

DELL	Qualified Platforms Included - Solutions	End Points	TestNav
1	Dell Wyse Datacenter for Microsoft VDI with vWorkspace	Windows-based Thick & thin clients	7.5
2	Dell Wyse Datacenter for Microsoft VDI with vWorkspace	Chrome OS	7.5

District Technical Information

This document provides guidance for districts and schools that choose to use the qualified product(s) with the TestNav version indicated.

Dell completed the TestNav qualification process for the specific products described in the **Qualified Products** table. The technology and setup requirements must be followed and all clients or workstations used to access TestNav must comply in order for the solution to remain in qualified status. In addition, please review all “Additional Recommendations”.

Qualification Standards

TESTNAV QUALIFIED mark and logo are certification marks owned by NCS Pearson, Inc. (the “TESTNAV QUALIFIED Marks”). The TESTNAV QUALIFIED Marks may only be used by entities who have executed Pearson’s TESTNAV QUALIFIED Certification Mark Agreement, and in the manner prescribed in the Pearson Certification Mark Usage Guidelines (the “Usage Guidelines”). Both documents are available online at <http://www.testnavqualified.com>; Vendor Qualification.

The Qualification Standards used to certify this solution are outlined in this document in the “**Appendix**” section of this document.

Qualified Products & Solutions Table – TestNav 7.5

Pearson and Dell jointly tested the following solutions for use with TestNav 7.5.x.

Performance testing has been completed by running all performance tests on a single VM. The VM was built using Dell profiles. The maximum number of clients was then extrapolated based off of the **Dell Wyse Datacenter for Microsoft VDI with vWorkspace** Reference Architecture. The maximum users as defined below will have the same experience as a single user for every host server added to the solutions compute cluster.

Dell Wyse Datacenter for Microsoft VDI with vWorkspace		
TestNav Version	TestNav 7.5.x	TestNav 7.5.x
Qualified Software Version	Dell Wyse Datacenter for Microsoft VDI with vWorkspace	Dell Wyse Datacenter for Microsoft VDI with vWorkspace
End-point/clients supported	Windows-based thick and thin clients	Chrome OS Devices
Minimum Processor	1 VCPU / Desktop	1 VCPU / Desktop
Minimum Memory	2GB/Desktop	2GB/Desktop
Operating System	Windows 7	Windows 7
Minimum Network Speed	1 GB VNic	1 GB VNic
Maximum # of Clients	185 Per Server host	185 Per Server host
Minimum Encryption	128bit AES encryption	128bit AES encryption

Requirements

Upon delivery of this solution, Dell will provide a detailed breakdown of all security settings required as part of the set up for the solution. All requirements must be followed in order for the solution to remain qualified. Any solution run without the specific settings enforced as defined by the requirements will be considered no longer qualified.

DELL INFRASTRUCTURE SET-UP REQUIREMENTS

Detailed requirements for set up and running *Dell Wyse Datacenter for Microsoft VDI with vWorkspace* can be found using the link below. Additionally, please review all specific TestNav 7.5 set up requirements and recommendations listed in this document. All requirements and set up for TestNav must be followed in order for the solution to be considered qualified for use during assessment testing.

<http://www.dell.com/learn/us/en/555/flexible-computing/dvs-enterprise-windows-server-2012>

If there are any questions completing the set-up, please call the Dell installation team who setup your installation or the Dell support numbers at the bottom of this document.

TESTNAV 7.5 REQUIREMENTS

All TestNav 7.5 Hardware and Software Requirements need to be followed when using qualified products: www.PearsonOnlineTesting.com/TN7requirements.

SYSTEM CHECK

The standard Pearson process running SystemCheck should be followed to confirm final concurrent user counts for implementation purposes.

PROCTOR CACHING

Pearson Proctor Caching technical set up guidelines should be followed. For environments using Proctor Caching servers that wish to run in the server in the same virtual environment as the virtual desktops, an additional virtual network will have to be added to the hosts. This virtual network will have access to publicly addressable static IP address that can be assigned to the virtual machine acting as the proctor caching server.

It is required as part of the solution set up process to ensure high availability is also enabled on these hosts for the proctor caching server to avoid testing problems in the event of a virtualization host issue.

SRF (STUDENT RESPONSE FILES) LOCATION SET UP

For environments using SRF files, **Primary SRF file locations must be changed from the default location**. As each VDI desktop is destroyed and recreated upon disconnect of the session, the SRF files should be stored using mapped drives that direct to user-specific file share locations. It is recommended that the Secondary SRF files are stored on a separate physical storage device from the Primary. Based on Pearson documentation, a Secondary SRF file location is always recommended as a best-practice.

USING WINDOWS-BASED THICK AND THIN CLIENTS AS ENDPOINTS

The **Dell Wyse Datacenter for Microsoft VDI with vWorkspace** solution utilizes special software to create a secure environment for testing even when connecting from a Windows-based thick or thin client. The software must be running and activated on all thick or thin clients with the required settings in order to have a compliant testing environment. **The software and settings will be delivered by Dell at the time of solution installation.**

USING CHROME OS AS ENDPOINTS

Chrome OS devices with at least 1024 x 768 display resolution capability (required) and Intel series processor (preferred) will be used. The device must be managed by a district or school admin.google.com account with **defined security settings** implemented to ensure test security. **These settings will be delivered by Dell at deployment of the solution.**

Recommendations

- The Microsoft VDI with vWorkspace environment must be setup to deliver a pool of non-persistent VM's that logoff upon disconnect.
- To ensure the virtual desktops have the minimal amount of software loaded and that the VMs perform appropriately, a dedicated pool of virtual desktops are required for this solution. If the VDI infrastructure is used for VMs performing tasks other than accessing Pearson TestNav, a separate desktop pool is required.
- The VMs used for testing must have updated Microsoft patches, the proper versions of Java and the correct security settings to avoid the prompting java security induces. These settings can be found in the TestNav requirements document. The latest version of Flash player must be installed. No other software should be added to ensure the student is using a clean system for testing.

Contact Numbers

SALES

For Sales Inquiries: ***Dell Sales Support***

+1 (800) 438-9973

SUPPORT

For Technical Assistance (Current Clients): ***Dell Customer Support***

800-624-9897

Appendix A - Qualification Standards

The Qualification Standards used to certify this solution are outlined below:

A virtual client machine should provide the same experience as a client machine in a non-virtual environment. A baseline Electronic Practice Test (ePAT) provided by Pearson during the qualification process was used for comparison. The ePAT provided is specific for the TestNav version being qualified.

Virtualization Setup Requirements

1. Testing environment must be set up using proctor caching
2. All cache must be cleared prior to testing including Java cache. For instructions on clearing java cache, please access the following link: http://www.java.com/en/download/help/plugin_cache.xml.
3. Once setup the testing environment should use the SystemCheck tool successfully

Virtualization Qualification Standards

Qualified Products must meet all of the following criteria:

Critical Security Standards for TestNav®

1. From selection of the test to "submit test" the desktop is secure and the system does not allow access to any application, content, or other service beyond the TestNav test assessment delivery system
2. From selection of the test to "submit test" the system does not allow any screen captures, printing, saving or other electronic replication or duplication of the display screen, source code or content of the test
3. All data is encrypted between client and server for the entirety of the usage period. The data encryption must be AES 128 or higher.

Critical Performance Standards for TestNav®

1. While logging in concurrently, no error messages are received
2. The first test item/question of the tests loads fully at the same speed as the baseline amount of less than 45 seconds
3. While interacting with all test items/questions there are no noticeable cursor lags, input lags or delays in tool engagement as compared to the baseline ePAT
4. While interacting with video, audio, and Technology Enhanced Items (TEI) there are no significant lags or delays experienced as compared to baseline ePAT
5. There is no noticeable delay when navigating from test item/question to test item/question
6. All tools work correctly as demonstrated in the baseline ePAT
7. At submit, no error message is received
8. When hitting submit the system acceptance response is at the same speed as the baseline ePAT submit speed, with a maximum of 10 seconds