

# Virtual Testing, Real Quality.



Microsoft® Visual Studio® Lab Management 2010 is an integrated development and testing platform that provides end-to-end support for virtual lab management. Reduce costs associated with setup, tear down and restoration of complex virtual environments to a known state for build automation, test execution and build deployment. Eliminate waste across the entire application lifecycle by allowing development and QA to work together to effectively optimize the build process and minimize regression testing efforts. Easily file rich bugs with links to environment snapshots that developers can use to recreate the tester's environments. Lab Management 2010 increases the predictability of build-deploy-test workflows to reduce overall risk and accelerate your time to market.

## Creativity Unleashed

Simplify virtual lab configuration and management with Microsoft Test Manager 2010<sup>1</sup>, a light-weight and streamlined application that was developed with the self-service user in mind. Now you can administer your labs through intuitive wizards and utilize existing virtual machines to build a Golden Virtual Machine Library for future uses.

## Simplicity Through Integration

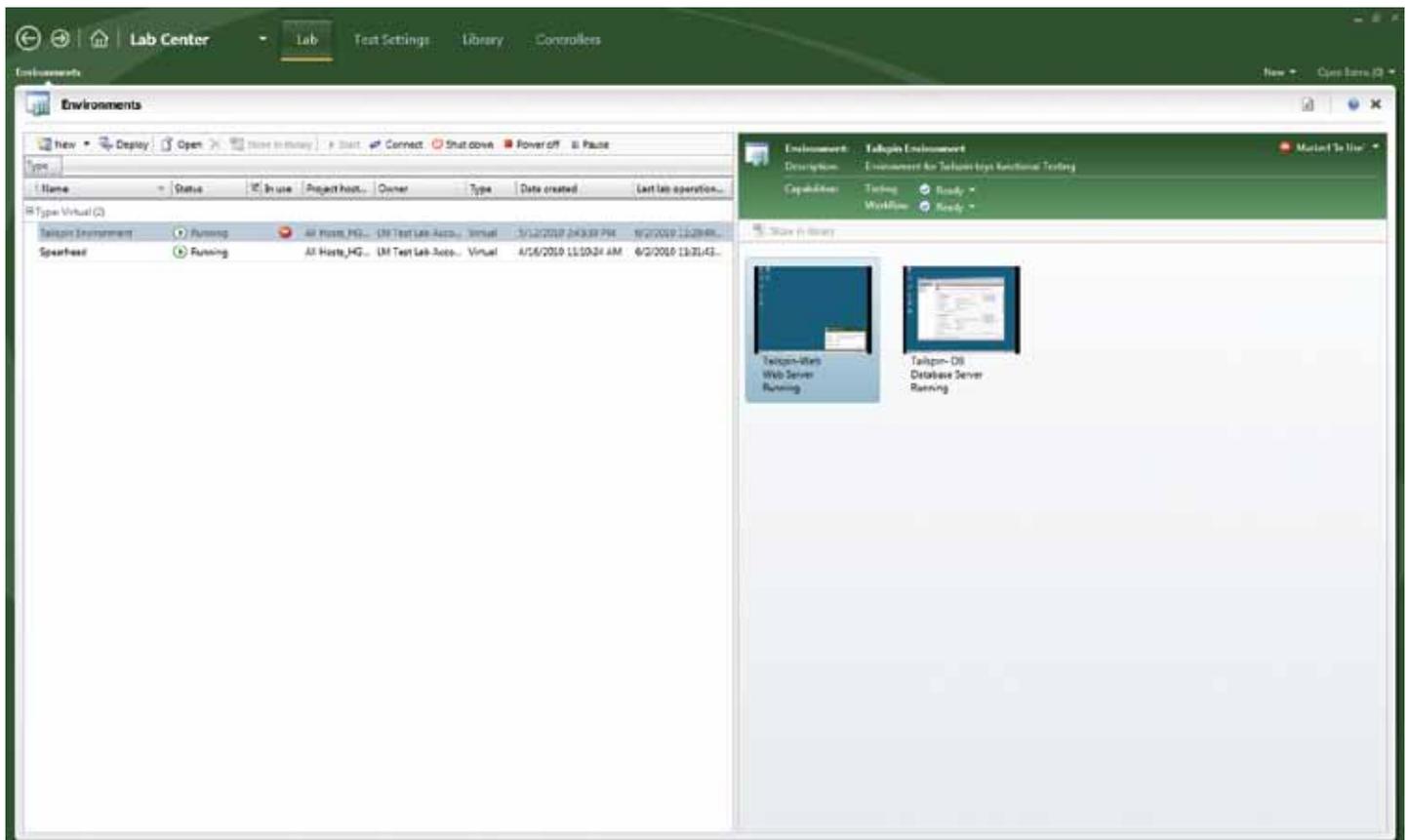
Built on the powerful Windows Server Hyper-V™ platform, Lab Management 2010 offers seamless integration with test and build processes through Team Foundation Server 2010<sup>2</sup>. This integrated toolset serves a key role in facilitating build automation, application deployment to test environments, and test automation

## Quality Code Ensured

Take quality to the next level by benefiting from virtualized test labs. Test applications early and often against production-like environments and release software in a shorter time frame. Lab Management 2010 delivers a predictable build-deploy-test workflow and enables development teams to find quality defects faster.

## Deploy to a Known Configuration

Lab Management 2010 provides development and test teams with unlimited and instantly-provisioned virtual environments for testing. Within each virtual machine environment, you can explicitly target a particular lab configuration – for example, an application running on a web server that accesses a database server, as shown. Now you can deploy to a known configuration predictably and consistently.



# Top ten benefits

- **Increase Operations Efficiency Across the Entire Application Lifecycle**

A powerful virtual lab management technology, Lab Management 2010 streamlines connections and overcomes key barriers across the three pillars of IT: development, QA, and operations. It is deeply integrated with the rest of the Visual Studio development and testing platform to allow for a more efficient build-deploy-test workflow and a more effective application lifecycle management strategy.

- **Improved Regression Testing**

Don't let fixes destroy your previously verified code base. Lab Management 2010 automates and streamlines tedious regression and smoke tests through its ability to automatically restore exact configurations to a known state and re-run predefined tests. This significantly reduces the effort and time associated with setting up and running regression tests.

- **Role-Based Virtual Lab Administration**

Use Lab Management permissions to create role-based self-service groups of team members, who can create, deploy and manage virtual environments without requiring system administrator privileges. These permissions are integrated with Visual Studio Team Foundation Server permissions to let you meet the specific requirements of *your* organization.

- **Deploy to A Known Configuration**

Project build-scripts can explicitly target a particular lab configuration, allowing multiple environments to be fully provisioned and readied for testing at build time. These images reside in the Golden Virtual Machine Library and ensure teams start from a clean set of virtual machines. Additionally, the build process can include the initial run of core build verification test suites that include unit tests, load tests and automated UI tests.

- **Collect Rich Diagnostic Data**

Test Agents within each virtual environment let you collect rich diagnostic data. Configure the Diagnostic Data Adapter (DDA) to collect IntelliTrace™<sup>3</sup> logs which contain specific diagnostic trace information to help isolate bugs that are difficult to reproduce. Unlock the power of IntelliTrace to enrich the context behind each bug you file.

- **See What Testers See**

Now developers can reproduce a bug in the exact same environment that the tester used to discover it. Testers can take a full server-side environmental snapshot during any testing activity and attach it to the bugs they file. From the bug form inside the Visual Studio IDE, developers connect to the environment directly. This lets developers see exactly what the tester saw and more easily identify the root cause of the problem.

- **Build Optimization**

Streamline your build process to continuously integrate, build, and verify changes. With Lab Management 2010, development and QA teams work closely together to schedule builds and plan for the tests required to verify a build. This optimized build process gives QA the visibility and stability it needs with each build.

- **Self-Servicing Lab Management**

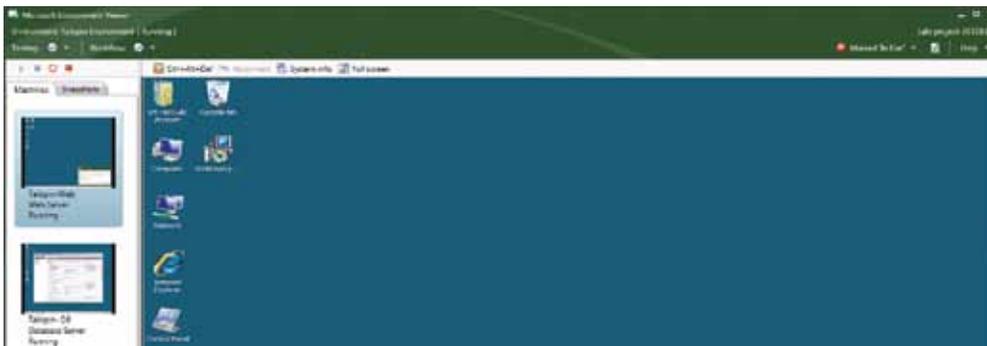
Regardless of your role, self-service virtual labs are at your fingertips. Virtual environments can be easily accessed through Microsoft Test Manager 2010, including viewing, stopping and restarting of environments from the Environment Viewer. You can also mark them as "in-use" to ensure visibility.

- **Cloning with Network Isolation**

Network isolation enables multiple copies of a lab environment to run at the same time without causing network conflicts, such as conflicts due to computer names and Domain Name System (DNS) registration. Now you can enable multiple complex test configurations for testing without any re-configuration of your multi-tier application.

- **Reduce Hardware Costs With Windows Server Hyper-V™**

The Hyper-V platform provides a reliable and optimized virtualization solution that lets you improve server utilization and reduce costs. It provides a small footprint with minimal overhead and easily plugs into your existing IT environments. Lab configurations from Lab Management 2010 are stored as Hyper-V virtual images, allowing them to be used as both physical and virtual images.



## The Environment Viewer

View, stop, restart an environment with a single click as well as manage snapshots easily.

1. To use Microsoft Visual Studio Lab Management 2010 you need Team Foundation Server 2010 (licensed separately).  
2. Microsoft Test Manager 2010 is available with Visual Studio Ultimate 2010 or Visual Studio Test Professional 2010, both licensed separately.  
3. IntelliTrace, available with Microsoft Visual Studio 2010 Ultimate, allows you to look back at a past state of your application with debugging information. Events of interest can be recorded through the IDE or Microsoft Visual Studio Test Manager 2010, available with Test Professional 2010 or Visual Studio 2010 Ultimate.

# Visual Studio 2010 Feature Comparison

	Visual Studio 2010			Visual Studio Test Professional 2010 with MSDN
	Ultimate with MSDN	Premium with MSDN	Professional with MSDN	
<b>Development Platform Support</b>				
Windows, Web and Cloud Development	•	•	•	
Office and SharePoint Development	•	•	•	
<b>Architecture and Modeling</b>				
Architecture Explorer, Layer Diagram and Dependency Validation	•			
Read-only diagrams (UML, Layer, DGML Graphs)	•	•		
<b>Database Development</b>				
Deployment, Change Management, Test Data Generation, Unit Testing	•	•		
<b>Debugging, Diagnostics and Testing</b>				
IntelliTrace™ (Historical Debugging), Web Performance Testing, Load Testing <sup>1</sup>	•			
Static Code Analysis, Code Metrics, Profiling, Code Coverage, Test Impact Analysis, Coded UI Test	•	•		
Unit Testing	•	•	•	
<b>Test and Lab Management</b>				
Microsoft® Test Manager 2010, Test Case Management, Manual Test Execution, Fast Forward for Manual Testing, Rich Actionable Bug Filing	•			•
Virtual environment setup & tear down, Provision environment from template, Checkpoint environment through Test Manager 2010 (Visual Studio Lab Management 2010 required) <sup>2</sup>	•			•
<b>Team Foundation Server</b>				
Version Control, Work Item Tracking, Build Automation, Team Portal, Reporting & Business Intelligence, Agile Planning Workbook, Team Explorer	•	•	•	•
<b>MSDN Subscription benefits</b>				
Priority support in MSDN Forums, MSDN Magazine, Flash newsletter, Online Concierge	•	•	•	•
Technical support incidents	4	4	2	2
Microsoft® e-learning collections (typically 10 courses or 20 hours)	2	2	1	1
Windows® Azure™ Platform	•†	•†	•†	
<b>MSDN Subscription - Software for Production Use</b>				
Microsoft® Visual Studio® Team Foundation Server 2010 plus one CAL	•	•	•	•
Microsoft® Office Professional Plus 2010, Project Professional 2010, Visio® Premium 2010, Expression Studio 3	•	•		
<b>MSDN Subscription - Software for Development and Test Use<sup>3</sup></b>				
Windows (client and server operating systems), Microsoft® SQL Server®, Toolkits, Software Development Kits, Driver Development Kits	•	•	•	•
Microsoft® Office, Dynamics®, All other Servers, Windows Embedded	•	•		

† Azure benefits vary by subscription level; see the MSDN Subscription site for details: <http://msdn.microsoft.com/subscriptions/> Subject to change and subject to availability.

1. May require one or more Microsoft® Visual Studio® Load Test Virtual User Pack 2010.

2. Microsoft® Visual Studio® Lab Management 2010 is not included with Visual Studio 2010 Ultimate.

3. Per-user license allows unlimited installations and use for designing, developing, testing, and demonstrating applications. UML is a registered trademark of Object Management Group, Inc.

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