

Automatic Multicast Rollover

VBrick WM Video

Introduction

Multicasting has well-known benefits for saving vast amounts of network bandwidth, but it is not deployed everywhere. Moreover, when it is deployed, it is often “spotty” due to the wide range of network equipment and vintage, and network staff expertise to deal with multicast issues.

Video deployed via multicast can get a bad rap when the average user clicks on a video link that does not work. The average user has no idea the video may be just fine but that their local firewall is blocking multicast – all they know is that “the video does not work”.

One would think that local IT staff would be keen to deploy multicast since it saves so much bandwidth vs. conventional unicast techniques, and perhaps they will be when traffic levels exceed some threshold and multicast comes to their rescue. But until that threshold is reached, widespread multicast may not be in the cards.

Multicast is in transition – making possible what would be otherwise impractical, but suffering the worse thing for any technology struggling for acceptance: lack of dependability. What is needed is a way to deliver video to users regardless of the network’s multicast capabilities, *but with a bias for multicast*. This is addressed with a VBrick WM appliance feature called “unicast rollover”.

Unicast Rollover

As the name implies, unicast rollover first tries to view a video via multicast, but if multicast fails it will play the same live video via unicast.

Unicast rollover has two distinct advantages. First, it ensures viewer success in viewing a live video and therefore drives usage by offering what multicast alone does not currently offer: dependability over multiple networks.

Second, it provides a built-in mechanism for IT managers to dramatically reduce the network load that this newfound dependable video may bring. When network loads (especially expensive WAN connections) reach unacceptable levels, the IT staff need only engage multicast and suddenly the load for 10,000 viewers is the same as the load for one viewer. Importantly, nothing but the network capability (and perhaps just the network configuration) need be changed to enable multicast.

Using Rollover

The VBrick appliance supports direct multicast plus direct delivery of up to 200 unicast streams via its built-in live video server.

Windows Media Player is instructed on how to view a multicast via a “.nsc” reference file¹. A URL that points to the VBrick’s built-in .nsc file is simply entered in the player, and if multicast is present the video plays. The .nsc includes instructions on what URL to use if multicast fails after trying for about 20 seconds. This rollover URL is entered in the VBrick, and it may point to the VBrick server, a URL to a reflecting server, or to any valid video stream. The rollover URL can even point to a stored video (perhaps one that instructs the viewer on the value of multicast and advises them on how to become connected to the multicast community).

¹ A WM “.nsc” is functionally equivalent to a MPEG-4 “.sdp” file.