



What is GRE DE-Encapsulation

Virtualisation is a very common approach in data centers, but for monitoring purposes it is not so easy, because the network communication within the hyper visor is not transported over the physical NIC in the server. It is transported over the virtual switch. Thus, there is no access to this trac.

It is common to use virtual TAPs to solve this issue. But these virtual TAPs could not send out the trac straight, they use in most cases a GRE Tunnel.

GRE is a L2 transparent tunnel.

Original HP Header	Original Payload
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Tunnel HP Header	GRE Header	GRE Payload
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Highlights

- GRE receiver and originator
- Hardware de-encapsulation
- Line rate up to 40 Gbit
- Multiple GRE streams per unit
- Easy to configure
- Filtering possible afterwards
- Standard feature (no extra charge)

Supported by

Packetmasters

EX2, EX5-3, EX12, EX32

EX20400, EX48400

The original IP trac will be encapsulated with the new IP header and the GRE header. This trac can then pass the virtual and in some cases a hardware switch to reach the monitoring device. But this trac cannot be used for monitoring directly. It needs to be first de-encapsulated.

This can be done in an easy way with the Packetmaster, even the smallest unit the EX2 supports GRE de-encapsulation at line rate.

After de-encapsulation the trac looks like the original and can be itered and forwarded to the monitoring device.

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Before GRE de encapsulation
# Frame 1698: 604 bytes on wire (4832 bits), 604 bytes captured (4832 bits) on interface 0
# Ethernet II, Src: Vmware_63:23:42 (00:50:56:63:23:42), Dst: Centecne_0a:10:16 (00:1e:08:0a:10:16)
# Internet Protocol Version 4, Src: 172.17.1.1 (172.17.1.1), Dst: 172.17.1.2 (172.17.1.2)
# Generic Routing Encapsulation (transparent ethernet bridging)
# Ethernet II, Src: Intelcor_5b:b0:9c (60:67:20:5b:b0:9c), Dst: Vmware_aa:c0:d3 (00:50:56:aa:c0:d3)
# Internet Protocol Version 4, Src: 172.16.100.61 (172.16.100.61), Dst: 172.16.101.220 (172.16.101.220)
# Transmission Control Protocol, Src Port: 64008 (64008), Dst Port: 80 (80), Seq: 3827, Ack: 68616, Len: 500
# Hypertext Transfer Protocol
# GET /modules/imageframe/frames/flicking/BR.gif HTTP/1.1\r\n
# [Expert Info (Chat/Sequence): GET /modules/imageframe/frames/flicking/BR.gif HTTP/1.1\r\n]
# Request Method: GET
# Request URI: /modules/imageframe/frames/flicking/BR.gif
# Request Version: HTTP/1.1
# Host: album.creneco.com\r\n
# User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; rv:38.0) Gecko/20100101 Firefox/38.0\r\n
# Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
# Accept-Language: en-US,en;q=0.5\r\n
# Accept-Encoding: gzip, deflate\r\n
# Referer: http://album.creneco.com/main.php?g2_view=imageframe.CSS&g2_frames=none&7cshadow&7cflicking\r\n
# Cookie: GALLERYSID=78cb78dbabb51f330677f4a72c4f22b9\r\n

After GRE de encapsulation
# Frame 108: 368 bytes on wire (4328 bits), 368 bytes captured (4328 bits) on interface 0
# Ethernet II, Src: Cisco_73:7e:c2 (00:17:94:73:7e:c2), Dst: Vmware_aa:c0:d3 (00:50:56:aa:c0:d3)
# Internet Protocol Version 4, Src: 172.16.100.61 (172.16.100.61), Dst: 172.16.101.220 (172.16.101.220)
# Transmission Control Protocol, Src Port: 64325 (64325), Dst Port: 80 (80), Seq: 4686, Ack: 100998, Len: 500
# Hypertext Transfer Protocol
# GET /modules/imageframe/frames/flicking/BR.gif HTTP/1.1\r\n
# [Expert Info (Chat/Sequence): GET /modules/imageframe/frames/flicking/BR.gif HTTP/1.1\r\n]
# Request Method: GET
# Request URI: /modules/imageframe/frames/flicking/BR.gif
# Request Version: HTTP/1.1
# Host: album.creneco.com\r\n
# User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64; rv:38.0) Gecko/20100101 Firefox/38.0\r\n
# Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
# Accept-Language: en-US,en;q=0.5\r\n
# Accept-Encoding: gzip, deflate\r\n
# Referer: http://album.creneco.com/main.php?g2_view=imageframe.CSS&g2_frames=none&7cshadow&7cflicking\r\n
# Cookie: GALLERYSID=78cb78dbabb51f330677f4a72c4f22b9\r\n
    
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