



VBrick Enterprise Media System

VEMS v5.1 Network Video Recorder Release Notes



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About VBrick Systems

Founded in 1997, VBrick Systems, an ISO 9001 certified vendor, is a privately held company that has enjoyed rapid growth by helping our customers successfully introduce mission critical video applications across their enterprise networks. Since our founding, VBrick has been setting the standard for quality, performance and innovation in the delivery of live and stored video over IP networks—LANs, WANs and the Internet. With thousands of video appliances installed world-wide, VBrick is the recognized leader in reliable, high-performance, easy-to-use networked video solutions.

VBrick is an active participant in the development of industry standards and continues to play an influential role in the Internet Streaming Media Alliance (ISMA), the MPEG Industry Forum, and Internet2. In 1998 VBrick invented and shipped the world's first MPEG Video Network Appliance designed to provide affordable DVD-quality video across the network. Since then, VBrick's video solutions have grown to include Video on Demand, Management, Security and Access Control, Scheduling, and Rich Media Integration. VBrick solutions are successfully supporting a broad variety of applications including distance learning and training, conferencing and remote office communications, security, process monitoring, traffic monitoring, business and news feeds to the desktop, webcasting, corporate communications, collaboration, command and control, and telemedicine. VBrick serves customers in education, government, healthcare, and financial services markets among others.

NVR v5.1 Release Notes

The Network Video Recorder (NVR) is a component of VBrick's Enterprise Media System and provides a dedicated platform to perform multiple simultaneous recordings of live streams coming from VBrick encoders. The NVR lets you off-load all recording tasks from the VEMS Portal Server machine to one or more separate "recorder server" machines. The NVR is available in two versions—one that supports 10 simultaneous records and one that supports 40—and is ideal for environments that require large scale recording on a robust and reliable platform. The NVR is tightly integrated with the Portal Server, the Scheduler, and VBrick's Video-on-Demand servers. See the *VEMS Portal Server Admin Guide* for related information.

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Installing an NVR

The NVR is sold as a hardware/software combination or as software-only product. If you purchased the hardware/software combination from VBrick, the Standard or Standalone NVR software will be pre-installed and your server license(s) will be activated. You will still need to configure the NVR as explained in the *Portal Server Admin Guide*.

If you purchased only the software from VBrick, *you* must install the NVR software as explained below and then configure it using the instructions in the *Admin Guide*. If you are using server hardware not purchased from VBrick, be sure to read [NVR Hardware Recommendations](#) on page 3.

Note NVR 5.1 is not backward-compatible with VEMS 5.0. In order to install and use a 5.1 NVR, you must have a VEMS v5.1 Portal Server. Also be aware that once 5.1 player components are installed on a PC, that PC cannot be used to Add Video to a 5.0 Portal Server.

Installing a Standard NVR

- ▼ To install a standard NVR:
 1. If installing the NVR on a server with Windows 2003 *Standard Edition* only, you must perform certain configuration steps before installing the NVR. See [Configuring for Windows Server 2003 Standard Edition](#) on page 2. When done, or if you are not using Windows Server 2003 Standard Edition, go to Step 2.
 2. Go to the "Network Video Recorder" page on the Product CD and double-click on the **Standard NVR** setup file.
 3. Follow the prompts and exit the window when done.
 4. Then open the Portal Server Admin Console and configure the NVR: see "Configuring a Standard NVR" in the *Portal Server Admin Guide*.

Installing a Standalone NVR

- ▼ To install a standalone NVR:
 1. If installing the NVR on a server with Windows 2003 *Standard Edition* only, you must perform certain configuration steps before installing the NVR. See [Configuring for Windows Server 2003 Standard Edition](#) on page 2. When done, or if you are not using Windows Server 2003 Standard Edition, go to Step 2.
 2. Go to the "Network Video Recorder" page on the Product CD and double-click on the **Standalone NVR** setup file.
 3. The installation steps are identical to those used to install the Portal Server. See "Installing the Portal Server" in the *Portal Server Release Notes* for complete details.
 4. Follow the prompts and exit the window when done.
 5. Then open the Standalone NVR Portal Server Admin Console and configure the NVR: see "Configuring a Standalone NVR" in the *Portal Server Admin Guide*.

Configuring for Windows Server 2003 Standard Edition

The NVR runs on Windows Server 2003 Web Edition or on Windows Server 2003 Standard Edition. If you are using a server with Windows Server 2003 Standard Edition installed, you must modify the installation as explained below *before* installing the NVR.

- ▼ To modify the Windows Server 2003 Standard Edition configuration
 1. Install IIS (Internet Information Services).
 - a. Go **Start > Control Panel > Add or Remove Programs**.
 - b. Click on **Add/Remove Windows Components** in the left navigation panel of the window.
 - c. Click on **Application Server** and select **Details**.
 - d. Make sure the following subcomponents are selected:
 - Application Server Console
 - ASP.NET
 - Enable network COM+ access
 - Internet Information Services (IIS)
 - e. Then select **Internet Information Services (IIS)** and click **Details**.
 - f. Make sure the following subcomponents are selected:
 - Common Files
 - File Transfer Protocol (FTP) Service
 - Internet Information Services Manager
 - World Wide Web Service
 - g. Then select **World Wide Web Service** and click **Details**.
 - h. Make sure the following subcomponents are selected:
 - Active Server Pages
 - World Wide Web Service
 2. If you install .NET 2.0 before installing IIS, the Network Service user is not added correctly to the .NET framework folder. Use these steps to verify or add the Network Service user:
 - a. Go to **C:\WINDOWS\Microsoft.NET\Framework**.

- b. Right-click on the **Framework** folder, click **Properties**, and select the **Security** tab. If the Network Service user is present, exit the window and you are done.
 - c. If the Network Service user is not present, click the **Add** button, type **Network Service**, and then **OK**.
 - d. Give the Network Service user the following permissions and click **OK**:
 - Modify
 - Read & Execute
 - List folder Contents
 - Read and Write
3. When done, reboot the server, and install the NVR.

Configuring an NVR

See "NVR Configuration" in the *Portal Server Admin Guide* for complete configuration instructions.

NVR Hardware Recommendations

If your server hardware was not purchased from VBrick, it must meet the following minimum specifications. The following tables show the recommended hardware and hard drive configuration relative to the number of purchased licenses. VBrick requires that you use dedicated server that meets or exceeds these specifications. The use of a less capable system may adversely affect system performance.

Table 1. Recommended Hardware Specifications

NVR 10
Single Xeon Processor at 2.13 GHz, 2 GB memory, 4 x 73 (10 k, 2.5 in drives) configured as a RAID5, Redundant Power.
<ul style="list-style-type: none"> • PowerEdge R610 with Chassis for Up to Six 2.5-Inch Hard Drives • E5506 Xeon Processor, 2.13GHz 4M Cache, 4.86 GT/s QPI, TurboHT • 2GB Memory (2x1GB), 1066MHz Single Ranked UDIMMs for 1 Processor, Adv ECC • Embedded Broadcom, GB Ethernet NICS with TOE • PowerEdge R610 Heat Sink for 1Processor • (4) 73GB 10K RPM Serial-Attach SCSI 2.5" Hot Plug Hard Drive • PERC 6/i SAS RAID Controller 2x4 Connectors, Internal, PCIe256MB Cache • Windows Server 2008, Web Edition • DVD ROM, SATA, Internal • RAID 5 for PERC 6/i Controller • Sliding Ready Rails Without Cable Management Arm • Energy Smart Power Supply Redundant, 502W
NVR 40
Dual Xeon Processors at 2.8 GHz, 4 GB memory, 2 x 73 GB drives configured as RAID 1 for the OS, 2 x 146 GB drives configured as a RAID1 for recordings, Redundant Power.

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- PowerEdge R610 with Chassis for Up to Six 2.5-Inch Hard Drives
 - (2) X5560 Xeon Processor, 2.8GHz 8M Cache, 6.40 GT/s QPI, TurboHT
 - 4GB Memory (4x1GB), 1066MHz Single Ranked UDIMMs for 2 Processors, Adv ECC
 - Embedded Broadcom, GB Ethernet NICS with TOE
 - PowerEdge R610 Heat Sinks for 2 Processors
 - (2) 73GB 10K RPM Serial-Attach SCSI 2.5" Hot Plug Hard Drive
 - (2) 146GB 10K RPM Serial-Attach SCSI 2.5" Hot Plug Hard Drive
 - PERC 6/i SAS RAID Controller 2x4 Connectors, Internal, PCIe256MB Cache
 - Power Saving BIOS Setting
 - Windows Server 2008, Web Edition
 - DVD ROM, SATA, Internal
 - RAID 1/RAID 1 for PERC 6/i or SAS 6/iR Controllers
 - Sliding Ready Rails Without Cable Management Arm
 - Energy Smart Power Supply Redundant, 502W
-

Caveats

This section addresses known issues in this release, most of which have an easy workaround. For more information about any item, or help with an issue not listed here, contact your reseller or VBrick Customer Service.

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- When recording to an NVR from an MPEG-1/MPEG-2 encoder, and you stop the recording before it reaches 1% of the Defined Record Duration, the FTP will fail with an error message on the Status page. The NVR does not recognize extremely small files and this is standard behavior.
 - The NVR 40 lets you record any combination of up to 40 MPEG-1, MPEG-2, MPEG-4, H.264 and WM streams at a time. There are however performance limitations when recording multiple high-rate MPEG-2 or WM streams at the same time. At MPEG-2 rates up to 5.5MBps or WM rates up to 1.2MBps 40 simultaneous recordings are fully supported. At higher rates however the full licensing capacity cannot be used. For example, when using the **Best Quality** WM template at 4.5MBps, 10 simultaneous records are supported; when using MPEG-2 at 15MBps, 15 simultaneous recordings are supported.
 - Batch recording to an NVR from a WM VBrick encoder is not supported; the **Batch** tab is greyed out on the **Scheduling** page. Batch recording is supported from all other VBrick encoders.
 - The Portal Server and the NVR are tightly linked. In order to avoid backward compatibility issues, always upgrade the NVR from the same package when you upgrade the Portal Server, and vice versa.
 - In some cases, because of a naming resolution issue, a LAN Network Video Recorder (NVR) does not record when the VEMS Portal Server server is in a DMZ. As shown on the status page, the recording will either fail or run indefinitely (without actually recording). To work around this issue, modify (or create) a `hosts` file on the VEMS Portal Server as shown below. Go to `c:\windows\system32\drivers\etc\hosts`. Open the `hosts` file in an editor and add the IP address and computer name of the NVR as shown below. (If the `hosts` file is not present, you must create one by saving a `txt` file with no extension.)

```
# Copyright (c) 1993-1999 Microsoft Corp.
```

```

# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space. Additionally, comments (such as these) may be inserted on
# individual lines or following the machine name denoted by a '#' symbol.
# For example:
# 102.54.94.97      rhino.acme.com # source server
# 38.25.63.10      x.acme.com      # x client host

127.0.0.1          localhost
nvr ip address     nvr computer name

```

- The VEMS Portal Server and the NVR must be in the same time zone. Also, in order to record successfully, the system time on VEMS Portal server and the NVR must be synchronized. You can synchronize the machines, for example, by running the Service for Windows Time on both machines. See "Synchronizing the Portal Server and the NVR" in the *Portal Server Admin Guide*.
- In order to record multiple streams, the Recorder path must be under FTP root. For example, if root is `C:\inetpub\ftproot` the Recorder path must be `C:\inetpub\ftproot\`
- If you try to uninstall the Microsoft .NET 1.1 framework prior to uninstalling the Network Video Recorder, the uninstall of the Microsoft .NET 1.1 framework will fail because the Network Video Recorder uses this framework. If you need to uninstall the Microsoft .NET 1.1 Framework, you first need to uninstall the Network Video Recorder software.
- The default FTP path in IIS is automatically set via the installer, but, depending on the particular machine's configuration, it may need to be changed. The installer sets the default FTP path to `D:\inetpub\ftproot` in IIS, if a D: drive is detected. Otherwise it sets the path to `C:\inetpub\ftproot`. If you have a machine with an E: drive and you want to set the FTP path to E:, you need to do two things. First, go to IIS and use the right mouse button to select on the **Default FTP Site**, select Properties from the popup menu. The Default FTP Site Properties dialog box will appear. Select the **Home Directory** tab. In the Local Path edit box, change the value to `E:\inetpub\ftproot` and hit **OK**. Second, you need to go to the **Admin Console > Global Settings > Global Assignments** and change **Select FTP root path** to `E:\inetpub\ftproot` and then change **Select a media storage path** to `E:\inetpub\ftproot\MCS\Record`.



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