



Cisco Data Center Performance and Validation Testing

Maintain service availability and performance during peak-load conditions with structured architecture design testing.

A Proactive Design Methodology

The benefits of consolidating, virtualizing, and automating data centers are widely believed to justify the effort and expense. But in an effort to reap these benefits very quickly, many organizations rush into deployments without adequately identifying how such changes will affect the entire data center. Data center components such as servers, LANs, SANs, the WAN, and security services interact very closely in virtualized environments. Problems in any one area can affect the interoperability of the entire system, resulting in excessive expenditures, deployment launch delays, and business-critical service outages. Integrating performance and validation testing into the solution design process can prevent problems that add time and expense to the deployment process.

Cisco Data Center Performance and Validation Testing

While most organizations recognize that test and validation are critical components of data center architecture design, few have the equipment and facilities to emulate peak demands in their test lab. Cisco® Data Center Performance and Validation Testing lets you build customized test systems that include virtually any product in the Cisco portfolio, as well as products from other vendors, so you can validate your solution end to end. Cisco Data Center Performance and Validation Testing also provides access to Cisco subject matter experts in data center architecture design and testing.

Building a working prototype of your architecture in a Cisco test lab reduces test qualification time and expenditures and gives you confidence that your data center services will remain available even under the most demanding conditions.

Service Components and Benefits

Cisco Data Center Performance and Validation Testing includes four components (Table 1). Each offers unique benefits.

Table 1. Cisco Data Center Performance and Validation Testing

Service Component	Description	Benefits
Test Lab Strategy Review (TLSR)	Evaluates the gaps between customer test lab capabilities and their ability to perform in-house testing of data center solutions	<ul style="list-style-type: none">• Introduces you to Cisco best practices for systems testing and how to properly use testing during various phases of the data center lifecycle• Helps you identify gaps in your own test process and resources
Test Consulting	Facilitates the assessment and planning portion of the design cycle in preparation for the actual test implementation	<ul style="list-style-type: none">• Reduces test cycle time by providing you with proven test plans that focus on the elements needed to validate your data center design• Assesses whether results indicate potential flaws in your design or are simply false positives• Allows you to tap into test consultants' experience with commercial test tools offered by different vendors• Allows you to "test drive" many different data center test tools prior to purchasing
Hosted Testing	Evaluates the feasibility of proposed designs and their ability to perform during peak demand through customer-specific test cases executed in Cisco lab facilities	<ul style="list-style-type: none">• Drastically improves your chance of success and reduces time spent in the lab by identifying concise test methods• Gives you access to more than \$1 billion worth of equipment and tools so that you can test an end-to-end solution• Helps you predict how your applications will behave during peak usage or when particular components fail• Reduces the chance of production network service outages• Adds value to design documentation by supplying test output data• Allows you to track issues (bugs, crashes, caveats) encountered during testing to help your organization avoid them in production
Network Ready for Use (NRFU) Testing	Certifies that preproduction networks comply with design and operational standards and are ready to carry live traffic	<ul style="list-style-type: none">• Supports informed decision making as to whether a data center is ready to host live applications• Provides a day-1 inventory of data center device details and an initial benchmark of performance



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At-A-Glance



Testing Throughout the Lifecycle

Cisco Data Center Performance and Validation Testing can be engaged during any phase of a data center network's lifecycle to validate and accelerate service delivery.

- **Plan:** Proof-of-concept test cycles can model several possible architectures for feasibility, benefiting organizations in the planning phase of private cloud or grid computing services.
- **Design:** Predeployment design verification can help engineers working on data center infrastructure, because device configurations generated during hosted test cycles can be templated and used as low-level design documentation.
- **Implement:** Implementation teams can gain invaluable insight into the accuracy of their Data Center Interconnect (DCI) migration plans with the help of diagnostic equipment that provides immediate feedback on lost or delayed traffic.
- **Operate:** Operators of virtualized data center designs can gain invaluable hands-on experience during testing as they see that new solutions are manageable and support legacy services.

Service Benefits

Structured testing can help you design a data center that performs predictably and efficiently and experiences fewer problems during periods of peak activity or network instability.

Data Center Performance and Validation Testing helps you to:

- Evaluate new products and technologies prior to investing
- Shorten deployment lead times by using prebuilt data center test beds aligned around common architectures
- Analyze the effects of changes on simulated or actual application performance
- Develop provisioning rule sets and capacity plans without performance bottleneck concerns
- Certify that newly installed data center solutions comply with design standards and are ready to carry production traffic

Why Cisco Data Center Services?

Today, the data center is a strategic asset in a world that demands better integration among people, information, and ideas. Your business and your data center work better when technology products and services are aligned with your business needs and opportunities. Cisco and our industry-leading partners deliver intelligent, personalized services that accelerate the transformation of your data center. Using a unique, network-based perspective and a unified view of data center assets, Cisco takes an architectural approach to help you efficiently consolidate, virtualize, and manage data center resources. Cisco Data Center Services help transform, optimize, and protect your data center to reduce costs, deliver high availability, and improve application performance.

Availability

Cisco Performance and Validation Testing is widely available. Contact your local Cisco account manager about availability in your area.

For More Information

For more information about Cisco Data Center Performance and Validation Testing, as well as the broad array of Cisco Services for the data center, contact your local Cisco account manager or visit www.cisco.com/go/dcservices.