



# Smart Business Test Cloud Demonstration



## Transcript

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With today's global economy, the rapidly increasing diversity, complexity and scale of IT environments are creating the perfect storm for IBM's cloud computing. Cloud computing is an emerging style of standardized, elastic, commodity-based IT capability delivered dynamically as a service. Clouds are a new way of consuming and delivering services. The three compelling aspects of the cloud model- virtualization, standardization and automation- drive down cost and provide more flexibility, allowing clients to free up budget for new investments and speed deployment of new capabilities.

A cloud computing model that is implemented within the enterprise and maintained behind the firewall is called a "private" cloud. This model is typically part of a client's IT infrastructure using a private network.

Since our clients are approaching this IT transformation by examining their workloads, and deciding which are right for the cloud, we are lining up our solutions by workload. Development & Test workloads are ripe for cloud adoption and can yield significant value to your clients.

Some challenges in the test environment are:

- poorly configured test environments, resulting in a lot of defects
- lack of automation for identical setups for each test, resulting in an inconsistent environment
- underutilized testing resources, even though a large proportion of servers are dedicated to testing.
- lack of resources
- and large backlogs slowing down the process

IBM employs a broad strategy based on common technology in order to deliver value and capability to many environments other than testing and infrastructure.

IBM offers the services to help you implement a private test cloud- Smart Business Test Cloud - using Tivoli Service Automation Manager (TSAM), Tivoli Provisioning Manager (TPM), IBM Tivoli Composite Application Manager (ITCAM) and Websphere cloud appliance. Additionally, IBM Smart Business Test Cloud services support IBM's hardware, software and services platform – which is IBM CloudBurst. With this option IBM can help you rapidly set up an cloud platform with CloudBurst, then provide full customization and integration for a comprehensive, on-site test environment based on a private cloud computing model. Smart Business Test Cloud also gives you the option to leverage your existing systems and storage for a complete cloud solution

This demo shows a retail company's test environment setup and management for a web-based store application which needs to be tested and put into production quickly to support a featured sale of a "hot new product line" with a new look.

We will log in as the IT test manager and open the TSAM interface, the end-user oriented service tool which shows the self-service catalog user interface. We request a full scale production simulated configuration to do systems and performance testing. We are testing the entire environment – server, storage, database, web application server and web application.

The display shows the TSAM end user catalog UI, which has several categories of retail oriented offerings. These include a Help ticketing system, request for new service, and frequent requests. The bottom part of the UI shows previous requests submitted by this user.

Here we see the preconfigured, end to end test environments, including the web store application. Using predefined standardized environments gives us systems and software configuration cost savings.

Selecting the webstore brings up an order dialogue where a user can pick which size of test environment should be deployed - small, medium, or large. We fill in the order entry screen including location, storage, and database information. You can schedule resources from a calendar for the days you need and then the virtualized resources are automatically freed up.

We see the status change to Approved, showing that the test system has been deployed. The provisioning is automated, taking hours vs weeks in the past manually... in this case the available resources were found and the end-to-end system was provisioned!!!! point and click and end-to-end resources are available. In this example, the workflow is designed to automatically approve the request, however, the workflow could be tailored to support an approval routing process. The automated test environment system can reduce set up operational costs up to 50%

We have instrumented this system so you can do monitoring and management using ITCAM and TPM.

We can look at memory usage, CPU usage, transaction rates and transaction flows. It is easy for the user to manage various test environments and identify bottlenecks which might delay system testing and affect application deployment, or utilization issues which might affect business and application SLAs.

We can view statistics in different formats and see real time historical and data trends.

We can see statistics showing utilization of the server for different components and we see declining performance. We have instrumented not just the basic platform, but also the capabilities to check whether you are getting the performance you want.

Here we see performance issues with response times nearing maximum acceptable limits.

We can see the system and performance testing of the transaction flow all the way through the system. This simulated transaction flow when added up is over 2 seconds , which means we have a challenge and need more web capacity, or a larger predefined web configuration, to meet performance SLAs. WebSphere cloud appliance cannot add capacity to the configuration but can increase the capacity by adding a new larger service – through TSAM.

Again we select the preconfigured test environments including the web store end-to-end test environment – this time to update the configuration to support the additional performance requirements. We request a new service with a larger capacity, specify the configuration information, update the web store test environment, request provisioning, deploy it to the test environment, and a larger test system is set up. Resources used by the smaller test environment are automatically recovered when the subscription period expires

We see the new request appear and be approved. In the background, Websphere cloud appliance is handling all of the provisioning that will take place.

Websphere cloud appliance makes it easy to set up a web servers for your test cloud, control usage, and create a virtual system by deploying a reusable pattern. You can see what patterns are available and you can add, modify, or delete applications.

This shows that webstore that was requested through TSAM originally. We took the same steps using Websphere cloud appliance to set up a larger web application capacity.

You can see the virtual machines that were defined for this pattern and how many of them are a part of this pattern.

You can go into WebSphere cloud appliance after requesting a configuration and see the list of web server images provisioned. We see the webstore test environment has been deployed and is ready to use.

Now we see the request for the larger environment go from approved to completed, or closed in TSAM. The test is complete, the application is ready to go live, and the LOB is impressed with how quickly the new product web site application was tested and put into production.

IBM Smart Test Business Cloud services help you implement on demand provisioning of dynamically scalable, virtualized test resources in a secure, private cloud environment. This can help you reduce capital investments by up to 75%, reduce IT test environment operational costs by 50%, improve time to value by reducing test cycles from weeks to minutes and improve quality by eliminating defects stemming from faulty configurations up to 30%.

IBM has integrated solutions architecture, tools, and proven service delivery methods for accelerated design, testing, deployment and management of integrated cloud solutions. We offer unmatched real world cloud experience from our own IBM IT transformation, and 80,000 professionals across the world with testing skills and best practices experience across diverse, multi-vendor environments. Our service management consultants have over 40 years of virtualization experience (After all, IBM invented virtualization)

IBM approaches cloud computing from the inside out, designing a cloud environment and providing cloud-based services for your unique requirements to transform your IT with cloud computing.

Find out more at [www.ibm.com/ibm/cloud](http://www.ibm.com/ibm/cloud)