



VBrick v1.0 OSN ViP
Quick Start Guide

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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.

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OSN ViP Overview

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OSN ViP Overview

VBrick delivers Enterprise IPTV solutions that scale with your needs. The ViP (Video Portal) is VBrick software designed for installation on the 3Com® OSN, transforming the module into a web-based video portal for accessing live streams and on-demand Windows Media® video assets. The OSN (Open Services Networking Module) is Linux-based module integrated within 3Com routers and switches that provides an open service delivery platform for the VBrick ViP. Tightly integrated with the OSN, the ViP enables automated discovery of live video from VBrick WM Appliances, and provides access to stored video assets onboard the OSN's internal storage or via any web server or Windows Media streaming server. The user interface provides the ability to locate available media assets from Windows PCs via an Internet Explorer. The ViP is designed for a variety of online and on-demand applications:

- Live information distribution via video
- Record and archive meeting
- Training and education
- Security monitoring
- Commercial television distribution
- Priority/Emergency video notification

Note The ViP plays Windows Media (.wmv) files only. **ViP is a browser-based, Windows application that runs on Internet Explorer 6.0 or higher only.** It is not supported on Firefox and does not run on Linux or Macintosh computers.

Live Video

The ViP automatically detects VBrick WM video from any number of VBrick appliances. The VBrick appliances may be on the same network as the ViP or they may be located anywhere in the world. The ViP will detect the live video and present it for immediate selection and viewing. Simply select **Live** from the menu and then click on any video title.

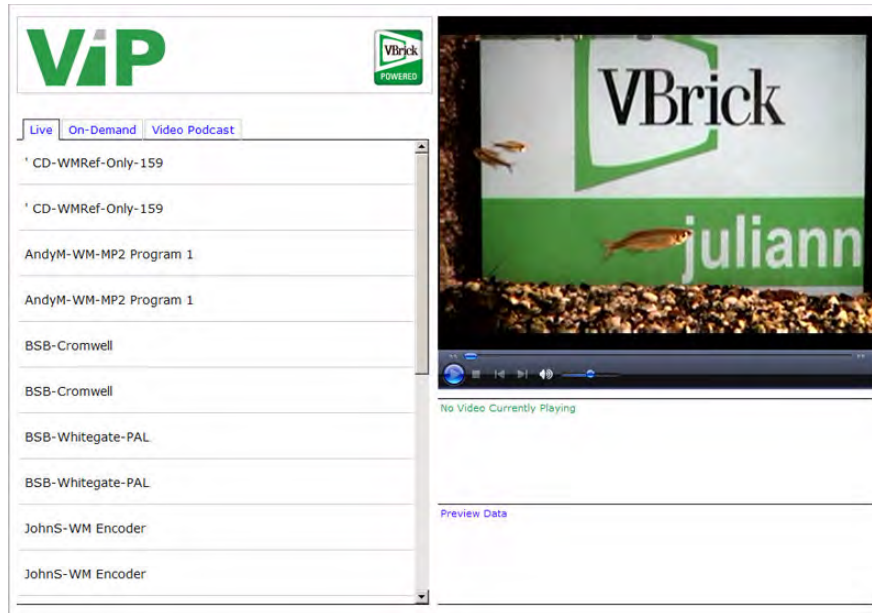


Figure 1. Live Video

Stored Video

The ViP will display a list of stored videos. The stored videos may be uploaded and delivered directly from the ViP's internal hard disk (via progressive download), or the video may come from virtually any local or Internet-connected web server for WM streaming server. Simply select **On-Demand** from the menu and then click on any video title.

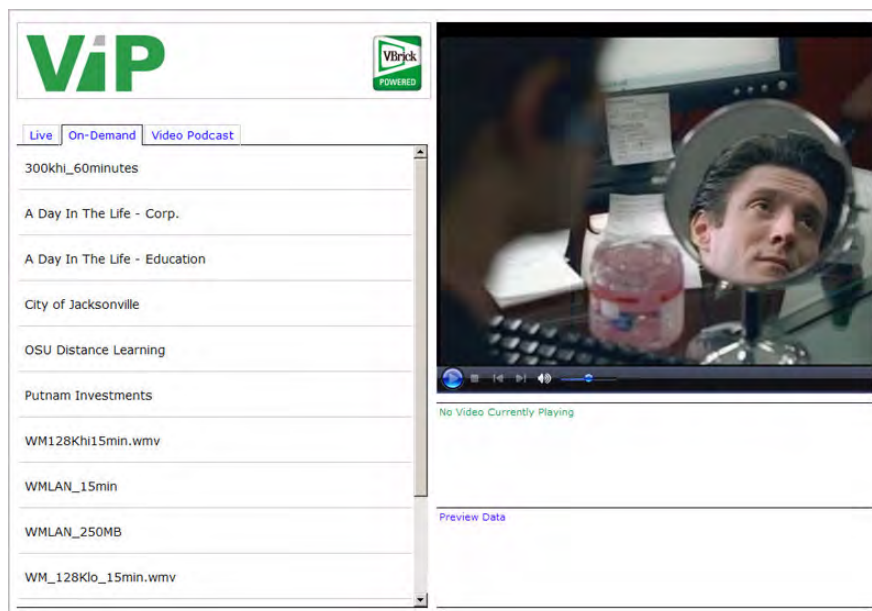


Figure 2. Stored Video

Video Podcasting

The ViP will host and display a list of your video Podcasts. Podcasts are uploaded to the ViP via the "Podcast Transcoder" or a similar third-party tool. The transcoder converts a .wmv

file to an .mp4 and uploads it to the OSN hard drive. *The video plays on your iPod—not on the ViP.* A Podcast subscriber simply enters the provider URL in iTunes (go to **Advanced > Subscribe to Podcast**) or similar viewer to subscribe to the video Podcast.

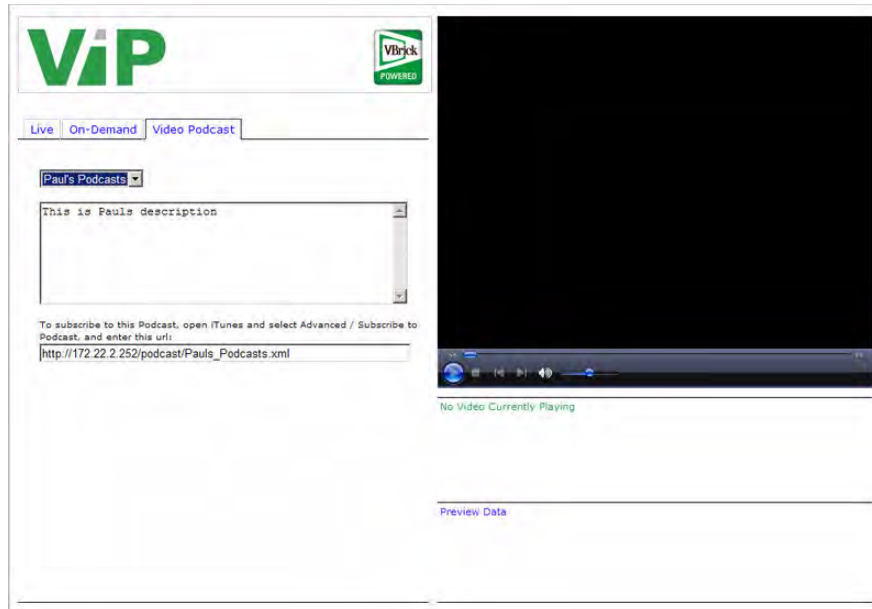


Figure 3. Podcast Video

Priority Alert

When there is a priority event or an emergency, the ViP can be used to automatically open a selected live or stored video on everyone's desktop.

OSN ViP Setup and Administration

The ViP administration function allows you to add links to live or stored video files, to upload video files, and to delete existing video files. The ViP software uses the configured OSN IP address and/or domain and delivers the default home page. For example, if the IP address of the OSN is **123.123.123.123**, then a viewer need only enter this to access the viewing pages.

Login

The administration page is launched by appending **/vip/admin** to the IP address of the ViP (for example **http://123.123.123.123/vip/admin**). The user name is always **admin** and cannot be changed. The password can be changed on the **Security** tab.

Table 1. Default Username and Password

Username	admin
Password	vbrick

Add Files

Figure 4. Add Files

<p>Upload WMV File</p>	<p>Use the Browse button to select and upload video files not exceeding 250 MB. Use any alphanumeric characters in the filename but avoid spaces and special characters. The format for filenames is <code><filename.wmv></code> Note that an upload will abort if you close the window or navigate to a different page while an upload is in progress. Complete the remaining fields the remaining fields as explained below and click Submit.</p> <ul style="list-style-type: none"> • Check this box to upload a new video file to the ViP. When checked, the only upload option is Local VoD. Complete the remaining fields and then browse to a .wmv Filename on your computer and click Submit. The file upload time will depend on the file size and local bandwidth availability. • Uncheck this box to add a reference to video file located elsewhere (this changes the Filename field to URL). The reference can point to a Remote VoD or to a Live video. For example: To point to a video file located on a Remote VoD such as a web server or a streaming server, enter: http://<ip_address>/<filename.wmv> To point to a Live URL for a live video (that is not automatically listed) enter: http://<ip_address>/<publishing_point>
<p>Live Stream or Stored File</p>	<p>See above. If uploading a .wmv file, the only option is Local VoD. If not uploading a .wmv file, you can select Remote VoD or Live.</p>

Title	The optional information in these fields is displayed below the player window when a video is playing or in the Preview Data area when you mouseover a video title.
Author	
Copyright	
Date	
Description	
Tag	Reserved for future use.
Filename/URL	Displayed when you uncheck or uncheck Upload WMV File respectively.

Delete Files

Select **Delete Files** to remove any video file or reference that has been set by **Add Files**. Simply check the video to delete and click **Remove Video(s)**.

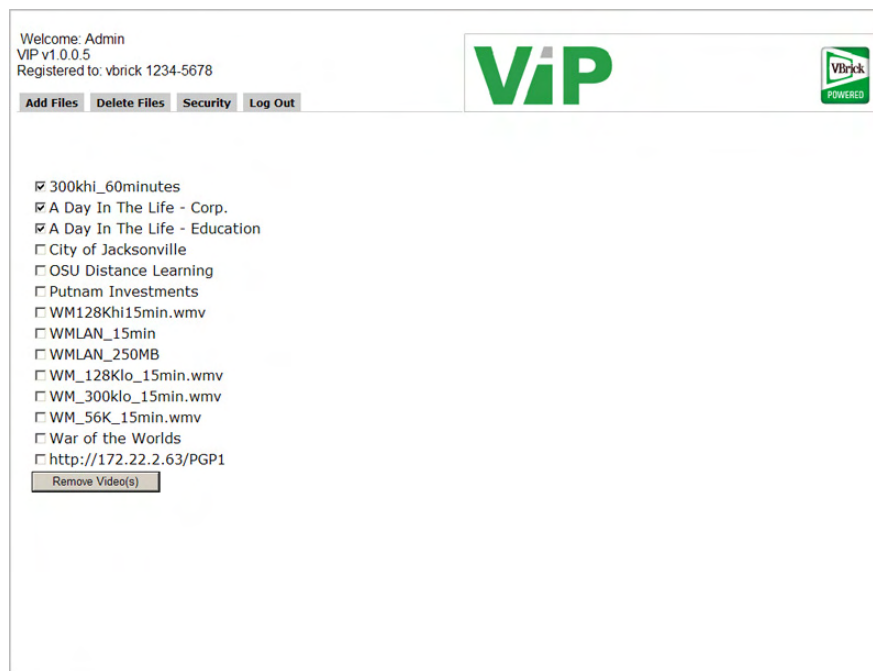


Figure 5. Delete Files

Security

This window lets you set and confirm a new password. The ViP administrator user name is always **admin**. The password can be changed as desired.

Logout

Click this tab to logout immediately.

OSN ViP Performance Issues

When using **live video**, the number of viewers of live video is limited only by the capacity of your network and the source VBrick appliances. For multicast, you may have a virtually

unlimited number of viewers. For unicast live video, the capacity is limited to the capacity of the VBrick (up to 200 viewers), the VBrick reflector (200 viewers), or a WM Server publishing point.

When using **stored video**, the number of viewers of stored video is subject to many factors. Video that is stored on the ViP is delivered via "progressive download." This method is not streaming but rather a file download that begins to play before the whole file is downloaded. Progressive download should be used only for smaller video files (less than approximately 25 MB) because navigation of the video is not possible until the whole file is downloaded to the user's computer. Also, progressive download does not scale to a large number of simultaneous viewers. Video files uploaded to the ViP are intended for small enterprises where there is occasional or light usage. The ViP is also limited to approx 65 GB of storage.

Note For heavy usage, and/or where the files are lengthy, they should be placed on a streaming server and the reference URL should point to the video on the server.

OSN ViP FTP Accounts

The ViP comes preconfigured with four special FTP accounts. You access these accounts via conventional FTP.

Table 2. ViP FTP Accounts

Name	Description	Details
Videos	The account is used to directly upload new videos and their associated XML files and/or to delete existing videos and XML files. If possible it is suggested that the administrator use the administrative interface to upload files. However, should files exceed 250 MB, then FTP is required. Manual creation of XML descriptor files is required to add videos in this manner.	Username: videos Password: user Viewing URL: http://ip/videos
Podcast	This account is used to provide direct access to Podcasts that have been uploaded to the ViP via the VBrick Pod Transcoder.	Username: podcast Password: user Viewing URL: http://ip/podcast
Presentation	This account is used to give multimedia presentations via a (future) version of VBPresenter.	Username: presentation Password: user Viewing URL: http://ip/presentation
Priority	This account is used by the VBrick Priority Alert System to provide desktop priority announcements.	Username: priority Password: user Viewing URL: http://ip/priority

WM Appliance Configuration

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Your VBrick WM Appliance can automatically send an announcement to the ViP whenever it is on and transmitting video. The ViP program list is dynamic and is based on the ViP's receipt of VBrick Program Announcements or SAPs. The ViP listens for two types of announcements: Multicast SAPs and Unicast messages.

Configuring for Multicast

Use the following steps to configure a VBrick for multicast. Basically, you set your VBrick **Announce(SAP)**, **Program Name**, **Program Author**, and **Copyright** field as desired. When your VBrick is set to deliver video via multicast, and both the ViP and the target viewer can receive that multicast, the program information is available for selection, and the viewer can view the live video. The information is transmitted by each configured VBrick as long as **Announce Program Guide (SAP) for Multicast** is enabled. Go to **Configuration > Encoder > Announce(SAP)** and verify the **IP Address** and **Port** are set to **224.2.127.254** and **9875**.

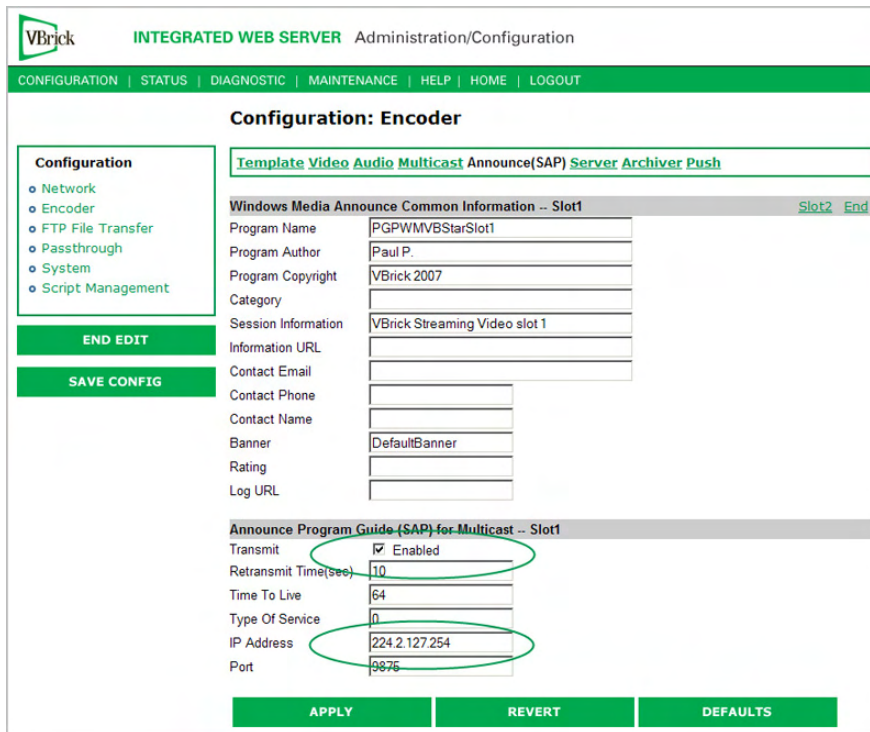


Figure 6. Multicast Configuration

Configuring for Unicast

For unicast (i.e. non-multicast), the ViP is informed about the video URL from the source VBrick. This is set in the VBrick WM Appliance (**Configuration > Encoder > Server > Announce External Server**). Select **Enable** and set the **IP Address** or **Host Name** to the IP Address or Host Name of your ViP (e.g. <http://123.123.123.123>) and be sure the port is set to **9878**. Enter the viewing URL which may be the URL of a VBrick reflector or an external, Internet-connected streaming service provider like PowerStream.

If you are not using an external reflector (e.g. PowerStream), then you may elect to enable **Configuration > Encoder > Server > Announce HTTP and RTSPU Server**. You may enable HTTP or RTSPU (HTTP is more common). This will cause the VBrick WM Appliance to announce its internal streaming server URL to the ViP.

The screenshot displays the VBrick Integrated Web Server Administration/Configuration interface. The page is titled "VBrick INTEGRATED WEB SERVER Administration/Configuration" and includes a navigation menu with options like CONFIGURATION, STATUS, DIAGNOSTIC, MAINTENANCE, HELP, HOME, and LOGOUT. The main content area is divided into two sections: "Announce HTTP and RTSPU Server -- Slot1" and "Announce External Server -- Slot1".

The "Announce HTTP and RTSPU Server -- Slot1" section includes the following settings:

HTTP SAP Transmit	<input checked="" type="checkbox"/> Enabled
RTSPU SAP Transmit	<input checked="" type="checkbox"/> Enabled
Retransmit Time(sec)	25
Time To Live	64
Type Of Service	0
IP Address	255.255.255.255
Port	9878
HTTP URL	http://172.22.132.99:8080/vbrickvideo1
RTSPU URL	rtspu://172.22.132.99/vbrickvideo1

The "Announce External Server -- Slot1" section includes the following settings:

Transmit	<input checked="" type="checkbox"/> Enabled
Stream Advertisement	Pull Group1 to Microsoft Reflector
Retransmit Time(sec)	25
Time To Live	64
Type Of Service	0
IP Address or Host Name	172.22.2.252
Port	9878
URL	http://172.22.132.99/vbs1multi.nse

At the bottom of the page, there are three buttons: APPLY, REVERT, and DEFAULTS. A green oval highlights the "Stream Advertisement" dropdown menu in the "Announce External Server" section.

Figure 7. Unicast Configuration

Configuration Guidelines

- If you are using multicast and all viewers are within your multicast-enabled network, only use **Multicast Announce(SAP)**.
- If you are not using multicast and all viewers are within your local area network, use only **Announce HTTP or RTSPU**. The video will come from each VBrick's internal streaming server.
- If your ViP is exposed to the public Internet and your video sources are available on the public Internet, use **Announce External**. The video will come from a VBrick via an external reflector.
- If you have one or more multicast videos, and a viewer is not able to receive multicast (e.g. they are on the public Internet), they may select the video but it will fail. This is normal behavior.

OSN ViP Installation

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Installation Overview

The ViP package is a set of tools and web pages which give the 3Com OSN module the ability to direct users to live and stored video as well as provide streaming of locally stored content. The ViP package consists of the following components.

Table 3. Installation Components

Component	Description
VBTV Listener	The VBTV Listener is a Java-based SAP and announcement listener application. This application has been optimized to run on the 3Com OSN Linux module running Cent OS.
ViP PHP Interface	The ViP PHP interface is a set of web pages which provide the user interface for access to video. The ViP PHP interface relies on the VBTV Listener to provide the XML data files necessary to build the user interface.
Java JVM	Java Virtual Machine.
VSFTP	Very Secure FTP server.

Requirements

An Apache Web Server with PHP module is required.

Command Line Installation

The `vip.tar` needs to be uploaded to the OSN unit. Any SFTP tool can be used to copy `vip.tar` to the OSN unit. For your convenience we've included a batch file and SFTP application to assist you.

▼ To install ViP from the Command Line:

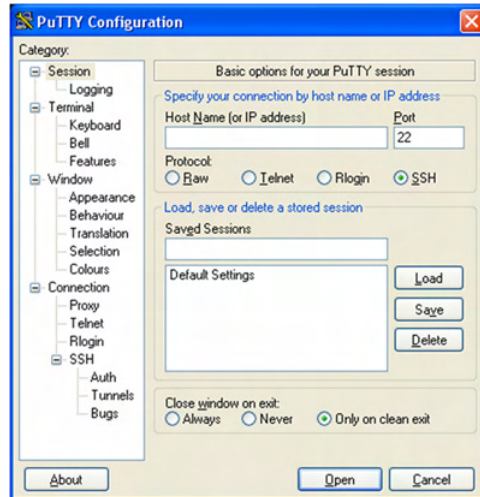
1. Launch a DOS window by double clicking the `runme.bat` file in the `install` directory.
2. In the DOS window, enter the following command (insert the OSN IP address where appropriate):

```
psftp root@IP_ADDRESS_OF_OSN -b copy.scr
```

- You will be presented with an "enter password" prompt. Enter the root password to your OSN which by default is **root**. The **vip.tar** file will now be automatically copied to the **/tmp** directory on the OSN. During this time, there may be a pause as the files are transmitted to the OSN.

Note Please wait while this 150 MB file is transferred. The command line stays blank and there will be no indication that a file transfer is currently in progress.

- Once the file is successfully transferred, you should be presented with a command prompt again. At this point, type the following command to launch the PuTTY application: **putty**



- In the **Host Name (or IP address)** field, enter the IP address of your OSN module.
- If it is not already selected, select the **SSH** radio button.
- Click the **Open** button and a Putty SSH command window should open.
- You should be prompted to log in. Do so using the user ID of **root** and the root password which by default is **root**
- Upon successful login, change directories to **/tmp** with the following command:
cd /tmp
- Once in the **/tmp** directory, untar the **vip.tar** file with the following command:
tar -xvf vip.tar
- Once extracted, change directories to the **vip** directory with the following command:
cd /tmp/vip
- The **install_vip.sh** file needs to have its permissions modified. Do so with the following command:
chmod 755 install_vip.sh
- Next, run the installer with the following command:
./install_vip.sh

At this point, you will be presented with interactive questions regarding licenses and installation procedure. Answer all questions with yes, no, company name and serial number (found on the CD or box) as needed. This script will copy all files to their appropriate location, change their file permissions as needed, create directories, and add the

`vbtvlistener.jar` file as a service which will run on boot up for run levels 2 through 5. While this script executes you may see a **FAILED** notice when the http daemon is being stopped. This will not affect the service and will not cause a problem. Once installed on the OSN unit, you will see these files in the following directory structure:

```
/vip
  .htaccess
  httpd.conf
  install_vip.sh
  jre-6u2-linux-i586-rpm.bin
  php.ini
  readme **this file**
  vbtvlistener
  .conf
  vbtvlistener.jar
  vip.php
  vipindex.php
  vsftpd.conf
  vsftpd-2.0.1-5.EL4.5.i386.rpm
  /admin
    index.php
    ulstatus.php
    uploader.php
    vip_admin_add.php
    vip_admin_logout.php
    vip_admin_pwchange.php
    vip_admin_remove.php
    vip_admin.php
  /conf
    pswds
    taglist
  /css
    admin.css
  /images
    vip_logo.gif
  /includes
    admin_login.php
    constants.php
    functions.php
    podcast.inc
  /js
    loginjs.php
  /saps
    *EMPTY*
  /videos (Sample content may vary)
    a_day_corp.wmv
    a_day_corp.xml
    a_day_education.wmv
    a_day_education.xml
    jacksonville_300k.wmv
    jacksonville_300k.xml
    OSU_300k.wmv
    OSU_300k.xml
    PutnamInvestments_Final300k.wmv
    PutnamInvestments_Final300k.xml
```

```
/bin/vbtlister.jar
/etc/vbtlister.conf
/etc/rc.d/init.d/vbtlister
```

If the installation completes successfully without error you should be able to navigate to the IP address of the OSN with Internet Explorer and see the launch page: http://IP_Address_of_OSN. You should be presented with a user interface which will, after one minute, display any available live streams on your network. You should also be able to click **On-Demand** and select various sample programs.

VBTV Listener Configuration

If the installation is successful and all files are successfully placed in their proper default locations, you will find the configuration file for the SAP listener at the location `/etc/vbtlister.conf`. It is suggested that you use the default configuration file. Should a specific configuration be required, be sure to restart the `VBTVListener` after the configuration file is modified. To do this, either reboot the machine or use the command `service vbtlister stop` and then `service vbtlister start`

Changing FTP and Root Passwords

- ▼ To change the FTP and Root passwords:
 1. Go to the "software" folder on the Product CD.
 2. Double-click on `putty.exe`
 3. When prompted for UID and PW enter the UID of `root` and the PW for root (default is `root`).
 4. A command line should appear. The command to change the password for the following users is: `passwd <username>` For example: `passwd root` will change the password for the root user (recommended) and you will be prompted to confirm.

Users:

```
root
videos
podcast
presentation
priority
```

WM Appliance Configuration

For a brief explanation of how to configure a VBrick WM Appliance to work with a ViP, see [WM Appliance Configuration](#) on page 7. For complete encoder documentation, please see the *VBrick WM Appliance Admin Guide*. Note that the latest documentation for VBrick products is always available on the web. If you have Internet access and want technical information about any VBrick product, go to www.vbrick.com/documentation

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