

FAQ

What does latency < 1ms (transparent mode) mean in the context of 8 x Video Access Module mean?

Transparent mode in this context means no compression and no decompression. This leads to a latency of typically 200 microseconds.

This is only true for SD-SDI and HD-SDI. ASI requires compression and decompression (i.e. not transparent mode), which increases typical latency times.

What does SDTI mean?

Serial Data transport Interface: is a way of transmitting data packets over a Serial Digital Interface datastream. This means that standard SDI infrastructure can be used.

How much bandwidth is required for DLEcontrol channels?

3-4 DLE slot. In Element manager, this is fairly well described. In chapter 7.8 it is said:

Is it possible to set an internal sync of a given node as sync master?

No, the node with the lowest MAC address is by default the sync master.

What is the difference between paths, channels, links and slots?

Channel is an abstraction of communication resources between sending and receiving nodes and it is an unidirectional virtual transmission path by a set of slots over one or more links.

A frame is a set of slots transmitted every 125µs (8000 frames/sec). The more is the capacity the more are the slots transmitted per frame.

Is the order in which you specify the nodes in a source node important?

Yes

How many HD SDI channels can be configured on an Nimbra 360?

Since 1.485 Gbps are need per HD SDI channel and Nimbra 360 has an average 5Gbps switching capacity then 3 HD SDI channels can be simultaneously used.

What if you want to add a new DLE client but there's no enough network capacity available?

The channel is not established and a network congestion alarm is raised.

What is the difference between DSTI and TTP?

DSTI is number that identifies a TTP

Is it possible to upload (push) node configuration(s) from Nimbra Vision?

Upload configuration from Nimbra Vision is not possible, only download configuration.

Is it possible to edit a custom map

Editing the properties of a custom map is possible, but in doing so you lose layout information. In other words, everything starts on a grid again. It is therefore recommended to delete the map and recreate a new one.

How much bandwidth capacity is allocated for TTC channels?

TTC channels use one slot in each direction.

Is an Alarm/Event generated when Preemption is triggered, that is when it goes in "reduced operation"?

When preemption is entering Reduced Operation, or is restoring to Full Operation, and entry is logged in the Configuration Audit log (tree: "Nimbra Vision>Configuration>Audit"). No alarm is raised/cleared.

Is it possible to set Security Permission per Node and/or per Interface?

Yes, this is called fine-grained authorization. Setting per node is fairly simple. See manual "Nimbra Vision Installation, User and Administrator Guide (nid2808_F1.pdf) > Security Management" and "Appendices > Partitioning the Nimbra Network".

Can you explain Nailed & Persistent links in more detail?

Each local interface can be configured with a link-class. The link-class decides how DLSP should treat the interface in case an error is detected. Three different link-classes have been defined:

- *Normal means that DLSP should consider the link as Down if it fails to communicate with the neighbouring node over that link or if it receives a notification that the link has failed. Down means that DLSP's clients will tear down all channels running over that interface.*
- *Persistent means that DLSP shall classify the link as NoControl if it fails to communicate with the neighbouring node over that link, but if DLSP receives an indication that it is actually the link that is at fault, it shall classify the link as Down.*
- *Nailed means that DLSP shall classify a link as NoControl if it fails to communicate with a neighbour over that link. If DLSP receives an indication that it is actually the link that is at fault, it shall classify the link as DownKeep, but still keep the DLSP session towards the neighbour open.*

Can we still have one way data transmission in case of one way link failure?

See attached LinkClasses.ppt file

Can you also further explain loose and strict terminology?

A source route is an explicit specification of a path to the destination and must be supplied in the source node. If no tools are available, the operator must manually specify the source route.

The primary use for this is to provide two diverse paths for a protected channel. Sources routes can be strict or loose. For loose source routes, part of the path is determined by hop-by-hop routing.

You can refer to section 17.1.1 "Loose and strict source-routes" in document Element Manager GX4.4 (Document number: NID 3437/A2):

It is possible to select whether a source-route shall be strict or loose:

For a strict source route, every node along the way to the destination must be specified. Optionally, the interfaces can also be specified.

For a loose source route, only nodes that are required to be traversed are specified; the path between the specified nodes is found via hop-by-hop routing (i.e. by DRP).

Can you explain "Raw use of channels" for DCAP-0?

The DTM Channel Adaptation Protocols are used for adaptation between the higher layer protocols and the service provided by the DTM Switching Layer.

The DTM Channel Adaptation Protocol 0 (DCAP-0) provides an asynchronous streaming service. The protocol is designed to allow for efficient hardware implementation.

DCAP-0 maps client streaming data onto a DTM channel.

DCAP-0 is a stream passing protocol. It provides an asynchronous streaming service on top of isochronous DTM channel

Can you explain "Transparent and frame alignment" for ES/EBU access cards?

TRANSPARENT transport service without the need for external synchronization in order to present a jitter-free transported audio signal.

In ALIGNED mode egress frames are aligned to a reference that may be an incoming signal, or to an internal reference such as the node clock.

Can you explain "G.826 PM end-to-end"

Performance monitoring (PM) is the process whereby transported data in a tele- or datacommunication network is supervised for quality deterioration. With help of this process, service level agreement (SLA) 1.4 reports can be produced and preventive maintenance work can be performed at an early stage before more severe faults occur in the network.

The PM function is used by maintenance entity (ME) managed objects (MO) to collect, store and supervise quality parameters as defined by G.826 1.4 in a G.784 1.4 fashion for unidirectional paths.

See attached G0826e.pdf file

Why does the outband IP of the server need to be in a different domain?

It's usually a good design to have separate (sub)net/domains for the Out-band network, In-band network and Management network.

In the example below node10 acts both as Student PC's default gateway and as DLE server. You can of course have this default gateway be different from the DLE server, as you can have the Out-band network be the same as the management network.

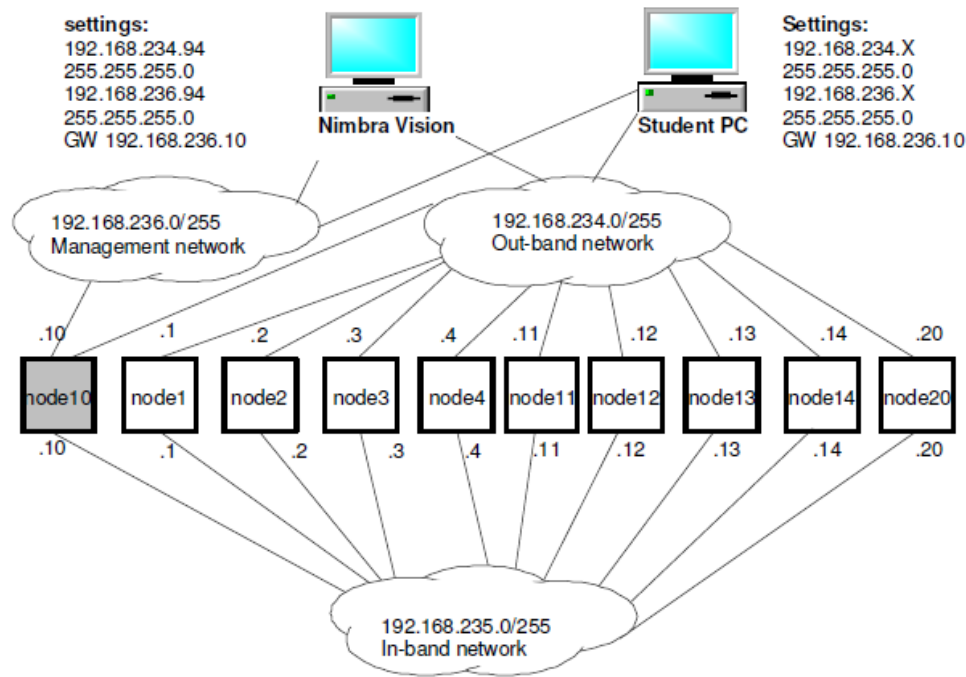


Figure 1 Redundant management networks, where node10 is gateway and DLE server

Note that Out-band network and In-band network are two different type of links in that network, then you need a gateway/router, node10 in this case, which forwards packets in order to allow hosts non connected on the same link to communicate.

In other words IP routing must be set-up between DLE segment and other IP sub-networks.

If I want to set another server (redundant) how would you set up the IP configuration?
You set a second DLE server adding the second DLE server as “destination” in the “in-band servers” section. See picture below.

ELEMENT MANAGER

node10 > Control network > In-band servers > Edit

OK Apply Delete Cancel

Name: dles0
 Administrative status: Up Toggle Admin: ☐
 Operational status: up
 Purpose: DLE Server
 DSTI: 32769

Server to client connection capacity: 0.485 Mbps (uses 1 slots)

Server to server connection capacity: 0.485 Mbps (uses 1 slots)
 Server to server destinations: 0

Advanced Destinations

Originating client connections

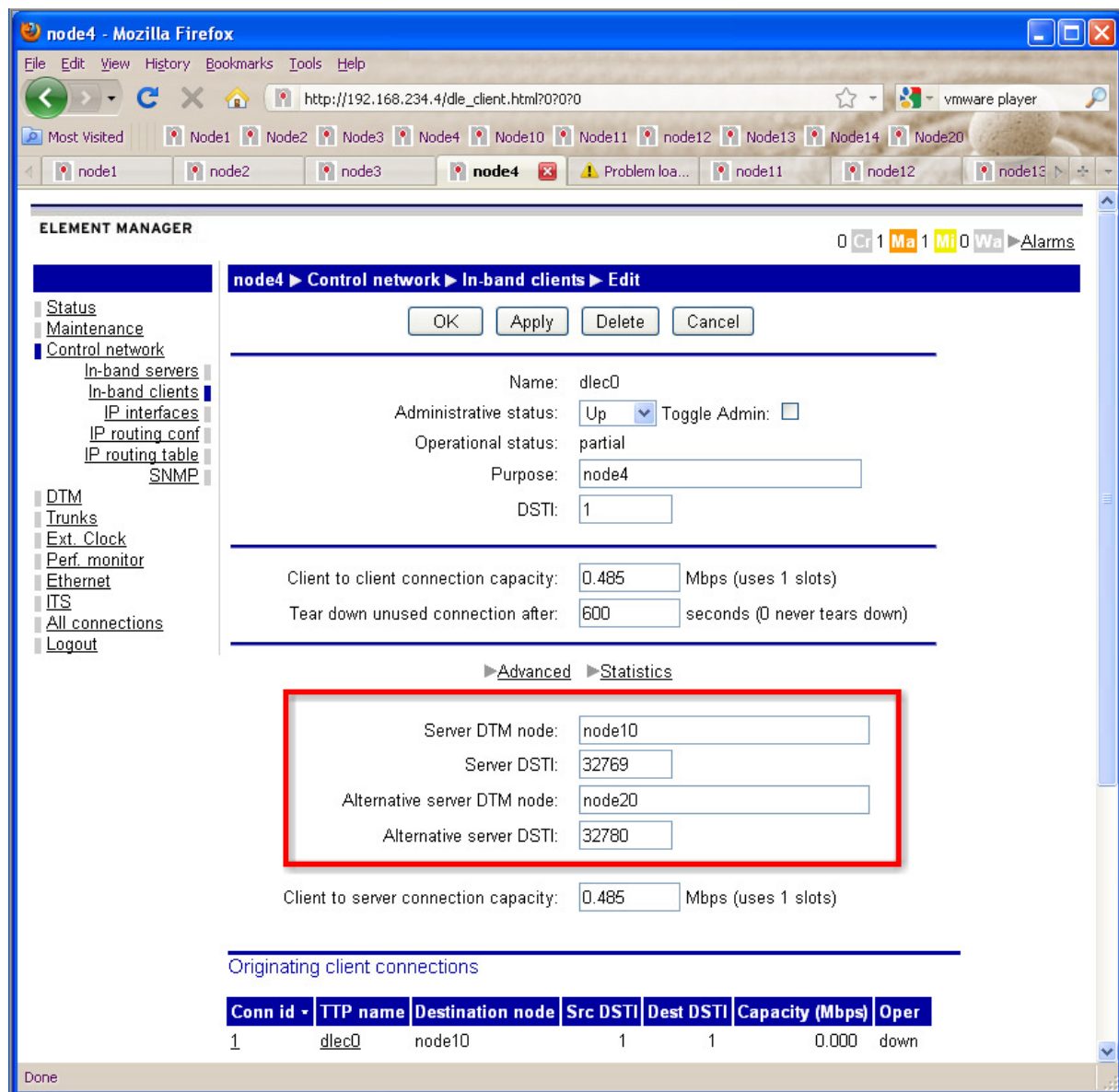
| Conn id | TTP name | Destination node | Src DSTI | Dest DSTI | Capacity (Mbps) | Oper |
|---------|----------|------------------|----------|-----------|-----------------|------|
| 2 | dles0 | (multicast) | 32769 | | 0.512 | up |

Terminating client connections

| Conn id | TTP name | Source node | Src DSTI | Dest DSTI | Capacity (Mbps) | Oper |
|---------|----------|-------------|----------|-----------|-----------------|------|
| 4 | dles0 | node10 | 1 | 32769 | 0.512 | up |
| 6 | dles0 | node12 | 1 | 32769 | 0.512 | up |
| 8 | dles0 | node3 | 1 | 32769 | 0.512 | up |
| 9 | dles0 | node20 | 1 | 32769 | 0.512 | up |
| 10 | dles0 | node4 | 1 | 32769 | 0.512 | up |

You do the opposite in the second DLE server, that is adding first DLE server as destination for the second DLE server.

Each DLE client will configure both the server DTM nodes, node10 and node20 in the example below.



If I want to access the server from the client nodes using DLE, how should I set the IP routing table for the client and the server?

Within the same DLE segment, DLE Server and client will belong to same subnet, hence the client will be able to access the server without any specific routing table.

Is it possible to send data from one DLE segment to another DLE segment?

To send data from one DLE segment to another, the packets must pass through one or several IP routers!

See picture below and the attached "In-band, multiple segments.ppt" file.

In-band, Configuration of large network

