

VERDE VDI™ Desktop Virtualization Software Installation Overview.

The Simple, Smarter Solution.

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Welcome to VERDE VDI

VERDE VDI, an award-winning desktop virtualization software solution, removes the management burden, complexity and costs associated with desktop virtualization. Organizations of all sizes are turning to VERDE VDI to provide an easy-to-use, cost effective approach to provisioning, managing, updating, and securing PC and BYOD (bring your own device) environments.

Purpose of this Guide

The purpose of this guide is to provide a broad overview of a VERDE VDI installation. We pride ourselves on the simplicity of the installation process and the ease with which the solution can be extended as your needs grow. Additional detailed guides, including the Quick Start Installation Guide and the Administrator's Guide, are available to all customers.

Your Options for Installation

VERDE VDI offers two installation methods:

1. VERDEOS, or "bare-metal" installation, is a single ISO installation package. This self-installing software DVD installs the operating system, as well as the networking stack, and the VERDE VDI environment with very little inputs required from the administrator.
2. VERDE RPM, or Debian, installation packages can be installed on select Linux distributions. This second method is usually more suited for larger operations where there may be requirements to use specific operating system to comply with company policies and guidelines.

Even non-Linux-savvy administrators can get a VERDE VDI system up and running with the VERDEOS and have a Gold Image installed and deployed to users in a matter of a few hours. All it takes is a server with the right specifications (see below), the installation package and a software license.

Prefer a hands-off approach? Our Services organization can help you to whatever degree you desire, including end-to-end implementation, or a simple remote installation. **Learn more about support that's available.**

Planning the Installation

Pre-installation Considerations

While VERDE VDI allows the administrator to create local user accounts, the best way to leverage your existing environment and simplify the system administration is to integrate with your existing Directory Services system, such as LDAP, ActiveDirectory, eDirectory or Oracle ID.

By integrating with Directory Services, users will benefit from a seamless experience. For production environments, the recommended memory overhead for the operating system and software stack is 8GB; add any additional memory required to run the virtual desktops on top of that, e.g., to run ten virtual desktops with 1GB of virtual RAM each, plan for an additional 10GB of RAM. It is a best practice to factor in additional memory as buffer, and our sizing tool will help you accurately configure your solution with all these details. (Give us a call if you want to check out the tool.)

Additional requirements:

- An IP address (preferably static) for the server
- Some type of supported clients (laptop, desktop, thin client) to run the VERDE VDI User Console or VERDE VDI Client and launch the virtual desktops.
- A gateway address
- Directory credentials/directory details to integrate with Directory Services. (A user ID and/or domain administrator who can create computers, users, and change passwords.)

See the Administrator Guide for detailed guidelines. To evaluate clustering, you need network attached storage (NAS) that supports the NFS or CIFS Protocol.

Other Technical Considerations

In order to properly size your production environment, here are other things to take into account:

- Total concurrent users. Never plan on minimum usage, always think about maximum load to avoid running short of resources.
- Storage requirements. In addition to the needs of each virtual desktop, consider growth requirements and backup capabilities.
- Number of Gold Images. More images means more storage required.
- Server capabilities. CPU cores and memory must meet your expected user needs.
- Required network bandwidth for users.
- End-user devices. Tools and protocols must be loaded, ensure compatibility.
- Third party utilities. Linux guest OS is a required third party utility (Centrify or Likewise, for example) to join images to Active Directory.
- Security restrictions. No RDP usage, for example.
- Users exist. Ensure user accounts & groups already exist in LDAP-compliant Authentication and Authorization services.
- Network rules. Firewall and router rule sets need to be in place to ensure connectivity from clients to VDI cluster to storage.

Planning Your Time

It takes approximately 15 to 20 minutes to install VERDEOS (operating system and software stack) on a server. Once installed, it will take 15-30 minutes to configure **VERDE VDI** with the help of the **VERDE VDI** Console in order to create the LDAP directory connection, Session Settings, and prepare for a Gold Image creation.

After successfully configuring the server and creating the foundation for your Gold Images, you are ready to create the Gold Images, from which your virtual desktops will launch. This process is similar to that of installing an operating system on a physical computer. Once you have completed the installation, check in the newly created Gold Image and deploy it to individual users or groups of users.

Deploying desktops takes seconds, and is a simple matter of mapping user IDs or group IDs to the desired Gold Image. The user is informed of the server URL to enter in the **VERDE VDI** User Console, and can then log in and start immediately.

Evaluation Before Installation is Easy

It is easy to see for yourself the simplicity of **VERDE VDI**. Contact us to [request an evaluation license key](#), and right on your desktop system, upload the software to try it out. Once your request has been processed, you will receive a license key, a link to the support portal, and a link to download the **VERDE VDI** installation package.

The Support portal contains additional training materials, including a Quick Start Guide and an Administrator Guide.

The **VERDE VDI** client can run any combination of guest sessions. A Gold Image is created for each session type.

- Windows Server 2012, 32-bit
- Windows Server 2012 Datacenter Edition 64-bit Support
- Windows XP (including service packs) 32-bit Support
- Windows 7 (including SP1) 32-bit Support
- Windows 7 (including SP1) 64-bit Support
- Windows 8.1 32-bit Support
- Windows 8.1 64-bit Support
- Windows 10 32-bit Support
- Windows 10 64-bit Support

Supported Client Platforms

The following operating systems are supported with latest updates and service packs. The client must have a single instance of the latest Java Runtime Environment installed. This client is the device where the VDI session is launched.

Please note that the platforms we support are evolving on a regular basis. Contact us to discuss your solution needs.

CLIENT TYPE	SUPPORTED OPERATING SYSTEMS	SUPPORTED BROWSERS
THIN CLIENT PC	Windows XP, 32-bit Windows 7, 32- and 64-bit Windows 8.1, 10 (32- and 64-bit)	Internet Explorer Mozilla Firefox Chrome
THIN CLIENTS	Contact <i>NComputing</i> Professional Services for the latest compatibility list.	
MACINTOSH	Intel-based MAC OS X, version 10.7.03	Mozilla Firefox 12, 64-bit version Apple Safari 4.0.5, 64-bit version
TABLETS	HTML5 Browser	
LINUX CLIENTS	SLED 11, 32-bit RHEL 6/7 Workstation, 32-bit CentOS 6.0/7, 32-bit Ubuntu 12.04, 14.04 32-bit	Mozilla Firefox

Supported Guest Sessions

Windows Guest Sessions

- Windows Server 2008, 32-bit
- Windows Server 2008 R2 Datacenter Edition 64-bit Support

Linux Guest Sessions

- RHEL/CentOS 6.x 32-bit Support
- RHEL/CentOS 6.x 64-bit Support
- RHEL/CentOS 7.x 32-bit Support
- RHEL/CentOS 7.x 64-bit Support
- Fedora 14 32-bit Support
- Fedora 14 64-bit Support
- Ubuntu Desktop 12.04 32-bit Support
- Ubuntu Desktop 12.04 64-bit Support
- Ubuntu Desktop 14.04 32-bit Support
- Ubuntu Desktop 14.04 64-bit Support
- SUSE Enterprise Linux Desktop (SLED) 11 32-bit Support
- SUSE Enterprise Linux Desktop (SLED) 11 64-bit Support

Installing the Software

Detailed guides, including the Quick Start Installation Guide and the Administrator's Guide, are available to all customers.

Quick Install

Select the Quick Install option from the main menu of the welcome page. This option automatically formats and partitions any attached storage.

Navigating the VERDE VDI Menu

After the initial installation steps, the VERDE VDI menu enables networking, server, and storage configuration.

VERDE VDI Menu Tasks

- Network Configuration
- Stop System Services
- Reboot this Server
- Server Configuration
- Stop System Services and Networking
- Power Off this Server
- Branch Configuration
- Restart the Management Console
- Root Shell
- Start System Services
- Generate Support Report
- Log out of Menu

Configuration Basics

Network Configuration

The network configuration portion of the menu can be accessed during or after installation to configure VLAN tagging and bonded pairs.

Server and Storage Configuration

- a. On the Server Configuration page, press Enter to select (2) the default option.
- b. On the Server Role page, choose a role for this sever: **This is the default option: 1 – Cluster Master + Management Console + VDI Server**
- c. Press Enter. On the Public Address page, enter the IP address or host name that external clients will use to connect to this server.
- d. Return to the main menu. Select Network Configuration.
- e. On the Network Configuration sub-menu, select Restart Networking. If the networking settings are valid, a success message is displayed. The VERDE VDI Server is now configured.

Managing the Environment

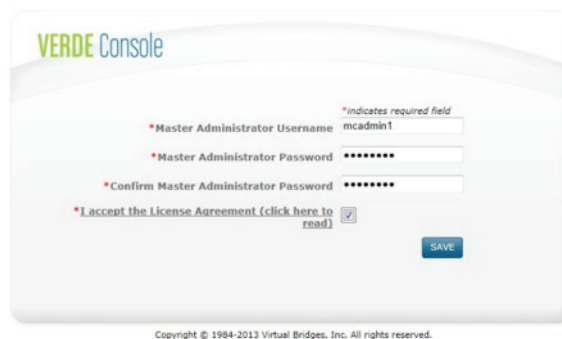
The Role of the VERDE VDI Console

The VERDE VDI environment and virtual desktop sessions are managed from the VERDE VDI Console, which is accessed from a standard web browser. This chapter provides an overview of the VERDE VDI Console and the tasks performed to manage the VERDE VDI environment.

Configuring a simple installation includes the following:

- Adding a VERDE VDI License.
- Creating one or more users.
- Creating a Desktop Policy for a guest session.
- Creating and Installing a Windows 7 Gold Image.

Starting the VERDE VDI Console



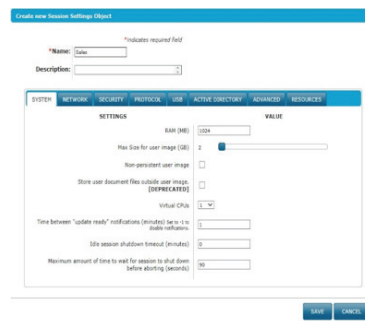
Log into the VERDE VDI Console with the console administrator ID.

Adding VERDE VDI Licenses

Licenses are managed from the VERDE VDI Console and are applied to the entire cluster.

Create New Session Settings

To define a new session setting rule, perform the following steps:



- a. On the Session Settings page, click CREATE NEW.
- b. Enter a name and optional description for this session setting rule.

- c. Click each tab to configure settings.

Creating a New Gold Image

Gold Images are created and managed from the Configuration tab of the VERDE VDI Console.

- a. To create a new Gold Image, click CREATE NEW.
- b. Enter the Gold Image Name, Title and Description.
- c. Choose the Operating System from the drop-down list.
- d. Click NEXT.
- e. Enter the location of the installation media.
- f. Select the System Image Max Size from the drop-down list.
- g. Select the Session Settings for this image.
- h. Click NEXT.
- i. Select the groups or users to own this image.
- j. Click CREATE NEW IMAGE.
- k. A notification displays instructions for installing the Gold Image. Read instructions and then click

CLOSE. The structure of the Gold Image has been created on the server.

Preparing to Install a Gold Image Operating System

Installing a Gold Image requires VERDE VDI Guest Drivers and Tools to run correctly. Install these from the VERDE VDI User Console.

Installing a Windows 7 Gold Image

The options for installing Windows 7 are standard.

Create VERDE VDI Users

The User page lists individual users created for VERDE VDI access. An administrator with the Management Console Master Administrator role has the privileges to create other users and administrators. Local user accounts created in VERDE VDI reside in the VERDE VDI database. An LDAP server can also be used to manage and assign accounts.

To add a new administrator or user:

- a. Click CREATE NEW.
- b. Enter the name of user.
- c. Select the Local User type.
- d. Select roles for this account.
- e. If a local user, search for and select one or more groups from the list.
- f. Click SAVE.

Connecting Users to VERDE VDI

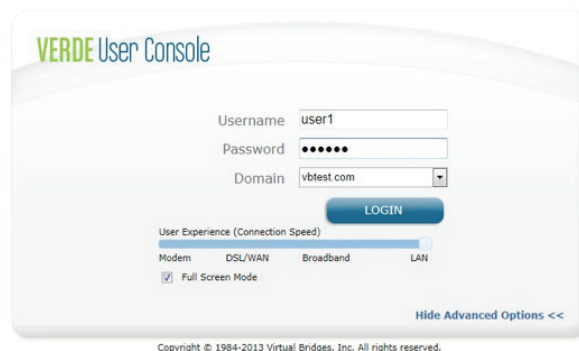
Remote users connect to VERDE VDI from the VERDE VDI User Console or the VERDE VDI Client. The User Console supports access to virtual desktops using SPICE, RDP, or NX protocols. The VERDE VDI Client is installed with the VERDE VDI user tools. VERDE VDI provides all of the tools required to enable the client for virtual sessions.

The End-User Experience

Starting the User Console

Once the VERDE VDI Server is installed, the VERDE VDI User Console is available by default at:

- a. Click Show Advanced Options to change RDP experience settings. Slide the cursor to the connection type for this session.



- b. Login to the VERDE VDI User Console. User names are case-sensitive, even if the underlying authentication provider user names are case-insensitive.
- c. If necessary, click show Advanced Options to adjust the connection speed and run sessions in full screen mode.

Starting a Guest Session

Perform the following steps to start a guest session:

- a. Log in to the VERDE VDI User Console. Click the Play button to start a session.



- b. The VERDE VDI User Console will automatically detect if Client Software tools need to be installed.
- c. Once the tools are installed on a client, the VERDE VDI User

Console or the VERDE VDI Client can be used to run guest sessions. An icon for the VERDE VDI Client is installed on the desktop by default.

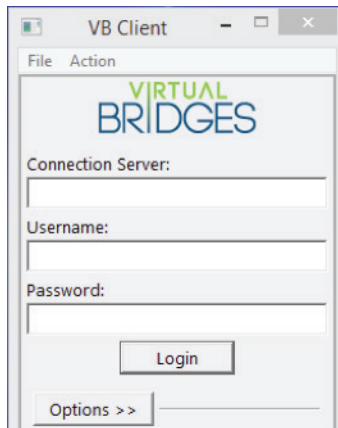
VERDE VDI Client

The client is an alternative to the **VERDE VDI** User Console. Once the **VERDE VDI** Client Software Tools are installed, Windows tools and the **VERDE VDI** Client can be updated automatically if configured in General Settings. Linux and MAC tools and the client are verified to be the latest version.

Using VERDE VDI Client

Perform the following steps to launch a desktop from the **VERDE VDI** Client:

- a. After VERDE VDI Client Software Tools are installed on a



client machine, double-click the VERDE VDI Client desktop icon.

- b. Enter the URL for the server on which this user can run sessions.
- c. Enter the username and account password.
- d. Click Login. The desktops that have been assigned to this user are listed.
- e. Select the desktop to launch.
- f. Click Connect to Desktop.

