



VBrick Systems VBDirectory

VBDirectory v5.2
User Guide



December 7, 2010
4410-0061-0012

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VBDirectory v5.2 User Guide

This online help is best viewed with **Internet Explorer 8.0** (Windows), **Safari 4.0** (Macintosh), or **Firefox 3.6** (Linux) at a minimum screen resolution of 1024x768. (These help pages may not display or function properly with earlier versions or other browsers.) For best results, please take a few minutes to upgrade your browser from the update pages at [Microsoft](#), [Apple](#), or [Mozilla](#). Copyright © 2010 VBrick Systems, Inc., Inc. All rights reserved.

VBDirectory 5.2 Online Help

This online help system provides access to VBrick VBDirectory documentation. It has a powerful search engine so you can get answers to technical questions in seconds; it also has the complete documentation set in PDF format if you need hard-copy. Our publications team is committed to providing first-rate documentation and your feedback is important to us. If you find errors or omissions, click the e-mail icon in the upper-right corner of this window or send your feedback to documentation@vbrick.com. This online help system includes the following documents.

1. Getting Started	describes the application and explains the two methods that can be used for installation.
2. Using the Interface	describes the user interface and explains how to configure timeout values, filters, and other options.
3. Connecting to VBrick Devices	explains how to connect to different VBrick devices and how to configure the host names and SAPs used by VBDirectory.

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Getting Started

Topics in this chapter

Introduction	1
Installation	2

Introduction

Many VBrick products are shipped with a management application called VBDirectory, which provides quick reference and access to all VBricks on a network. It is available as a standalone program available on the product CD (or from the VBrick website) and bundled with the release of many VBrick products. The VBDirectory application listens to the Management SAP (Session Announcement Protocol) sent by each VBrick on the network. This allows the administrator to locate the name and IP Address of each VBrick on the network through its Host Name which is set in the Internet Protocol, or IP section of the software. If a Host name has not been selected, the VBrick is identified through the Media Access Control (MAC address, a hardware address that uniquely identifies each node of a network. On Ethernet models, the VBrick's Host Name identifies the VBrick to various network applications, including DHCP SNMP and VBrick application tools.

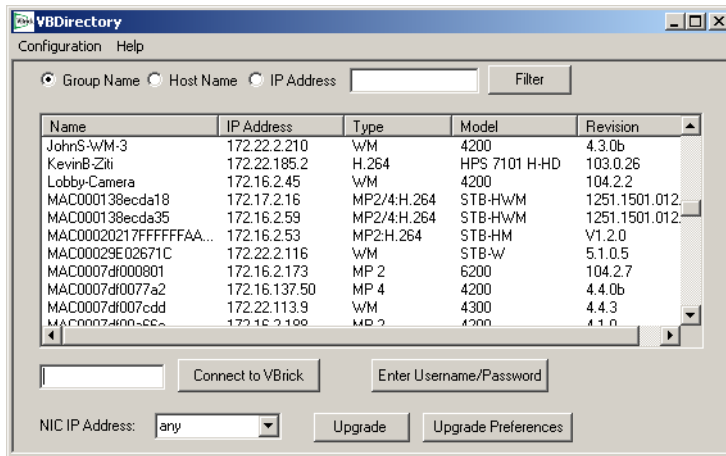


Figure 1. VBDirectory Application

Note VBDirectory is compatible with software release 2.0.0 or higher for the VBrick 6000 Series and release 1.00 for VBrick 7000 Series. It is not backwards compatible with previous versions of code.

VBDirectory significantly simplifies management of environments with multiple VBrick appliances. It automatically recognizes when VBricks are added or removed from the network and allows VBricks to be grouped together for management purposes. As long as SAP transmit is enabled, the VBrick sends a Management SAP to VBDirectory's default address. When a new VBrick device is added to the network, VBDirectory automatically

locates it and adds it to its list. Double-clicking the VBrick address after locating the SAP in the VBDirectory interface launches a Web Interface that provides VBrick control through one of the following:

- VBrick 4000, 5000 and 6000 Series (MPEG-2, MPEG-4, and WM) appliances through the Integrated Web Server (IWS).
- VBrick 7000 Series H.264 encoders.
- STB-M – MPEG set top boxes through a web browser interface.
- STB-W – Windows Media set top boxes through a web browser interface.
- STB-HMW – H.264, Windows Media, or MP 2/4 set top boxes through a web interface.

Installation

The PC running VBDirectory must be connected to the network. and there needs to be at least one VBrick configured to send Management SAPs. It operates on any PC that has access to the network. VBDirectory must be closed during installation or upgrade to avoid an error being reported. If the application is open, just close the file and complete the installation. VBrick Systems recommends the following minimum system specifications:

- 2000, XP, Vista, or Windows 7
- Any Pentium processor.
- 128 MB RAM.
- Minimal space required (under 400K).

Installation Methods

VBDirectory is installed in either of the following two ways:

- Run [SetupVBDirectory_x_x.exe](#) and follow the on-screen directions. The Setup program installs the program on your computer. It is recommended that the default settings be used. The setup installs the software in the default location in Program Files > VBrick > VBDirectory. Use the default folder or specify the location.
- VBDirectory is installed along with the installation or upgrade of MPEG-2, MPEG-4, H.264 and WM VBrick appliances when using Intelligent Download, the VBrick installation and upgrade program.

Using the Interface

Topics in this chapter

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Configuring VBDirectory	4

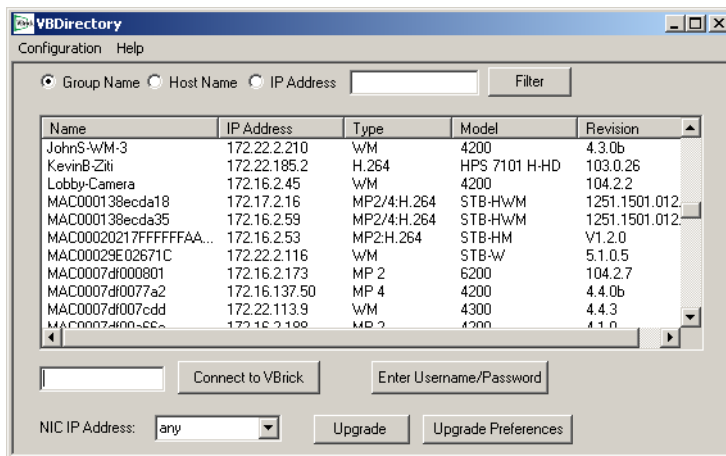
Launching VBDirectory

VBDirectory runs from the Start menu, Go to Start > Programs > VBrick > VBDirectory. You can create a shortcut by right-clicking on VBDirectory and choosing Create Shortcut.

- VBDirectory can be resized by dragging the corners or sides of the menu.
- You can sort the listing by clicking on any column header.
- Check the version of VBDirectory by viewing the Help > About Box. The About Box can be accessed by selecting the VBDirectory icon in the top left of the menu or by right clicking anywhere in the title bar or from the Windows bar.

VBDirectory Settings

VBDirectory detects and identifies all VBricks that are configured to send Management SAPs to a network address accessible to the PC on which VBDirectory is running.



The interface window for VBDirectory displays a list of VBrick devices on the network:

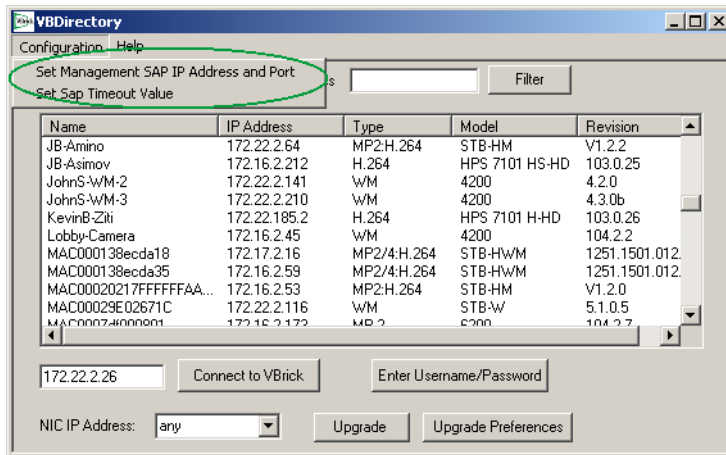
Name	Either the Host Name or MAC address of the device.
IP Address	The IP address of the device.
Type	Stream type associated with device: MP 1, MP 2, MP 4, H.264, WM.
Model	Label for VBrick devices (for set top boxes see Table 1).
Revision	Revision level of currently installed software.

Table 1. Set Top Box Models

Type	Model	Description
MP 1/2/4	STB-M	MPEG STB
WM	STB-W	WM IP Receiver
MP2:H.264	STB-HM	AmiNET130
MP2/4:H.264:WM	STB-HWM	Multi Format STB

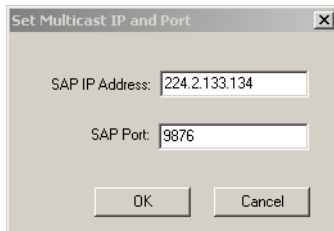
Configuring VBDirectory

The Configuration pull down menu contains the settings for the **Default Management SAP IP Address and Port** and the **Timeout Value**.



Management SAP IP Address

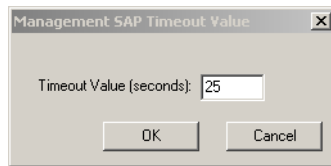
VBDirectory is configured to pick up Management SAPs transmitted by VBricks. The default address from which the Management SAPs are obtained is 224.2.133.134, port 9876. If the default address from which the Management SAP is received is changed in VBDirectory without changing the SAP address to which the Management SAP is sent by the VBrick, the Management SAP will no longer be visible.



Timeout Value

The SAP Timeout Value specifies the length of time a Management SAP will remain on the list after it stops being transmitted. This configuration option works in tandem with the Retransmit Time value in the Management Screen of the VBrick. If the SAP Timeout Value is smaller than the Retransmit Time, then that VBrick's Management SAP will keep

intermittently appear on VBDirectory's list. Take this into account when changing the SAP Timeout Value. The default value is set at 25 seconds.

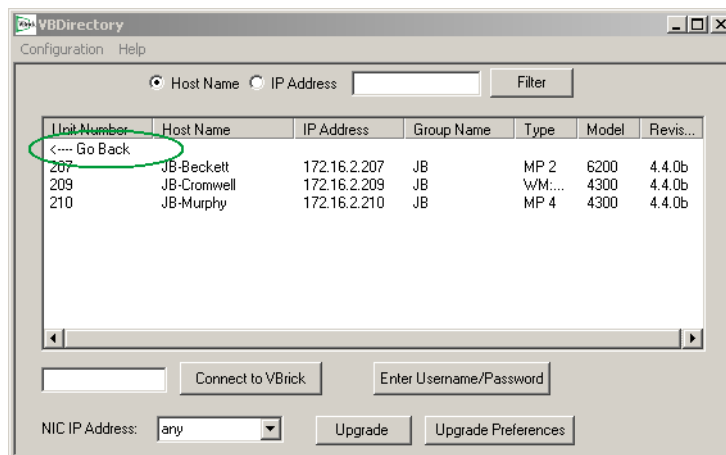
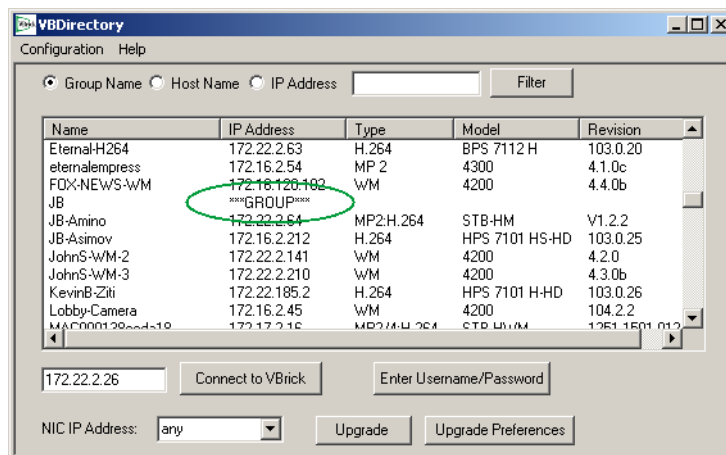


Filter

It is possible to filter the list through the Group Name, Host Name or IP Address by selecting one of the radio buttons and clicking on **FILTER**. To return to the entire list, click the same button, which will have toggled to **UNFILTER**.

Groups

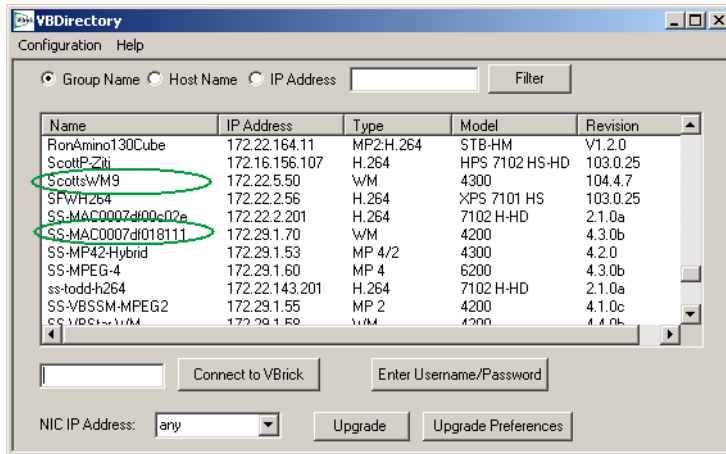
The configuration screens on the VBrick allow the operator to organize VBricks into groups. This helps simplify identification and streamline access to VBricks within a group. Within the group an individual VBrick is identified by a unit number. Dual encoders or decoders are identified by the same number. Displaying a group requires double-clicking on it:



- Double-click the name of a group to display a list of the contents.
- Dual encoders/decoders display the same Unit Number.
- Double-click **Go Back** at the top of the list to return to the entire list.

Host Name

The **Host Name** is set in the Internet Protocol, or IP section of the VBrick. Please refer to the users guide for the model. If a Host Name has not been selected, the VBrick is identified through the Media Access Control (MAC) address, a hardware address that uniquely identifies each node of a network. Host Name is set in the IP configuration section of the VBrick. If a Host Name is not set, the VBrick is identified by the MAC address.



Connecting to VBrick Devices

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STB-HWM (MP2/4:H.264:WM)	20

Overview

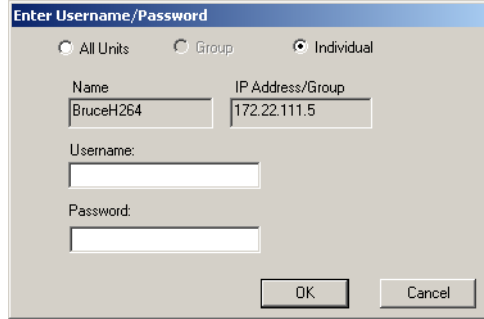
Connect to a VBrick by double-clicking on a highlighted selection. VBDirectory will launch the appropriate communication program to connect with the VBrick. For detailed information on the Integrated Web Server and VAdmin, please refer to the appropriate MPEG, WM, or H.264 *Admin Guide*.

- Connection to VB4000-5000-6000 Series VBricks will be made through the **Integrated Web Server** (IWS).
- Connection to VBrick 7000-8000-9000 Series H.264 encoders will be made through **VAdmin**.
- Connection to STB-M set top boxes will be made through an **Administration** web page.
- Connection to the STB-W set top boxes will be made through a **WM IPR Admin** page.
- Connection to the STB-HWM will be made through a browser interface.

Note If a VBrick does not appear in the list, it is still possible to connect by entering the IP address in the block and selecting **Connect to VBrick**. When the appropriate management program is displayed, enter the **User Name** and **Password** and select **OK**.

Username and Password

The **Username** and **Password** can be set for all units, groups or individual units. VBDirectory keeps track of Username and Password use. The selection available is dependent on whether a single unit or group is selected in the VBDirectory interface.



All Units

- ▼ To set the Username and Password for all units
 1. Do not highlight a selection in the VBDirectory interface window.
 2. Select the “Enter Username/Password button.
 3. The All Units radio button will be selected.
 4. Enter a Username and Password.
 5. Select OK.
 6. Confirmation is requested.

Group

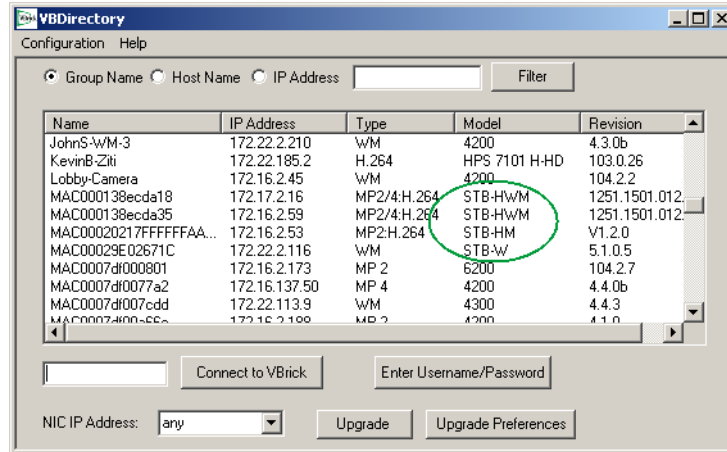
- ▼ To set the Username and Password for a group
 1. Highlight a group in the VBDirectory interface window.
 2. Select the Username/Password button.
 3. The Group radio button will be selected.
 4. Enter the Username and Password.
 5. Select OK.

Individual

- ▼ To set the Username/Password for an individual unit
 1. Highlight the unit in the VBDirectory interface window.
 2. Select the Enter Username/Password button.
 3. The Individual radio button will be selected.
 4. Enter a Username and Password.
 5. Select OK.

Selecting Set Top Boxes

As shown in the VBDirectory window, Set Top Boxes are clearly distinguished by **Model**. To manage a set top box, double-click on **Name** or select an STB and click **Connect to VBrick**.



Model	Description	Click "Connect to VBrick"
STB-M	MPEG STB	Launches MPEG Administration page
STB-W	WM IP Receiver	Launches WM IPR Admin page
STB-HM	AmiNET130	Launches Telnet page.
STB-HWM	Multi Format STB	Launches IP Set Top Box page.

4000-5000-6000 Series Encoders

4000-5000-6000 Connection

To connect to an individual VBrick, double-click on its name in the Name column (either the Host Name or MAC address), or single click the name and press the **Connect to VBrick** button. The default name is the MAC address of the VBrick. That will launch the Integrated Web Server (IWS) Login Page.

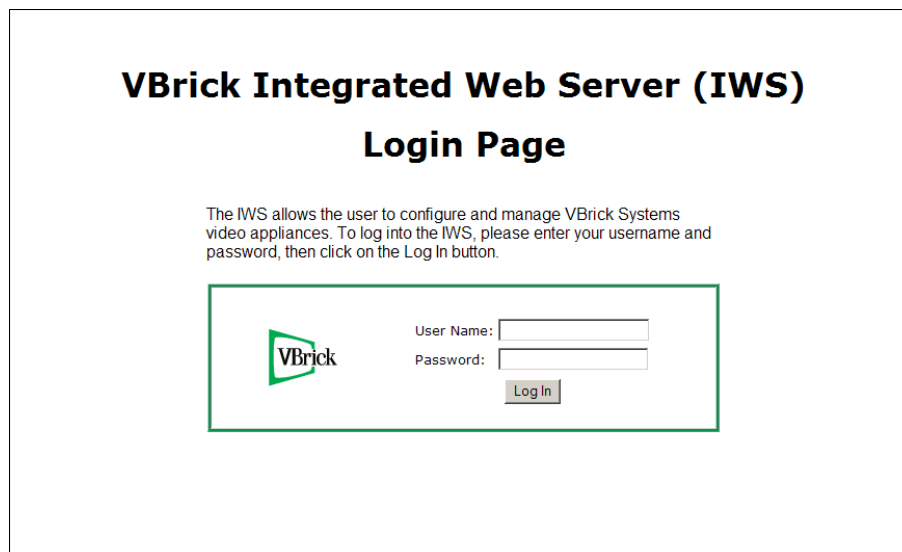


Figure 2. VB6000 Management Page

If connecting to a VBrick requires a Username and Password to be set, use the **Enter Username/Password** button. A pop-up box will appear allowing you to enter a new username and password. Press the **OK** button to confirm.

4000-5000-6000 Upgrade

Settings for Upgrade Preferences

If necessary, set the **Upgrade Preference** button in VBDirectory. For VB4000-5000-6000 appliances, select **VBDownload**.

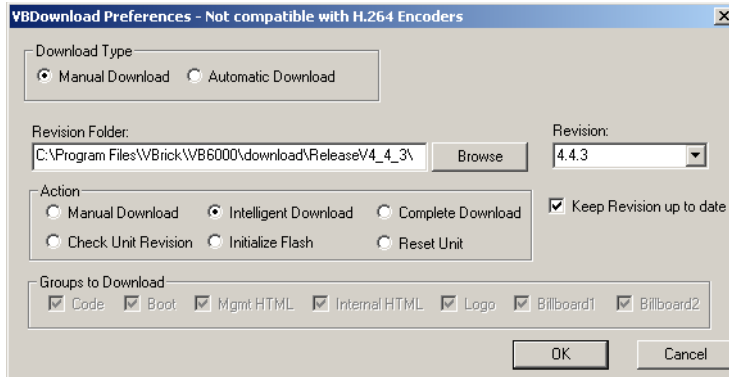


Figure 3. VBDownload Application

Download Type	Manual, Automatic.
Revision Folder	Browse to location or enter.
Keep Revision up to date	If checked, VBDirectory will keep track; if unchecked, it will need to be entered manually.
Action	Choose Action to perform.
Groups to Download	If Manual download is selected, choose the components.

▼ To use the Upgrade feature of VBDirectory for VB4000-5000-6000 series appliances:

1. Highlight the VBrick.
2. Select the **Upgrade** button to run VBDownload.
3. Browse to the location of the download
4. Select the VBDownload **Action** to perform.
5. Select OK.

Note If unable to connect, check that the Username and Password are entered using the Enter the Username/Password button on the VBDirectory interface window

4000-5000-6000 Settings

The following VBrick settings affect interoperability between the VB4000-5000-6000 series appliance and VBDirectory.

VBrick Host Name

The Host Name is set in the Configuration: Ethernet section of the Integrated Web Server (IWS) or in the corresponding Command Line (CLI) instructions. Refer to the *MPEG Appliance Admin Guide* for details.

The screenshot shows the VBrick Integrated Web Server Administration/Configuration interface. The main heading is 'Configuration: Network'. Underneath, there is a section for 'Ethernet Routing Management IPv6'. The 'VBrick Host Name' field is highlighted with a red circle and contains the value 'BruceMP2'. Other visible fields include Network DHCP (Enabled), IP Address (172.22.2.60), Subnet Mask (255.255.0.0), Gateway IP Address (172.22.1.5), Network Interface Speed (Automatic), Network Interface Type (Automatic), and Maximum Transmission Unit Size (1500). Below this is the 'Domain Name Server' section with Primary Server IP Address (172.16.1.100), Secondary Server IP Address (172.16.1.101), and Default Domain Extension (com). A 'BEGIN EDIT' button is visible at the bottom left of the configuration area.

Setting the Management SAP

These parameters define information used in the SAPs emitted by the VBrick, which are received by the VBDirectory management tool and other VBrick applications. They are found in the Configuration: Network > Management section of IWS or the corresponding Command Line (CLI) instructions. Refer to the *MPEG Appliance Admin Guide* for details.

The screenshot shows the VBrick Integrated Web Server Administration/Configuration interface. The main heading is 'Configuration: Network'. Underneath, there is a section for 'Ethernet Routing Management IPv6'. Below this, the 'Management SAP' section is visible. It includes fields for Group Name, Unit Number (1), and a table of Management SAP settings: Transmit Enable (Enabled), SAP Timeout (90), Retransmit Time (10), Time To Live (32), Type Of Service (0), IP Address (224.2.133.134), and Port (9876). A 'BEGIN EDIT' button is visible at the bottom left of the configuration area.

Transmit Enable	SAP transmit must be enabled in the SAP option settings.
SAP Timeout	The retransmit time set in the VBrick must be <i>less</i> than the SAP timeout value set in VBDirectory. The VBDirectory default timeout value is set at 25 seconds.

IP Address	The default address from which Management SAPs are obtained by VBDirectory is 224.2.133.134, port 9876. Sending SAPs from a VBrick to any address other than that, without changing the default VBDirectory configuration will make Management SAPs invisible to VBDirectory.
Group Name	This parameter defines the Group Name for this box. It is included in the Management SAPs used by VBDirectory. It is an optional setting used for organizing VBricks into groups to simplify use of VBDirectory.

7000-8000-9000 Series Encoders

7000-8000-9000 Connection

To connect to an individual VBrick, double-click on its name in the **Name** column (either the Host Name or MAC address), or single click the name and press the **Connect to VBrick** button. The default name is the MAC address of the VBrick. That will launch the Integrated Web Server (IWS) Login Page.

7000-8000-9000 Upgrade

Note The Upgrade Preferences functionality is not compatible with VBrick 7000-8000-9000 Series appliances.

▼ To use the upgrade feature of VBDirectory for VB7000-8000-9000 series appliances:

1. Highlight the VBrick.
2. Select the **Upgrade** button to run VBDownload.
3. Browse to the location of the download
4. Select the VBDownload **Action** to perform.
5. Select OK.

Note If unable to connect, check that the Username and Password are entered using the Enter the Username/Password button on the VBDirectory interface window

7000-8000-9000 Settings

The following VBrick settings affect interoperability between the VBrick 7000-8000-9000 Series appliances and VBDirectory.

Host Name

The **Host Name** is set on the System Configuration > Network page of VAdmin or in the corresponding Command Line (CLI) instructions. Refer to the *H.264 Encoder+ Admin Guide* for details.

The screenshot shows the VAdmin web interface. On the left is a 'Configuration Menu' with a tree view including categories like System Configuration, Advanced Configurations, Video/Audio Configuration, Program Configuration, Monitor, Program Status, and Troubleshoot. The main content area is titled 'System Configuration --> Network'. Under the 'Network' heading, 'Network DHCP' is checked and labeled 'Enabled'. Below are text input fields for 'IP Address' (172.22.2.120), 'Subnet Mask' (255.255.0.0), 'Gateway IP Address' (172.22.1.5), and 'Host Name' (VBrick Host Name). A green link 'Show advanced settings' is located below the Host Name field. At the bottom of the configuration area are five buttons: 'Apply', 'Revert', 'Default', 'Save', and 'Finish Edit'.

Setting the Management SAP

These parameters define information used in the SAPs emitted by the VBrick, which are received by the VBDirectory management tool and other VBrick applications. They are found in the System Configuration > Advanced Configurations > Management SAP page of VAdmin or the corresponding Command Line (CLI) instructions. Refer to the *H.264 Encoder Admin Guide* for details.

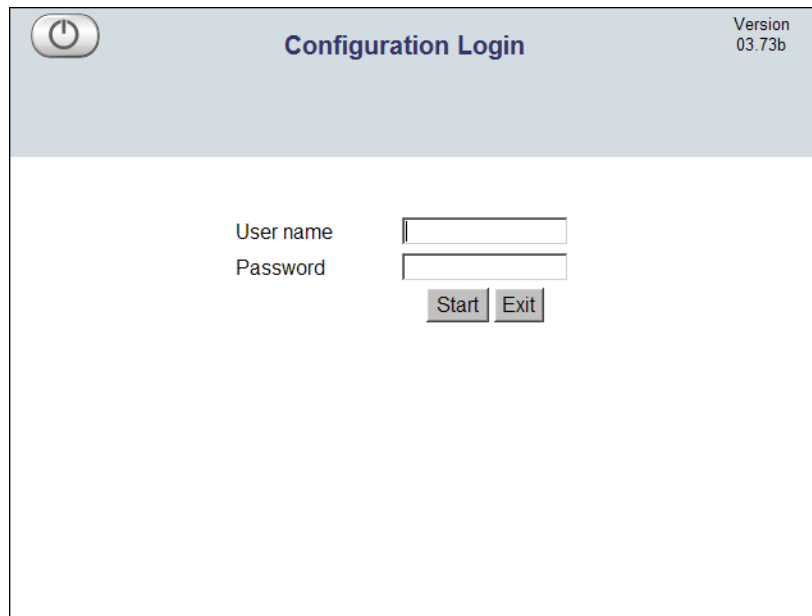
Transmit Enable	Controls the transmission of the Management SAPs (Enable or Disable).
Group Name	Optional. This parameter defines the Group Name. It is included in the Management SAPs used by VBDirectory. It is used for organizing VBricks into groups to simplify use of VBDirectory.
Unit Number	Optional. The appliance unit number (range 0–2147483647) is used to identify each VBrick in a group.
SAP Timeout	Provides a configurable timeout for program guide selections in seconds. If no SAP is received within the timeout period, the entry is removed from the table of available programs. Default = 90 sec.
Retransmit Time	Defines the Management SAP Retransmit Time.
Time To Live	The number of hops (between routers) for which a Management SAP is valid on the network.
Type of Service	The TOS (Type of Service) can be configured in the IP header to establish packet priority in the network.
IP Address	Defines the Destination IP Address for Management SAPs.
Port	Defines the Destination Port for Management SAPs.

STB-M (MP 1/2/4)

The **Type** column in VBDirectory distinguishes between MPEG Set Top Boxes (Digital IP Receivers) and WM IPRs. See [Selecting Set Top Boxes](#) on page 8 for details

STB-M Connection

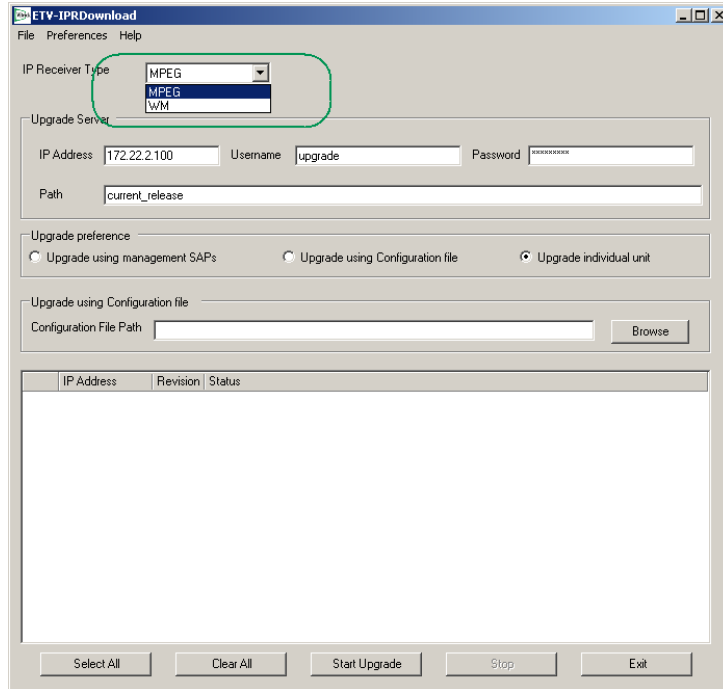
An MPEG IPR can be recognized by the designation **MP 1/2/4** in the **Type** column. If you double-click on an STB-M list item you will be taken to an Administration page with the words “You are not logged in.” Clicking on the Log in button will take you to the Configuration Login screen where you can enter your User Name and Password and start managing the STB-M. There is currently no support for logging in automatically to the web browser configuration tool through VBDirectory.



The screenshot shows a web browser window titled "Configuration Login". The window has a grey header bar. On the left side of the header is a power button icon. In the center of the header is the text "Configuration Login". On the right side of the header is the text "Version 03.73b". Below the header, the main content area is white. It contains two text labels, "User name" and "Password", each followed by a text input field. Below the "Password" input field, there are two buttons: "Start" and "Exit".

STB-M Upgrade

ETV Set Top Boxes are upgraded using the ETV-IPRDownload application. The ETV-IPRDownload application is included with the ETV-IPR setup file. See the *STB Admin Guide* or contact VBrick Support Services for more information.

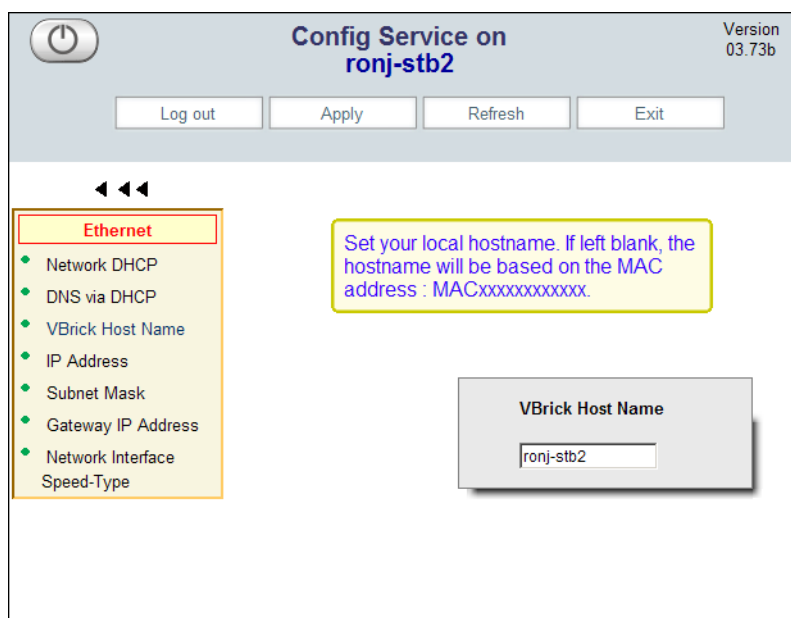


STB-M Settings

The following VBrick settings affect interoperability between the STB-M appliance and VBDirectory.

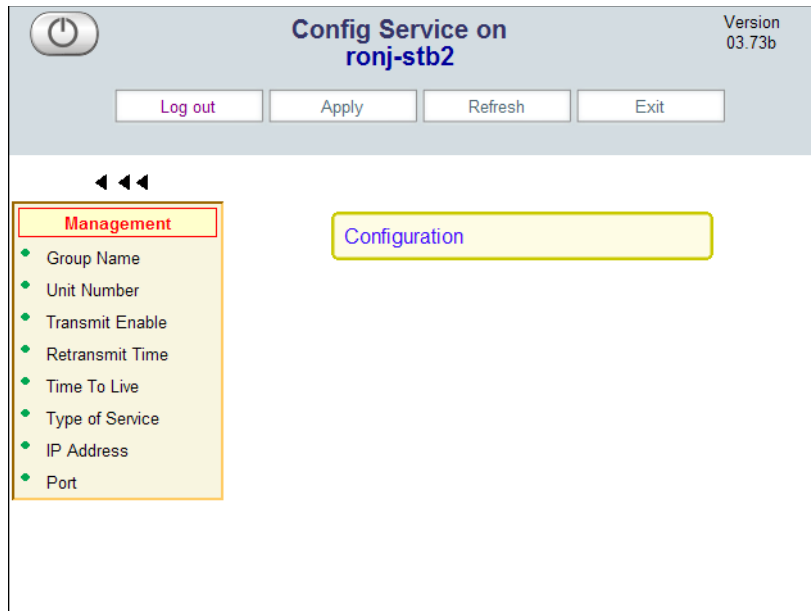
Host Name

The easiest way to configure the hostname is set Configuration > Network > Ethernet > Network DHCP to “static” and manually enter a hostname in the Configuration > Network > Ethernet > VBrick Hostname screen. The value you enter will appear in the name column of VBDirectory.



Setting the Management SAP

To set specific Management SAP parameters go to the Configuration > Network > Management section of the web browser. The default address from which Management SAPs are obtained by VBDirectory is 224.2.133.134, port 9876. Sending SAPs from an STB-M to any address other than that, without changing the default VBDirectory configuration will make Management SAPs invisible to VBDirectory.



Transmit enable	Checked by default. Uncheck to stop sending Management SAPs
Retransmit Time	10 by default. The retransmit time set in the STB-M must be <i>less</i> than the SAP timeout value set in VBDirectory. The VBDirectory default timeout value is set at 25 seconds.
Group Name	Blank by default, this parameter defines the Group Name for this box. It is an optional setting used for organizing VBrick appliances into groups to simplify use of VBDirectory.
Unit Number	Blank by default. If the Group Name parameter is not blank, this parameter must be filled with a numerical value. This value is used to sort the STB-M and other VBrick appliances within the user created group.
Time To Live	64 by default. The number of routers (hops) the Management SAP is permitted to pass through before expiring.
Type of Service	0 by default. This is an eight bit field that is assigned to request special handling of traffic.

STB-W (WM)

The **Type** column in VBDirectory distinguishes between MPEG Set To Boxes (Digital IP Receivers) and WM IPRs. See [Selecting Set Top Boxes](#) on page 8 for details.

STB-W Connection

An STB-W can be recognized by the designation **WM** in the **Type** column. To connect to an individual VBrick, double-click on its name in the Name column (either the Host Name or MAC address), or single click the name and press the “Connect to VBrick” button. The default name is the MAC address of the VBrick. This launch the WM IPR Administrator page.



VBrick WM IPR Administrator Page

The IWS allows the user to configure and manage VBrick Systems IP receivers. To log into the IWS, please enter your username and password, then click on the Log In button.

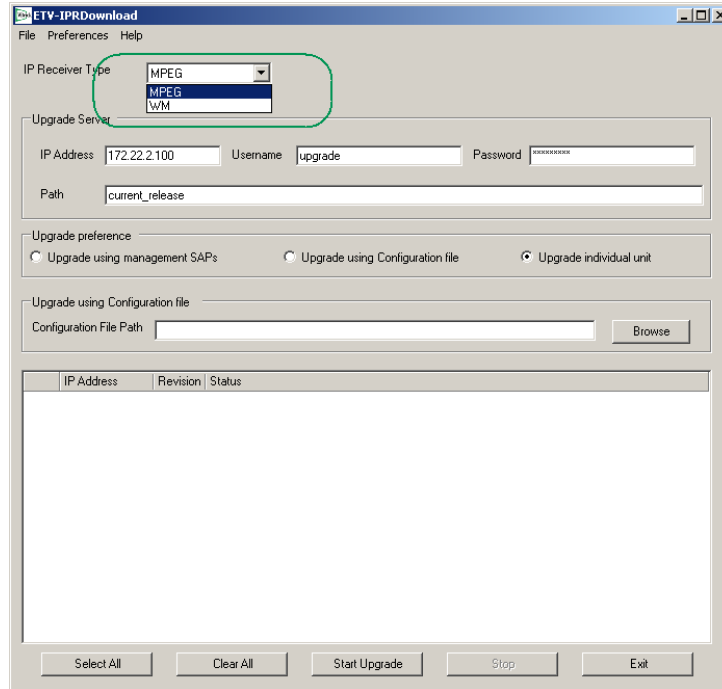
Login

Username:

Password:

STB-W Upgrade

The ETV-IPRDownload application is included with the ETV-IPR setup file on the WM-IPR Product CD. See the *WM IPR Admin Guide* or contact VBrick Support Services for more information.



STB-W Settings

Hostname

To set the Host Name that will be displayed in VBDirectory, go to the Configuration > Network page.

Setting the Management SAP

These parameters define information used in the SAPs emitted by the VBrick, which are received by the VBDirectory management tool and other VBrick applications. To set the Management SAP, go to the Configuration > SAP page.

Transmit Enable	Checked by default. Uncheck to stop sending Management SAPs
Group Name	Blank by default, this parameter defines the Group Name for this box. It is an optional setting used for organizing VBrick appliances into groups to simplify use of VBDirectory.
Unit Number	Blank by default. If the Group Name parameter is not blank, this parameter must be filled with a numerical value. This value is used to sort the STB-W and other VBrick appliances within the user created group.
Retransmit Time	Specifies the interval (in seconds) between each transmission of the management SAP.
Time to Live	64 by default. The number of routers (hops) the Management SAP is permitted to pass through before expiring.
Type of Service	0 by default. This is an eight bit field that is assigned to request special handling of traffic.

STB-HM (MP2:H.264)

There is no graphical user interface for managing the AmiNet130 set top box. For information about connecting and upgrading, see the *AmiNET130 STB Quick Start Guide*.

STB-HWM (MP2/4:H.264:WM)

The Multi Format set top box has a limited graphical user interface. For information about connecting and upgrading, see the *Multi Format STB Quick Start Guide*.



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