

VideolPath

Media Service Fulfillment

End-to-end connection management

Managing connectivity between media edge devices for service fulfilment at first seems like a simple task, but the complexity quickly grows beyond what is possible to comprehend manually or even with traditional network management systems when you consider a scenario with hundreds or thousands of endpoints where connections are dynamically changing. This picture is further complicated when point-to-multipoint connectivity and redundancy mechanisms are considered.

VideolPath addresses the complexity of provisioning media services across Ethernet layer 2, IP layer 3 or traditional baseband networks. The system works in conjunction with Nevision's flexible hardware solutions that are designed to efficiently transport existing video/audio standards, but also includes open interfaces for integration of third-party devices.

Applications

- End-to-end provisioning and integrated monitoring of media services across Ethernet, MPLS or optical networks
- Service providers that need to dynamically provision media services based on changing end-customer needs
- Broadcasters that need to control routing of media services in a campus or in-house infrastructure

Key features

- Automated provisioning of new services (occasional use or permanent)
- Continuous service monitoring and automated disaster recovery
- No need to manually perform configurations in each element
- Intelligent routing decisions based on bandwidth utilization and other network constraints
- Diverse path routing to support end-to-end redundancy
- Secure end-user provisioning of services

User interfaces



Map

The Map app allows users to view and schedule services and end-points based on a geographical or logical network map.



Connect

The Connect app offers a broadcast oriented interface for scheduling of services (designed for end-users). This app may be used by service providers to offer a user interface for end-customers.



Timeline

The Timeline app allows users to create or modify services based on a timeline. Users can graphically view when endpoints are in use.

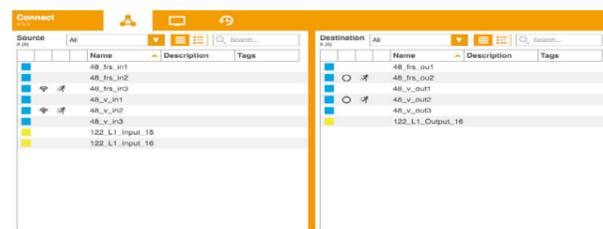


Profile

The Profile app allows users to edit service profiles used to provision different types of service in the network. It offers a generic way to define the properties for any given service.

Customer access

VideolPath system supports multi-tenant deployments where different customers may access only video and audio ports that have been assigned to them and only view or modify services they have been provisioned. It is also possible to share video and audio ports among customers if desirable to facilitate exchange of content between different customers running over the same network.



Edge provisioning

The system addresses the complexity of provisioning services at the edge removing the need for the user to have detailed knowledge concerning the configuration of each network element involved.

The user is able to create a new service between two or more endpoints and schedule provisioning of this service. The system will automatically setup and tear down the service according to the defined schedule. It is possible to create associations between endpoints in order to connect multiple endpoints in one operation. The system supports both permanent and occasional use services. Services are provisioned according to the service profile selected. Several pre-defined service profiles may be added to the system for the user to choose from when creating new services. The service profiles contains settings required to configured the network elements required for the service.

Network provisioning

The VideolPath system allows the user to specify source and destination ports, and let the system decide the optimal media transport path through the network infrastructure (topology) from source to destination(s). The path-finding algorithm is technology agnostic and allows the system to support path-finding at different layers in the network stack. The system supports path-finding for Ethernet, MPLS or optical networks (including hybrid infrastructures).

VideolPath utilizes a shortest path first algorithm to provision the least cost path from source to one or more destinations, and performs diverse path routing to support service layer redundancy mechanisms. The system keeps track of bandwidth allocation on each link within the core network to avoid any over-provisioning delivering predictable performance for video over IP services.

Supported devices

TVG425	ASI gateway
TVG430	HD JPEG 2000 gateway
TVG450	3G/HD JPEG 2000 gateway
TVG480	Post production gateway
TNS460	SDI monitor
TNS546	Transport stream monitor
VS901	JPEG 2000 contribution codec for IP
VS902	Multi-format contribution codec for IP
VS904	Contribution codec for IP
VS906	Multichannel audio and data contribution codec for IP networks
VS908	ASI to IP gateway
Juniper	EX series switches
Juniper	MX series routers
Cisco	ASR9000 series
Cisco	Catalyst 3560, 3570 and 4948 switches

Contact Nevision sales and support for more information about third-party integration

Supported features

- Auto-discovery of supported network devices
- Automatic re-routing based on link failures
- Customizable package based deployment system
- End-customer interface for service booking
- Equipment alarm status overview
- Just-in time resource reservation
- Network topology design support
- North-bound SNMP interface for service alarms
- Provisioning based on service profiles
- Provisioning of MPLS point-to-multipoint tunnels (*)
- Provisioning of SIPS protected services
- Provisioning of supported media edge devices
- Provisioning of VLAN trunks
- Scheduling of connections (calendar based)
- Scheduling of connections (endpoint based)
- Scheduling of connections (network based)
- Visualization of network infrastructure and connections
- Visualization of service scheduling over time

Performance and capacity

Number of active/scheduled connections	1000/25000 active service connections
Number of source and destination endpoints	2500
Number of service activations/teardowns per second	10
Connection setup/teardown time	< 1 sec
No of concurrent UI clients	50
Hardware server	Intel Xeon based, 1 rack-unit, disk mirroring (RAID1), redundant power, dual GbE interfaces
Virtual server	VideolPath may be installed on VMWare infrastructure (vRAM, vCPU and disk allocation depends on application))

Ordering options

VP-HW-SERVER	VideolPath hardware standard server. Intel Xeon E5 32 GB RAM 500GB SSD drive. Dual 1 GbE network and power.
VIP-SW-BASE	VideolPath base platform license. License fee per server. Includes 5 user licenses. Includes alarm and inventory management functions. Requires node licenses.
IP-SW-NODE-A/B/C	VideolPath level A/B/C node license. License fee per node added to the system. See guidelines for classification of node types.
VIP-SW-CONNECT-1	VideolPath connection license. License fee per activate connection. Includes alarm correction for connections.
VIP-SW-SCHEDULE-1	VideolPath 'connection scheduling license. Equals number of active connections in the system. Requires connection license to activate connections.
VIP-SW-USER-5	VideolPath user license. License fee per 5 simultaneous user sessions. Note 5 license included with base platform.
VIP-SW-DRIVER-A/B/C	VideolPath level A/B/C driver for third-party devices. License fee per device type. Contact Nevision pre-sales for classification of third-party devices.
VIP-SW-MAINT-SUPPORT	VideolPath maintenance and support agreement. Provides access to all major and minor software updates. Basic support services provided during office hours. 15% of all installed SW licenses.



VideolPath

Nevion's VideolPath system is built using the latest available internet technologies and consists of a number of apps that may be launched from a standard web browser. The platform allows custom apps to be built for specific purposes.

VideolPath is built on a distributed database and distributed processing model from ground up. The system is based on multiple hardware servers to provide high-redundancy. There is no loss of functionality or performance if one of the servers goes down.

The VideolPath system includes a security layer, API for communication with the clients, and core platform responsible for server-side processing and communication with the network elements within the IP network.

Platform characteristics

- Innovative and modern design
- Ease-of-use
- Distributed computing platform
- Scalable from small to large networks
- Built for redundancy
- Prosperous Web based internet applications
- Based on proven software and hardware

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