



# The Value of Automatic Configuration

## Greater Simplicity in VBDNA Version 4.1 and Above

A decorative graphic consisting of a grid of light green squares. A diagonal line runs from the top-left corner towards the middle-right. Several squares are highlighted in a darker shade of green. One square in the middle-left area contains the text "White Paper".

**White Paper**



One of the most valuable characteristics of a VBrick appliance is that you can put it virtually anywhere and know that your live audio/video is “on the air”. Thanks to “HTTP push”, a VBrick located in your home, office, hotel, or connected to a mobile cellular data service delivers highly dependable service. But this portable simplicity did not extend to configuration management, until now.

VBrick appliances support a patent-pending automatic configuration option. In essence, the VBrick appliance will periodically contact a user-specified web server, read a simple configuration file, and set the VBrick to match it.

## The Old Way

More often than not, a VBrick is located on an “inside” network, behind a firewall. It commonly obtains a “192.168.x.x” or similar non-routable IP address via DHCP from a local router. The VBrick is perfectly happy to send to the public Internet, but traffic from the public Internet is blocked from reaching the VBrick. As a result, no one outside your network can configure your VBrick...even if you want him or her to.

There are ways around this, of course. You could set up a “NAT” where your inside address is mapped to a specific outside address. Home routers support a “DMZ Host” mode that can be used, as well as more complex “port triggering” mechanisms. For many, this is a scary option because they fear they might break their existing public Internet access connection.

In the corporate and education environment, it can be a real challenge to convince the IT staff to give you a precious public Internet address.

Even when all of your VBricks are on a public Internet address, there is the next problem. How much time does it take to log into each one, make a configuration change, and move on to the next one? Even though the VBrick management interface is intuitive and simple, it will take at least a minute per VBrick. This is simply unacceptable when you have to configure 100 VBricks at the same time.

## Enter Automatic Configuration

Automatic configuration is an extremely powerful tool to automate both configuration and operation. Simply create a text file with the desired VBrick parameters (any parameters), put it on a web server, and tell the VBrick to read it every few minutes. If any of your parameters are different from what the VBrick is currently using, the VBrick will automatically make the change. If the parameters are the same, nothing happens.

To make it especially easy, VBrick owners can use [www.videoprogramguide.com/autoconfig](http://www.videoprogramguide.com/autoconfig) to configure their VBricks. This online tool creates and hosts configuration files for you.

## Use Case Examples

In the following examples, the VBrick appliance is presumed to be behind a firewall and normally “unreachable”. However, even when the VBrick can be directly managed, the following examples illustrate the power of Autoconfiguration.

### Sports Broadcasting

A VBrick is shipped to a sports venue where it will send live audio/video to a service provider’s reflector (e.g. a Windows Media Server). As soon as it is plugged in, it configures itself for the service provider’s publishing point, username/password and transmission begins. The on-site



production crew has their audio set incorrectly and the streaming audio is a bit distorted. The service provider sets the audio gain parameter to lower gain and posts it on their web server. Within a minute, the audio gain in the VBrick has been lowered.

## Convention

A national convention is conducted and the keynote address is webcast to thousands of viewers. The source VBrick is sending the live audio/video to a service provider's publishing point. While the VBrick can send the live video to up to 25 simultaneous servers, there is not enough outbound bandwidth to support more than one outbound stream. At some point, the service provider's network fails. Using Autoconfiguration, the VBrick is remotely reconfigured to send the video to a different service provider.

## Branch Office Reflectors

A VBrick appliance is located at 100 retail outlets of a major retail chain. Each VBrick receives a single video stream from the network and redistribute it locally to desktops, TV's, projectors, and flat panel video monitors.<sup>1</sup> The source of the video at all branch offices must be switched to provide branch offices with education, event notification, emergency event notification, live CEO address, etc. Using the Autoconfiguration, a simple change to a file on a web server is made and within a minute, all branch offices are delivering the desired content.

## Education

A VBrick appliance is located in each classroom along with two cameras and a wireless audio system. The classroom video is streamed live both locally and over the public Internet to remote students. Using Autoconfiguration, the VBrick is set to record the classroom at a specified date and time and for a specified duration. In addition, the Autoconfiguration tells the VBrick to send the recorded video to a WM server or service provider upon completion of recording.

## Training Webcast

A product manager in a corporation conducts a live webcast from his or her office to inform the sales channel about a new product. Prior to the event, it is noticed that the video is broken up and there is a lot of "rebuffering". It is concluded that this is because the source network simply does not have sufficient bandwidth to deliver the configured 500 Kbps bit stream with 30 fps, 640 x 480 resolution, and 48 Kbps audio. Using Autoconfiguration, the service provider changes the encoder to 300 Kbps, 15 fps, 320 x 240 and 32 Kbps audio.

## Embarrassment Prevention

After a live webcast, the presenter has not muted the microphone. You wish the video to continue, but you want to mute the audio. Using Autoconfiguration, the VBrick audio is muted within a minute.

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<sup>1</sup> Without a reflector, each desktop and display would require network bandwidth. With the reflector, only one stream is received in the branch office, thus minimizing bandwidth usage.



## Emergency Broadcasting

During an emergency, any VBrick, no matter where it is located (as long as it is connected and has a audio/video source) can be configured to automatically be the designated source for an "emergency broadcast". All desktops will show that live video.

## A/V Control Integration

An organization uses Crestron, AMX, or similar Audio-Video control systems. For the greatest simplicity, such systems need to only create a text file that a VBrick can read from a web server in order to provide near-real time control (1 minute granularity).

## Streaming Service Providers

A streaming service provider is in the business of making Webcasting events easy for their customers by provisioning bandwidth. They suggested that customers use PC-based encoder software, or they shipped pre-configured PC's to the client. They rapidly learn that rarely does pre-configuration work due to last minute changes and environmental variables and discover the drama involved with PC reliability for live events. The service provider provides VBrick appliances to their clients only preconfigured with the Autoconfiguration URL. They then have total control of the VBrick, regardless of local conditions.

## Business TV

A large corporation has many VBrick appliances delivering local off-the-air television channels, licensed Cable-TV television channels, and local content to desktops and TV's throughout the enterprise. To simplify configuration management, the IT staff maintains a different configuration file on an internal web server for each VBrick. If they ever need to make a change, they simply make it to the configuration file and it propagates to the VBrick appliances. For additional security, they configure their web server to only deliver the file to the IP addresses of the VBricks.

## Multiple VBrick Users

Many people in an organization use a VBrick appliance for different purposes. Each user has their own preferences (e.g. streaming service provider account) and the "last user" typically leaves the VBrick configured for them. Using Autoconfiguration, each user need only enter their personal URL and the VBrick will revert to their preferences. Furthermore, this is true regardless of the VBrick used.



### About VBrick Systems, Inc.

VBrick is the leader in Enterprise IP Video solutions, with over 6,000 corporate, education and government customers and 60,000 installations worldwide. VBrick solutions work over standard IP networks and the Internet to deliver rich media communications that connect people everywhere – from employees and customers, to partners and shareholders. Our comprehensive product suite and end-to-end solutions are used in a wide range of live and on-demand applications including meeting and event broadcasts, distance learning, digital signage, TV distribution, video surveillance, and Web-based marketing campaigns. Headquartered in Wallingford, CT, VBrick's products and services are available through industry-leading value-added resellers.

For more information, visit [www.vbrick.com](http://www.vbrick.com)