

IBM® Rational® Collaborative Lifecycle Management 2012 Administration Workshop

Produced by the Jazz Jumpstart Team

Version 1.1

Session Objectives

This workshop is a hands-on working session that will expose Jazz CLM solution administrators to many of the administrative and advanced tasks that they might need to perform in support of the Jazz CLM environment.

The primary focus of this workshop is on the IT administrative aspects of a Jazz deployment, as opposed to a more project administrative focus. So we will focus on the topology of the solution, where pieces of the infrastructure are located, and how to best configure these pieces.

The session is meant as a learning exercise, and can be done at the student's own pace.

The main points that you should remember at the end of this session are:

- There are no “perfect” Jazz deployments. Like most things, a Jazz deployment involves trade-offs between competing priorities
- There ARE some things that you should avoid when planning, deploying or maintaining a Jazz deployment

Session Roadmap

- **Overview**
- Lab 1 - Setup for the CLM 2011 Administration Workshop
- Lab 2 – Installation Scenarios (Departmental Topology)
- Lab 3 – Configuring a Reverse Proxy
- Lab 4 – Enterprise Topology
- Wrap Up

Overview – The Big Picture

There are a number of different things that you will do during this workshop. The main areas of focus during this workshop include hands-on examples of:

- Solution deployment
- Set up of web application servers
- Connection to LDAP resources
- Usage and configuration of database resources
- Set up and configuration of Jazz application servers
- Renaming of Jazz applications
- Clustering of Jazz applications

Overview – Getting Help

When you are looking at the administrative tasks in your own environment, you should be aware that you have help

- Use the Infocenter – it is the official owner’s manual for your CLM implementation
 - It’s at <http://publib.boulder.ibm.com/infocenter/clmhelp/v4r0m/index.jsp>
 - Infocenter versions will change with each release. Look at the “v4r0”. For the 3.0.1 release of CLM this part of the URL was “v3r0m1”.
- Use Jazz.net – the library has a wide array of videos and articles showing you how to configure and deploy your CLM solution
- Use the Jazz forums – post your questions on the forums, and search the forums for answers to your questions. You cannot be the only person in the world asking these questions, right?
- Check out the work items on Jazz.net. If something doesn’t work the way that you think it should, then enter a defect out on Jazz.net

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The Story

You are looking at evaluating the Jazz solution for your organization. Your company does not have enough hardware allocated to do a full scale Jazz implementation, and has decided to just have a couple of development teams “try it out”.

- You need to carefully choose a Public URI

- You may need to choose something that is NOT tied to the server name, and utilize a reverse proxy. More on that in the next lab(s)....

- All of the Jazz applications and databases need to reside on a single machine

- You know that this solution will not scale to a large number of users, but you are more concerned about functionality right now. Performance and maintenance are not a major concern at this point.

- You only need to support a small number of users

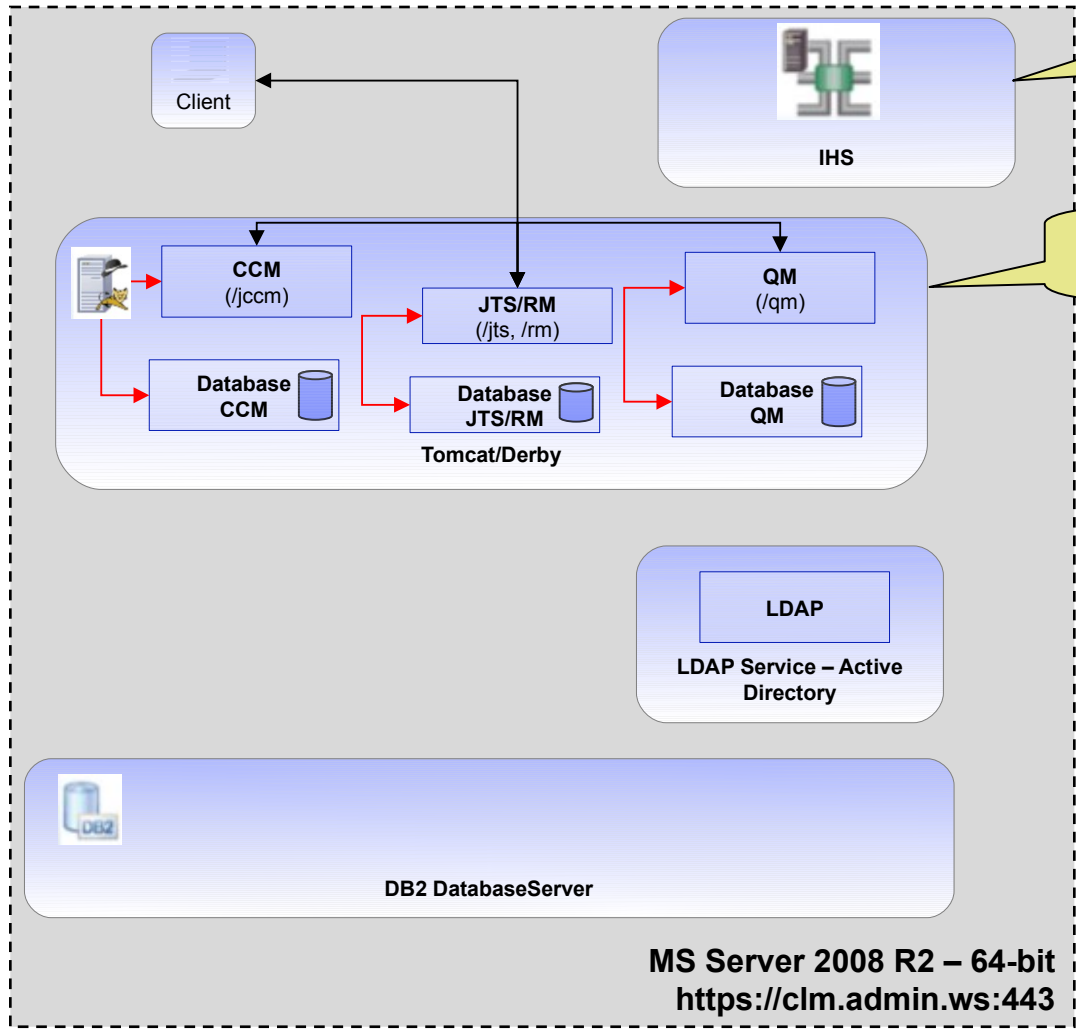
- You can use the evaluation license keys for the Jazz products, and you understand that the Derby database is not really meant for production use.

- Derby is very lightweight and will not support a large number of concurrent users.

- You need to get moving quickly

Your Initial Jazz Deployment

This is what your initial Jazz deployment will look like:



Note that while we install many of the software pieces that you will need, they are not currently configured as part of the Jazz solution

One logical installation of Tomcat and Derby

Single physical machine, which is a Vmware image

This is based on the Evaluation Topology

A Touch of Reality

You have seen initial Jazz deployment. This is the path that many of our customers follow, with a simple implementation that is geared towards an evaluation of the Jazz products.

- This solution will not last in production.
 - It does not have the ability to scale to a larger number of users.
 - It uses some technologies that may make your IT team nervous.
- You will install some software in this lab that you are not using
 - You will install and set up Active Directory as an LDAP provider, but it is not used at this time to provide authentication
 - You will install and set up WAS ND, but it is not yet configured to serve out the Jazz applications
 - You will install DB2 Express, but it is not yet configured for use as the database providing storage services for the Jazz applications
- Some of this software does not match what you currently use
 - For the purposes of this workshop, we chose technology that is common, popular, and relatively easy to find
 - You may not be using some of these technologies in your own deployment
 - Substituting your own technologies when performing this workshop in your own environment may make this easier for you

The Public URI

You have seen your initial Jazz deployment. One of the most important points that this workshop should illustrate is the following:

- The Public URI is forever
 - There are ways that you can change back end infrastructure like databases, networks, and servers. There are some techniques for doing this, like the use of a reverse proxy, that you **MUST** understand if you are going to be able to do this.
- You **MUST** understand how a reverse proxy works, and how this interacts with the Public URI and how that impacts how the artifacts are stored and linked to each other in a Jazz environment.

YOU CANNOT CHANGE THE PUBLIC URI

Using some of the techniques used in this workshop, you can have the ability to change the physical machine names of the Jazz application servers, change their port numbers, and even change the IP addresses of these machines. But you cannot change the Public URI.

This is the most critical point that this workshop should illustrate.



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There is NO BREAK!!

Go and DO THE LAB!!

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The Story

You are a person wise beyond your years, and have decided to purchase the Jazz products. Now you need to begin putting things into place to support REAL software development efforts.

- You need to have a strategy for how you will scale

- Having a strategy means having plans in place so you can communicate future needs for hardware, software and licenses should more users migrate to your Jazz solution

- At this point you are moving to a “Departmental Topology”

- Some of the more advanced scaling and infrastructure functionality and techniques are not needed at this time. Don’t over-engineer your solution.

- As you put this new solution in place, you will want to leave yourself in a situation where you can easily continue to scale

- You need to provide some real support

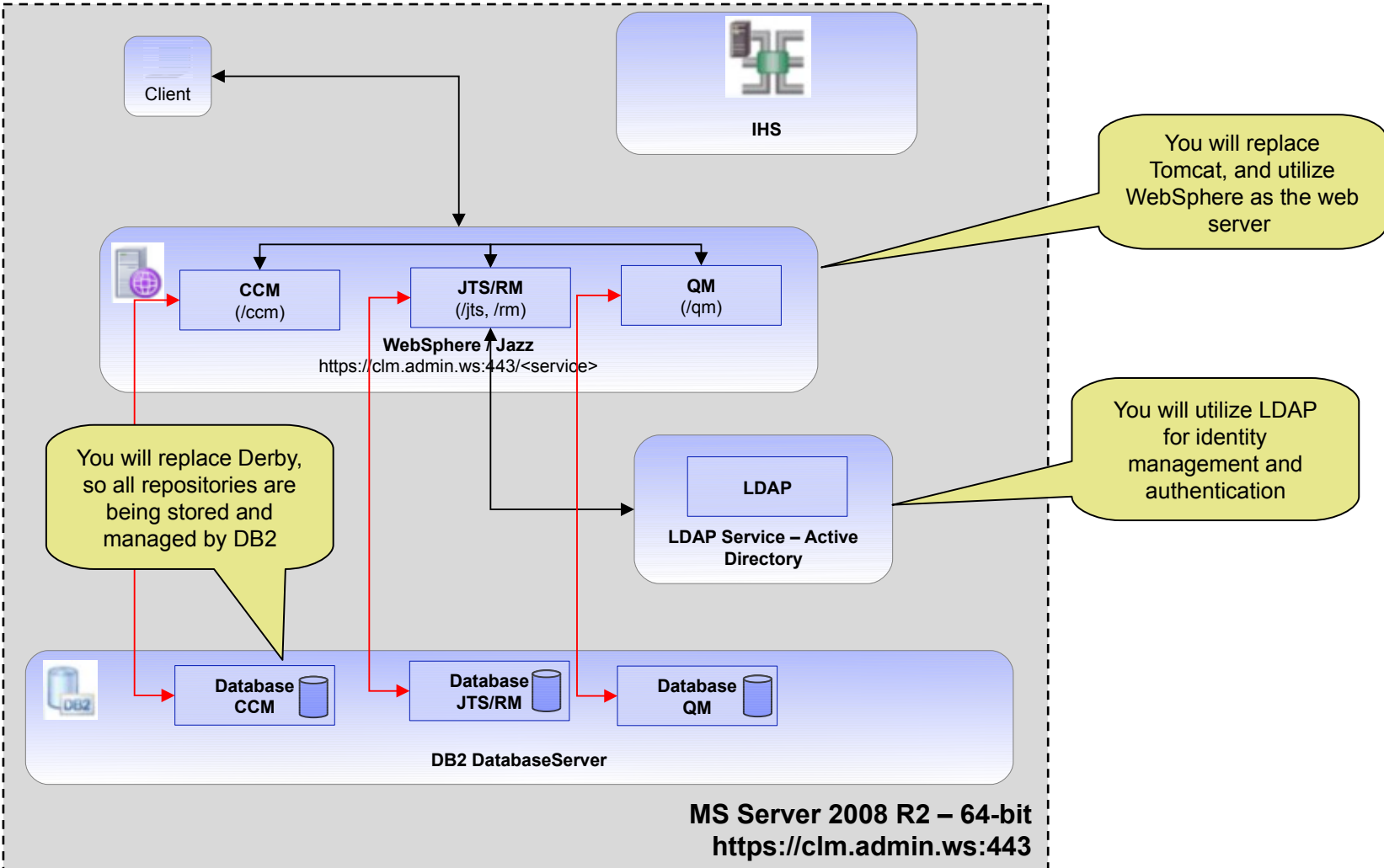
- The solution is going mainstream, and that means that you need to support it like a mission critical solution

- You will need to move to more robust technologies

- You will need to provide a REAL disaster recovery plan, and provide some real enablement materials so new teams can quickly come up to speed in the environment

Your Departmental Jazz Deployment

This is what your departmental Jazz deployment will look like:



This is based on a departmental Topology

MS Server 2008 R2 – 64-bit
<https://clm.admin.ws:443>

But there are still some concerns.....

You have seen the Departmental Jazz deployment. This is the path that many of our customers follow, with a simple implementation that is geared towards support of the early adopters in an organization

- This solution will last for a while in production, but you will need to scale in the future
 - It does not “hide” the identity of the individual Jazz applications, or their port numbers
 - Jazz applications are all running on a single machine, you will begin to see performance suffer as the load on the hardware resources increases
 - Your disaster recovery strategy consists of taking backups of the application servers and the databases. Any system down event could cause loss of data and lost time as new systems are configured and restored.
- There are still pieces which are installed, but are not being utilized
 - You’re not using the IHS software yet
- The topology and architecture are one issue, but your bigger issue is in getting teams to smoothly onboard to the new solution
 - You cannot continue to provide the one-on-one support that you gave to the pilot/early adopting teams



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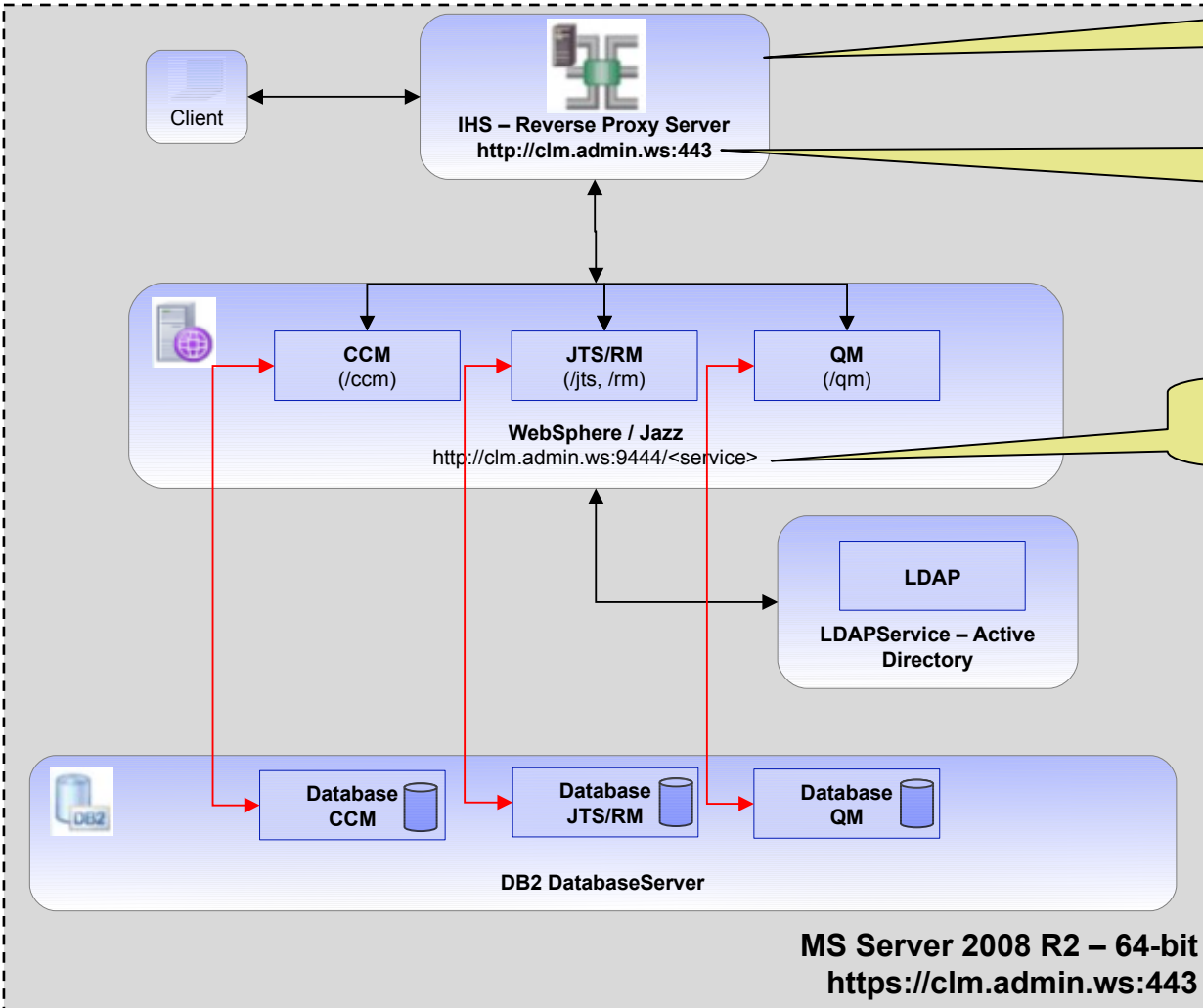
Get going on Lab 2, no excuses!

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Your Reverse Proxy Jazz Deployment

This is what your reverse proxy Jazz deployment will look like:



You will configure the IHS as a reverse proxy server

The public URI has not changed, even though the application location and port may have changed.

You will move the JTS to a new port

This is based on a departmental Topology

Now this is looking better.....

You have seen the reverse proxy Departmental Jazz deployment. This is the path that many of our customers SHOULD follow, with a simple implementation that is geared towards support of the early adopters in an organization

- This solution will scale in the future

- The reverse proxy will “hide” the identity of the individual Jazz applications, or their port numbers.
 - You can add additional Jazz applications. Just put them on a different machine, utilize a similar URI (like <https://clm.admin.ws:443/ccm02>, or <https://clm.admin.ws:443/qm02>) and have the reverse proxy take care of the rest
 - Your disaster recovery strategy still consists of taking backups of the application servers and the databases. Any system down event could cause loss of data and lost time as new systems are configured and restored.
- The topology and architecture are one issue, but your bigger issue is in getting teams to smoothly onboard to the new solution
- You cannot continue to provide the one-on-one support that you gave to the pilot/early adopting teams
 - As teams begin to use the systems, you need to determine what your “breaking point” is for standing up an additional Jazz application server
 - In order to know how much you are taxing the current infrastructure, **YOU NEED TO MONITOR IT!**



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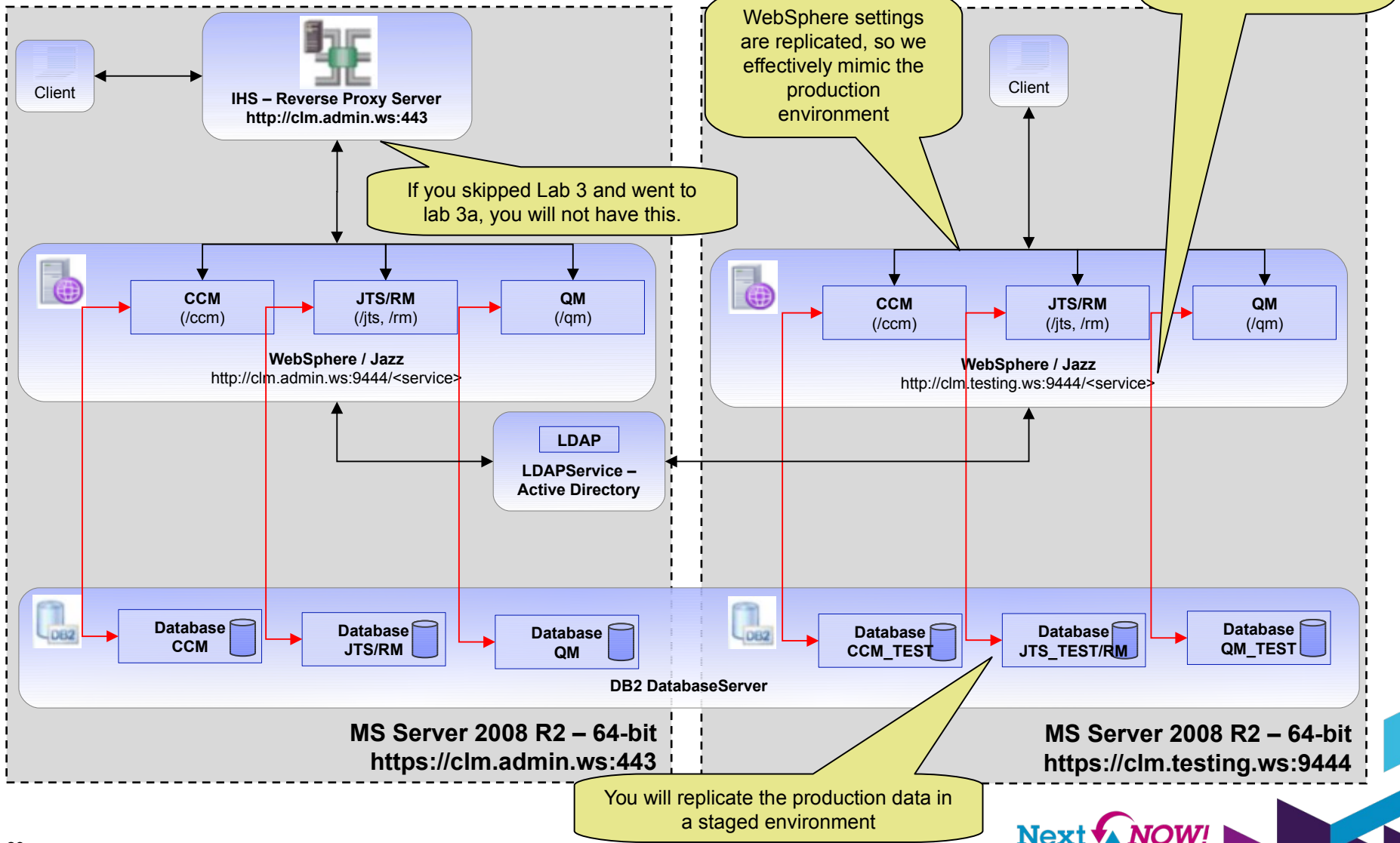
Let's begin Lab 3, there is nothing interesting going on out in the hallway

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Your Fully Staged Jazz Deployment

This is what your staged Jazz deployment will look like:





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Do you still need to ask?

Start on Lab 4!!

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Wrap Up

- At the beginning of this presentation we mentioned some specific areas that we wanted to make sure that you remembered. These were:
 - There is no “perfect” Jazz deployment. Like most things, a Jazz deployment involves trade-offs between competing priorities
 - There ARE some things that you should avoid when planning a Jazz deployment
 - Always implement the monitoring and measuring of performance your Jazz deployment

- In addition there are some other major points that we think you should remember
 - There is a wealth of information available to you, but you need to go and find it. Use resources out on Jazz.net like the library and forums. Use the Infocenter for general concepts and “how-to” instructions.
 - Always architect your solution with the future in mind. Do any extra work involved that allows you to leave your future options flexible.
 - Finally, one final reminder:

YOU CANNOT CHANGE THE PUBLIC URI

QUESTIONS

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