



nimbra Connect iT

**Tame the complexity of media transport.
Seamless integration, no fuss**

Just Connect iT

In the evolving media landscape, the shift to internet connectivity is not just a technical step but a strategic one. You aim to achieve seamless off-network connections, reaching wider audiences without the limitations of traditional networks. Maintaining solutions cost-effective is important, allowing for scalable growth and manageable expenses.

Navigating this new territory can be daunting, especially when targeting secondary markets or integrating new technologies with existing operations. We understand these challenges, particularly the need to adapt with your current team without requiring extensive resources.

This is why Nimbra Connect iT was developed – to empower you to tame the complexity of media networks, and scale as you grow. Just Connect iT.

Effortless deployment

Nimbra Connect iT delivers unparalleled ease of deployment. Crafted for small to medium networks, our solution streamlines the complex process of integrating media workflows into your existing infrastructure, ensuring that you can get up and running in minutes with a no-risk, commercial point of entry.

Bare metal? Public Cloud? Private Cloud? Nimbra Connect iT can easily be deployed in any of these environments, moreover you can create hybrid deployments to make sure you position your network where you need it, when you need it.

Transparent business approach

Embrace the simplicity of our straightforward business model. CapEx or OpeX? No problem, Nimbra Connect iT offers a clear, no-nonsense approach to content delivery and network management, allowing you to focus on delivering quality content and not what the bill is going to be at the end of the month.

- Intuitive Internet Transport
- Scalable platform approach
- Broad protocol support
- Unified stream orchestration
- Advanced monitoring

Streamlined interface

Manage all your live media workflows from a single graphical user interface with simple and powerful functions abstract your complex network topology into a familiar virtual router panel. Interoperate easily with external services with a standard-based open API.

Observability at the edge

Whenever you ingest or egress highly valuable live content to several distributed locations, it becomes essential to have a solution that provides immediate feedback when you need it.

First mile and last mile internet delivery is always the problem. Nimbra Connect iT coupled with our Edge Connect component gives you unparalleled visibility and protection right at the demarcation point in the network.

Nimbra Connect iT incorporates an intuitive visualization stack to give you full control of your media workflow from the source to all your destinations in one single place.

Equipped with advanced live transport monitoring metrics throughout the entire chain and a responsive alarm system, the platform reduces substantially your operational tasks.



Key features

Connect iT is a lightweight and easily deployable IP media routing platform for ingesting, delivering, and distributing any live media IP stream to multiple destinations across different IP networks.

Elastic

The platform is based on a container-based distributed microservice architecture. Connect iT can be deployed in any major public cloud provider, on-prem data centers, or hybrid cloud environments.

Secure and reliable

Take control of your media transport by providing ARQ and hitless protection throughout your network. Enable full stream encryption and monitor your workflows with advanced live monitoring, alarm and audit systems.

Easy content management

Bring live streams from and to any location with our open platform supporting all main transport protocols. Extend the capabilities of your existing appliances with our complete cross-platform solution to provide end-to-end transport metrics and synchronized playout delivery.

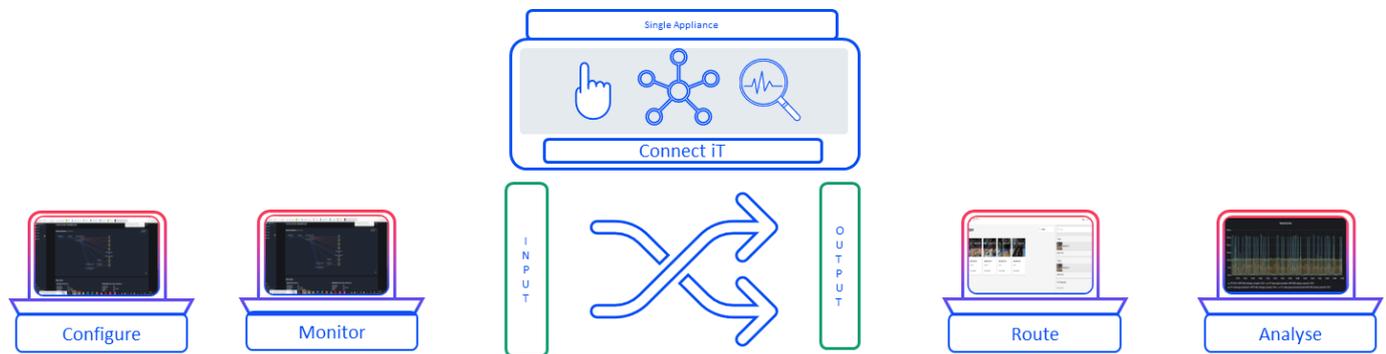
Solid orchestration

Simplify user management by creating users and groups to secure your content rights. Create input and output routing services easily through automated workflows that span multiple geographical regions. Keep track of your live streams performance with our monitoring and real-time alarm visualization solution.

Architecture

Control plane

Minimize operational tasks with a unified interface that provides you a detailed overview of all your media workflows with advanced monitoring under your control.



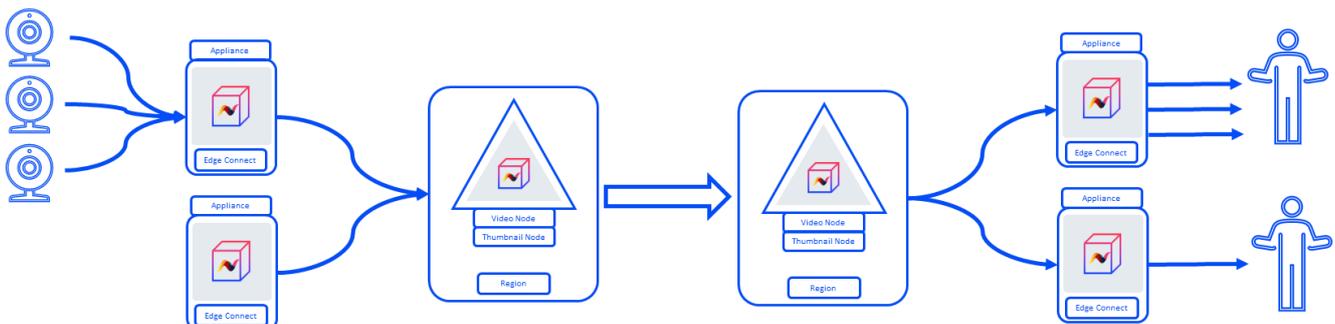
Data plane

The flexible and configurable transport and media processing layer

Video Node: an appliance entity located in a region responsible for the routing of the input streams to the final destinations, as well as the communication with other video nodes in their respective regions.

Thumbnail node: optional deployable appliance for generating the thumbnail of the corresponding streams that are handled by an associated video node.

Edge Connect: optional deployable appliance for observability and demarcation at the network connection points, can be standalone or embedded in Nimbra 400 and selected third party appliances.



Technical specifications

Inputs

- MPEG TS over UDP
- MPEG TS over RTP
- MPEG TS over RTP with FEC (SMPTE 2022-1)
- SRT in listener and caller modes
- RIST (VSF TR-06)
- RTMP

Networking

- Stream protection with path redundancy in active and failover modes
- Automatic repeat request (ARQ) with stream encryption
- SRT bonding in broadcast and main/backup modes
- Seamless Protection Switching (SMPTE 2022-7)
- IGMPv3 with source specific multicast support
- Synchronized playout delivery
- Automatic network routing
- Multi-region configuration

Monitoring

- ETSI TR 101 290 Priority 1 & Priority 2 measurements
- MPEG TS analysis for DVB and ATSC broadcast standards
- Analytics and interactive visualization dashboards
- Detailed transport protocol statistics
- Thumbnailing functionality
- Alarm monitoring system
- System resource usage
- Audit log

System requirements

Nimbra Connect iT components are deployed on host machines with the following minimum virtual requirements:

	Control plane		Data Plane	
Component	Core	Video Node	Thumbnail Node	Edge Connect
CPU (x86-64)	4 x vCPUs with SSE 4.2 support	4 x vCPUs	4 x vCPUs	4 x vCPUs
Memory	16GB	8GB	8GB	8GB
Storage	100GB	20GB	20GB	20GB

Software requirements for host machines:

- Linux Based OS (Recommended Ubuntu active LTS 20.04 or higher)
- Docker with Docker Compose V2 support (v18 or higher)
- NTP time synchronisation
- nftables with kernel support

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Outputs

- MPEG TS over UDP
- MPEG TS over RTP
- MPEG TS over RTP with FEC (SMPTE 2022-1)
- SRT in listener and caller modes
- RIST (VSF TR-06)
- RTMP and encrypted RTMP (RTMPS)

Management

- Multi-tenancy support with role-based user and group management
- Graphical end-to-end routing service overview
- Unified web-based graphical user interface
- Remote appliance configuration
- RESTful API

Additional features

- Metadata pass-through support (SMPTE 12M timecode)
- Multiple Programme Transport Stream (MPTS) demuxing
- PID transformations
- VLAN support

Constraints

- 100 concurrent streams per Connect iT control plane
 - A stream is an active stream being ingressed or egressed at the edge of the Connect iT network
 - The Connect iT data plane is compatible with the Nimbra Edge enterprise scale solution, this upgrade can be seamless to the active media services.