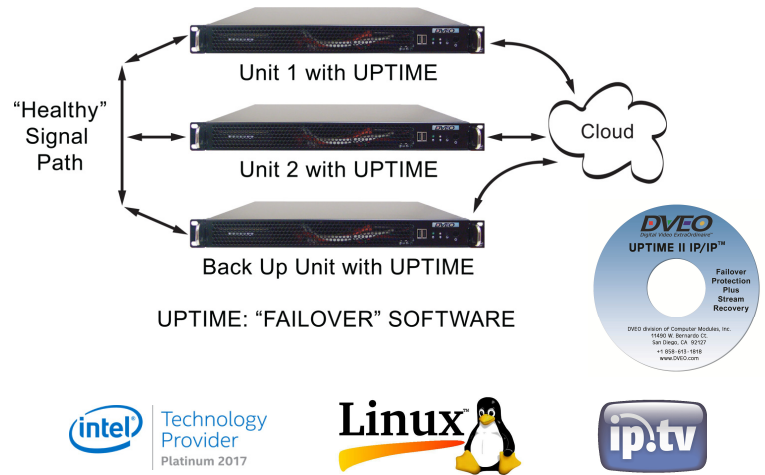


UPTIME II IP/IP™

Automated Hardware and Software Failover Protection plus Stream Recovery. Real Time N+1 Peer Redundancy Software Application that monitors DVEO products for failures and switches designated tasks to the standby “peered” unit. This application is designed to provide resiliency in case of hardware failure or stream errors. Includes new Monitoring and Trigger System for hands off recovery of streams. It automatically restarts the output stream in case of bitrate change, jitter detection, and/or packet loss. A spare unit must be available via IP to implement this protection mode. This software installs on all DVEO encoders and transcoders.



Features

- A simple software application that runs on all DVEO® Linux® machines
- Monitors and analyzes every IP output created in DVEO transcoders, encoders, media servers, DOZER™ boxes, etc. in real time
- Eliminates need to manually restart services for output errors, increasing overall Uptime of stream
- Designed for 24/7 operation
- Tracks output bitrates, jitter detection, and packet loss in real time for all IP outputs
- Automatically restarts output stream if there is change of bitrate, detection of jitter, and/or packet loss
- Auto Restart Trigger error frequency can be adjusted per error type, and per output
- Hysteresis can be set to control frequency of repetitive restarts
- Provides e-mail alert notifications when errors and triggers occur
- Logs history of errors in database
- N+1 or N+N automatic hardware redundancy
- Hardware switches from primary to secondary and back again on command from UPTIME II
- Scalable from a few units to large deployments
- SNMP, REST, SOAP support for remote management and monitoring
- Software is professionally scanned for vulnerabilities

Applications

- Failure Protection for encoders, transcoders, decoders, etc.
- Transport stream failover protection for Telcos, broadcasters, and cable head ends

Overview

Television has become a basic commodity that humans all over the world have become accustomed to as it provides mental solace in our complex world. It has become a high value business and expectation of its delivery is universal.

Powerful computers have become standard for processing digital video. Computers are highly reliable but are prone to occasional failure as they still use motors for cooling. Occasional component failure is expected even though failures are less than 1%. To minimize the impact of 1% failure, redundancy units are utilized for hot standby on most Telcos.

Incoming streams may also become unstable. We monitor bit rates, jitter, and packet loss. Our UPTIME II IP/IP offers N+1 automated failover to a spare unit for most DVEO® devices including our VOD servers, encoders, transcoders, decoders, DOZERs, etc. It was developed to provide necessary reliability to Telcos and broadcasters who must offer the best uptime possible at reasonable prices.

N+1 redundancy is a form of resilience that ensures system availability in the event of component failure. Components (N) have at least one independent backup component (+1).

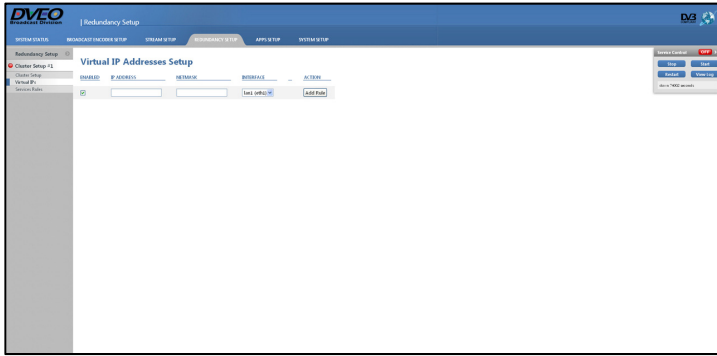
The level of resilience is referred to as active/passive or standby as backup components do not actively participate within the system during normal operation.

It is also possible to have N+1 redundancy with active-active components, in such cases the backup component will remain active in the operation even if all other components are fully functional, however the system will be able to perform in the event that one component is faulted and recover from a single component failure.

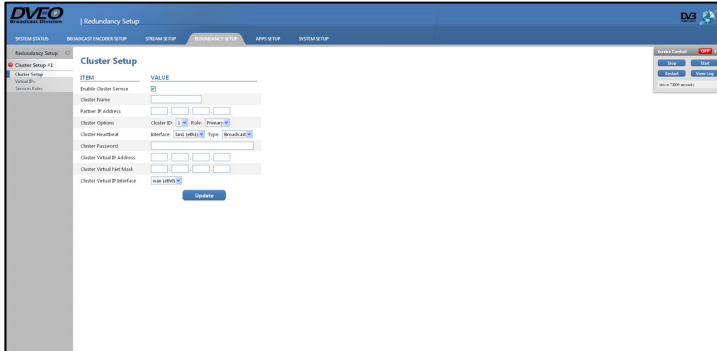
An active-active approach is considered superior in terms of performance and resiliency.

DVEO
Digital Video ExtraOrdinaire™
Computer Modules, Inc.
11409 West Bernardo Court
San Diego, CA 92127
Tel: 858-613-1818 Fax: 858-613-1815
www.dveo.com

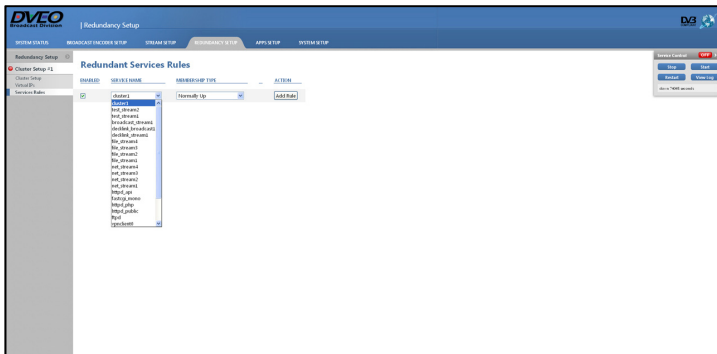
Sample of GUIs



Virtual IP Addresses Setup



Redundancy Setup



Redundant Services Rules Setup

Ordering Information

UPTIME II IP/IP

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CDNs Tested With:

1. Akamai
2. Limelight
3. BitGravity
4. Octoshape
5. CDNNetworks
6. Internap
7. Highwinds
8. Verizon
9. Ustream
10. Mirror Image
11. Tulix
12. More to come!

Ports Utilized

Protocol	TCP Ports	UDP Ports
HTTP	80, 8000, 8001, 8080, 1-65535 (out)	
HTTPS	443	
RTSP	554, 7070	6970-7170, 5004 5005
RTMP		1935
RTP		6970-6999, 16384-32767

Specifications

Some Supported Resolutions – Input and Output

1920 x 1080	720 x 480	480 x 480	qHD H.264up
1280 x 720	704 x 480	480 x 320	
720 x 576	640 x 480	320 x 240	

Also supports any custom resolution not listed here, including computer formats like 1280 x 1024, etc. Note: Lower resolution results in higher transcodes.

Supports PAL TO NTSC conversion but not NTSC to PAL. Supports closed captioning.

H.265 output resolutions supported are 1080, 720, 576, 480.

H.265 576/480 resolutions only have 4:3 aspect ratio.

Output Bit Rates

Bit Rates:	Multiple H.264, MPEG-2, and/or optional H.265 video streams at different bit rates (.1 to 15 mbps)
Quality:	8 bit encoding with 4:2:0 color sampling; optional 4:2:2





Administration

Access:	Web interface, SSH (Secure command line interface)
SNMP:	Monitoring and alerts, MIBS available
Scheduling:	On, Off support for timeslots

CPU and Operating System

CPU:	Quad Intel® CPU server, 40 Core
OS:	DVEO embedded Linux® in Flash™

Physical & Power

Size:	1.7" h x 17.2" w x 27.75d" (43 x 437 x 705 mm)		
Voltage:	1200W high-efficiency power supply with PMBus (80 Plus Rated)		
Power Consumption:	15 amps maximum		
Operating Temperature:	10° to 35° C (50° to 95°F)		
Non-Operating Temperature:	-40° to 70° C (-40° to 158° F)		
Humidity:	8% to 90% (non-condensing)		
Weight:	40 lbs (18.1 kg)		
Conformities:	   	UL, CSA, CE, RoHS	

Security

Port scanned to MIL requirements prior to shipment
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