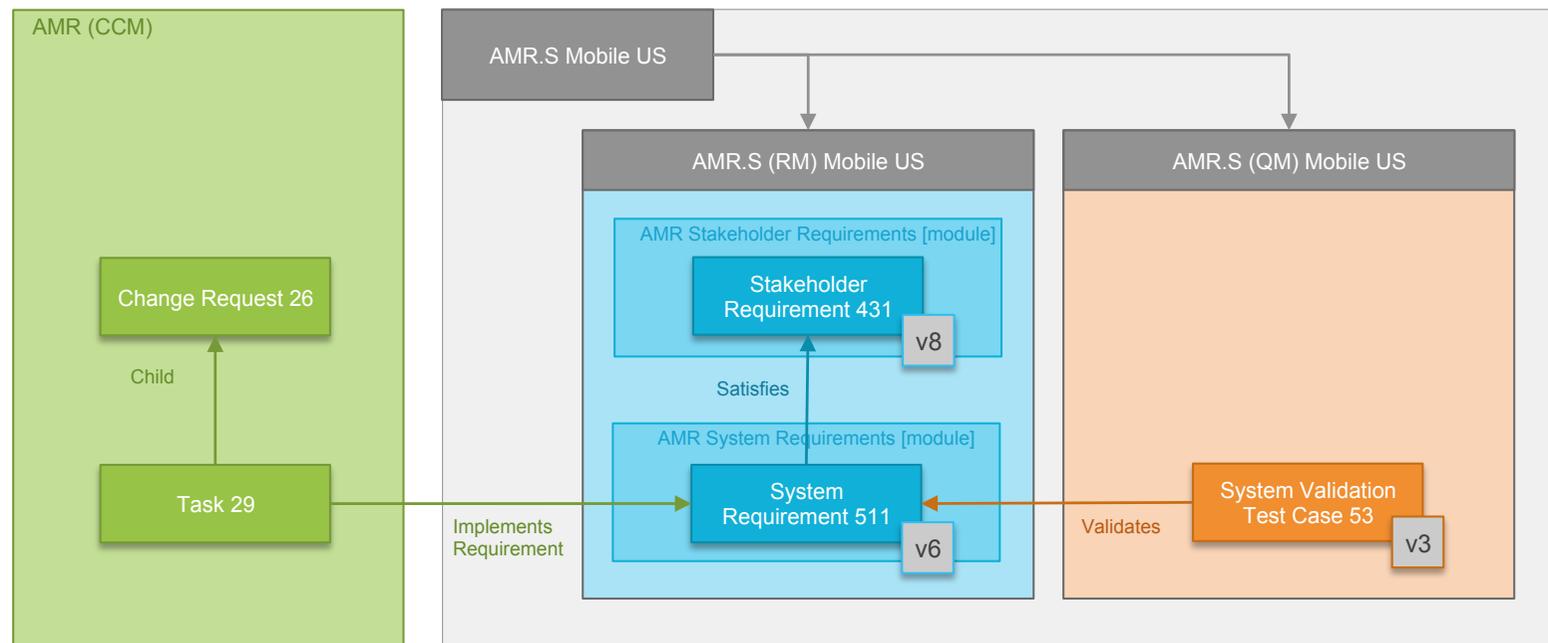
## Report in the right context

Team members can view dashboards, run queries and generate reports and other documents in the selected configuration context



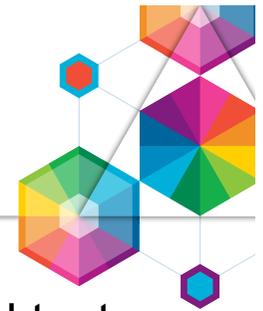
## Part 4 - Working in a Configuration Context

- In a configuration managed development environment, artifacts are **versioned** (requirement/tests) or **non-versioned** (work items)
- Versioned artifacts store Concept Links that do not contain version information
- The versions of the linked artifacts are resolved by the configuration context



## Part 4 - Working in a Configuration Context

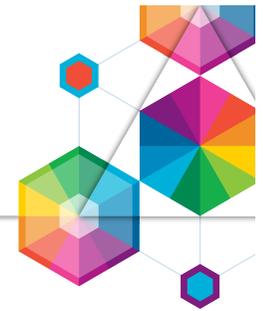
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- In this part of the lab you will make unique changes to requirements and test cases in the Mobile UK global configuration based on a Change Request
- You will use link in the change request to browse to the impacted requirement. You will also use traceability links from the requirement to the validating test case.
- You will use the **Rational Team Concert**, **Rational DOORS NG** and **Rational Test Management** to view artifacts and create new artifact versions
- The objective of this part is to understand how to work with artifacts and links in the context of a selected global configuration
- **Time: 20 minutes**

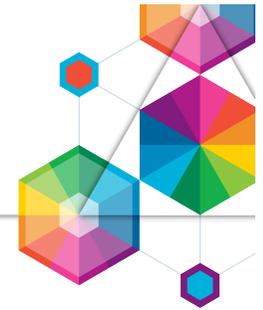
# Part 4 - Working in a Configuration Context

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- You have now explored requirements and test components  
Lets discuss the Concepts and User Experience
- Were you familiar with the concept of [working in a configuration context](#) before this lab?
- Did you find it easy to understand the concept of working in a configuration context in this lab?
- Did you find it easy to working in a configuration context in the tools when
  - Browsing requirements links from a work item
  - Selecting a configuration context
  - Editing requirements artifacts in a configuration context
  - Navigating links in a configuration context
- **How can we improve the Concept and User Experience for working in a configuration context ?**

# Part 5 - Exploring Baselines



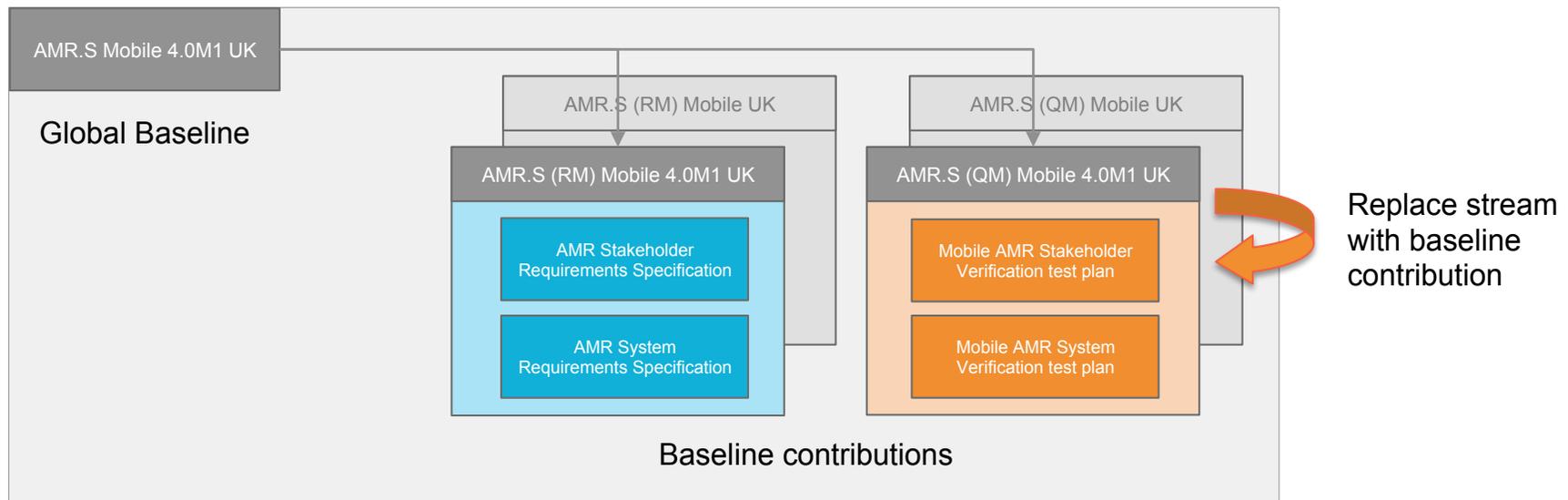
**Global Configuration** – A set of configurations

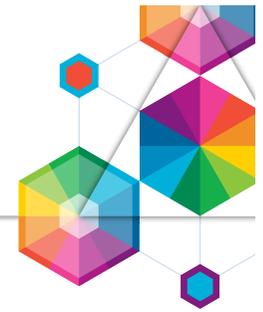
**Contribution** – A configuration within a set making up a global configuration

**Stream** – A modifiable (mutable) configuration

**Baseline** – An un-editable (immutable) configuration

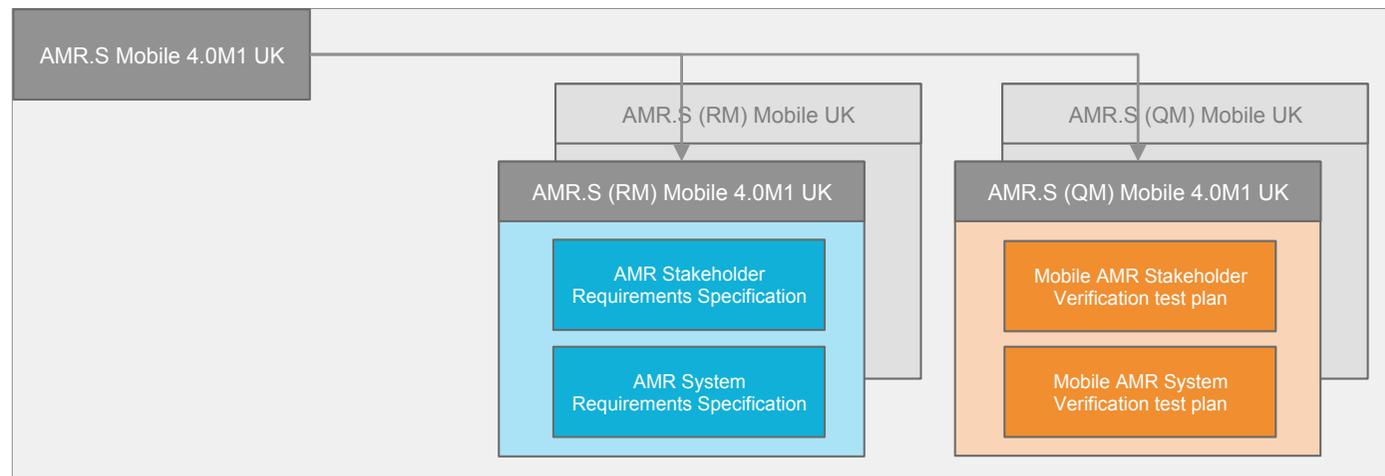
A Global Baseline is an immutable copy of a global stream with ONLY baseline contributions





## Part 5 - Exploring Baselines

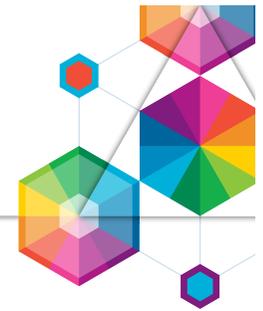
- In this part of the lab you will explore baselines
- You will create baselines of your requirements and test case changes. You will then create a global baseline
- You will use the **Rational DOORS NG**, **Rational Test Management** and **Rational Configuration Management** applications to explore the baselines



- The objective of this part is to understand how to create new baselines
- **Time: 20 minutes**

## Part 5 - Exploring Baselines

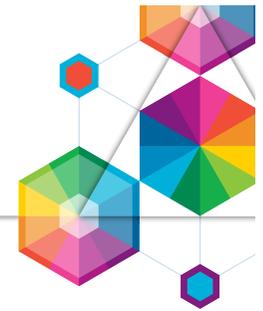
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- You have now explored requirements and test components  
Lets discuss the Concepts and User Experience
- Were you familiar with the concept of **baselines** before this lab?
- Did you find it easy to understand the concept of baselines in this lab?
- Did you find it easy to use baselines in the tools when
  - Creating a requirements baseline
  - Creating a test baseline
  - Creating a global configuration copy
  - Replacing stream contributions
  - Converting into a Global Baseline
- **How can we improve the Concept and User Experience of baselines ?**

# Summary and Conclusions

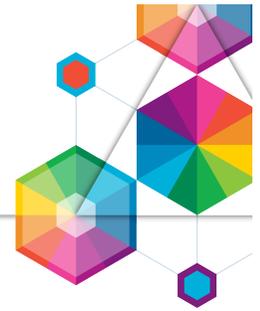
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- We have now completed the Configuration Management lab and we appreciate the feedback you have provided to our design topics
- If you want to deepen your understanding of the Configuration Management capabilities you can perform two additional parts in the Lab Handbook appendix
  - *Using hierarchical global configurations*
  - *Using change sets*
- The product capabilities you have explored today may change before released in a future product

# Summary and Conclusions

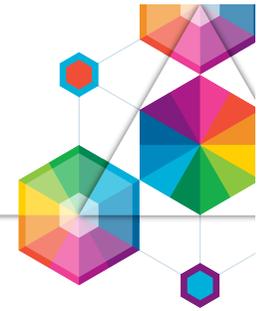
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- You have now explored explore concepts and tools for Multi-Stream Configuration Management. Lets discuss your conclusions
- Overall, did you find it easy to understand the concepts of Multi-Stream Configuration Management in this lab?
- Did you find it easy to use the tools with Multi-Stream Configuration Management in this lab?
- How can we improve the Concepts and User Experience?

# Learning more about Configuration Management

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- New introductory videos on Continuous Engineering on YouTube  
<https://www.youtube.com/watch?v=G8aurFdtpgw&list=PLlhg84-xzjfy8Tlu30MSkZFSsu-PH7H8t>
- Configuration Management on Jazz.net
  - Manage configurations in and across the CLM tools  
<https://jazz.net/blog/index.php/2014/11/05/manage-configurations-in-and-across-the-clm-tools-in-the-5x-m6-beta/>
  - Configuration Management Overview  
[https://jazz.net/wiki/pub/Main/CLMBetaOverview5x/CLM\\_5x\\_M6\\_CM\\_ovrww.pdf](https://jazz.net/wiki/pub/Main/CLMBetaOverview5x/CLM_5x_M6_CM_ovrww.pdf)
  - Accessing the Collaborative Lifecycle Management 6.0 beta  
<https://jazz.net/wiki/bin/view/Main/CLMBetaOverview5x>

# Thank You

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