XD Vision*

Multi-Domain Voice, VTC, FMV, & XML Cross Domain Solution

Key Features

- → Scalable, Flexible Configuration
- → Meets NCDSMO CDS Baseline requirements and approved for deployment to the U.S. DoD & IC
- → Designed for Multi-Domain
- → Voice/VTC, FMV, XML Streaming
- → Remote Administration & Monitoring
- → Meets rigorous "Raise the Bar" standards

Supported Data Formats & Transport Layers

- → Session Initiation Protocol (SIP)
- → Real Time Transport Protocol (RTP)
- → Transmission Control Protocol (TCP)
- → User Datagram Protocol (UDP)
- → ISA C2 sensor control protocol
- → H.263, H.263+, H.264, XML

Management & Monitoring at Scale

- → Remote Monitoring (RMON) rsyslog support
- → Remote Management (RMAN) 2 factor authenticated secure console administration via HTML5 in web browser
- → High Side Management and DCO network interfaces

The Owl Solution

Owl XD Vision is a multi-domain, scalable, secure software-based cross domain solution for sharing high-definition video and audio among multiple classified or coalition domains. Designed with a base 3-domain architecture, it can support Voice / Video teleconferencing (VTC), full-motion video (FMV), and XML Structured/Fixed Format data transfer between up to 7 or more domains (depending on throughput requirements). XD Vision can be configured as requirements grow to add additional domains, data types, and/or call and stream volume.

Voice & Video

XD Vision supports Voice over IP (VoIP) and Video Teleconference (VTC) cross-domain voice calls between at least 3 domains, with support for LDAP and Active Directory.

FMV

XD Vision supports full motion video (FMV) such as cameras for force protections and Unmanned Aircraft System (UAS) with metadata in Key Length Value (KLV) format. It also supports geofencing, which enforces sharing rules based on where the camera is pointed. The level of content filtering can be configured per stream based on threat level, quality, and sharing requirements.

XML Structured / Fixed Format

XD Vision is type accredited for XML and supports fixed format messages for structured streaming data, providing XML schema (XSD) validation and XSLT modification.

Multi Domain Operations at Scale

XDVision is a single, secure platform for real-time voice, video, and data collaboration across multiple security domains that can support hundreds of HD video and/or audio calls concurrently. It seamlessly connects coalition networks at different classification levels, managing, filtering, and routing all cross-domain communications. Centralized, remote administration streamlines user and system management, reduces hardware needs, and lowers costs by eliminating multiple classified phone systems.

* Owl XD Vision was previously named V3CDS

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XD Vision Components

Dispatcher

The Dispatcher verifies domains attempting to exchange data are allowed (based on the Security Policy) and routes the data to an available Pipeline Appliance (PLA).

Pipeline Appliance (PLA)

Manages the data transfer between domains. Filters the data (based on the Security Policy) and routes it through the Dispatcher to a Gateway on another domain.

Gateway Server

The Gateway Server contains the Protocol Adapters to accept and connect various data types between domains.

The Owl Solution

As shown in **Figure 1. Sample High-Level XD Vision Deployment** Domain 1 (red) has two Gateway Servers, a Call Manager, a sink that receives FMV video, and a Dispatcher that connects to all the Gateway Servers in the other domains.

Gateways 2 and 3 each have an FMV source (camera) that sends video to Domain 1 FMV Sink. If these domains are allowed to communicate (based on the Security Policy), when Domain 2 initiates a call to Domain 3, the call flows through its Gateway to the Dispatcher in Domain 1, where the Dispatcher verifies whether Domain 2 is allowed to communicate with Domain 3. If Domain 2 is verified, the Dispatcher in Domain 1 filters the call data (audio, video, text) through the Egress connection to the Ingress Pipeline Appliance (PLA). The Dispatcher receives the filtered call data and double checks that communication between the domains is allowed.

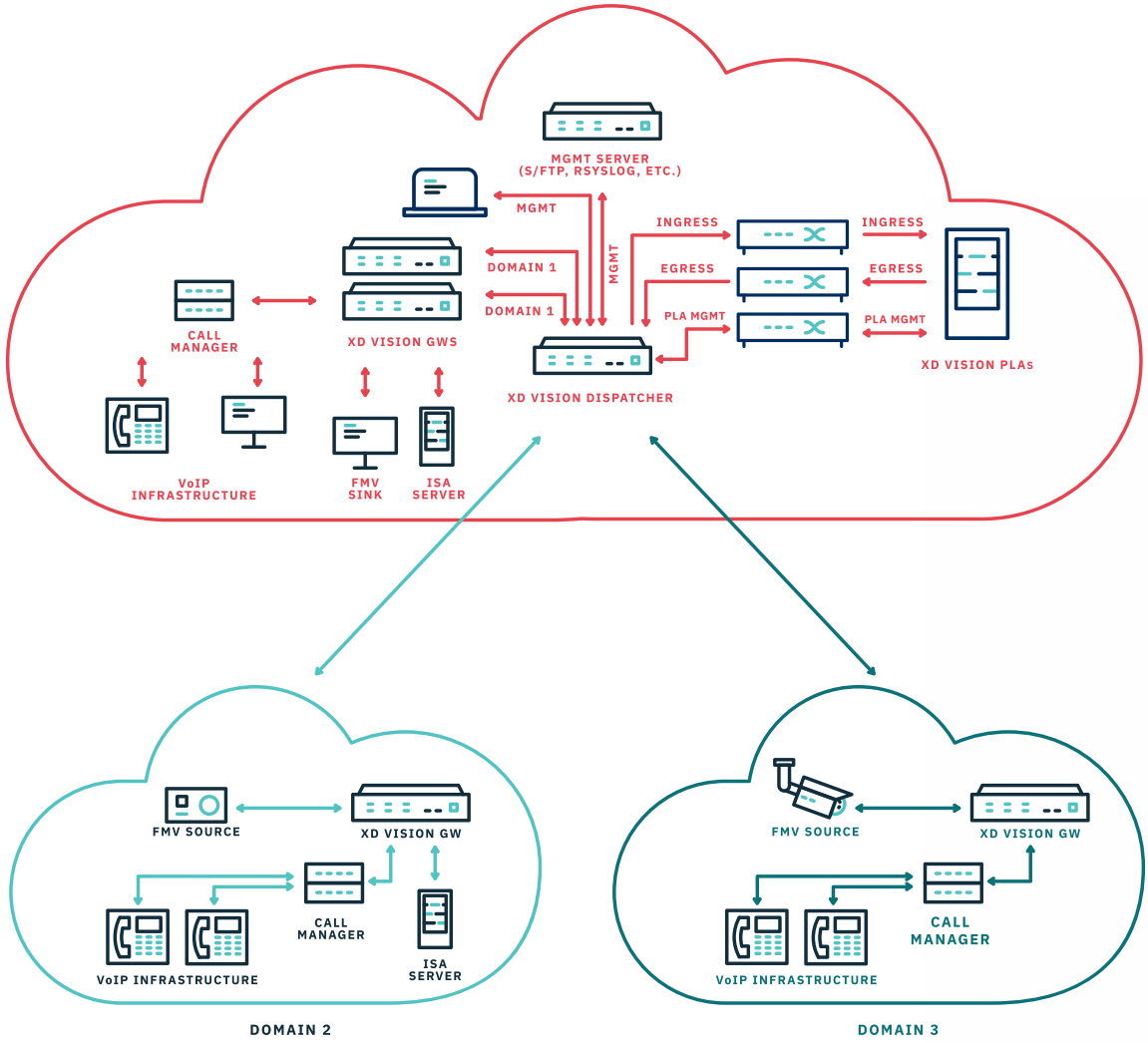

Fig 1. Sample High-Level XD Vision Deployment

Dispatcher: HPE DL 385 Gen 11

Technical Specifications *

Dimensions

(H x W x D) (with bezel):
8.75 × 44.54 × 71.47 cm
3.44 × 17.54 × 29.71 in

Form Factor

2U rack

Processor

AMD® EPYC® 7002 Series Processors

Temperature

Standard Operating Temperature:
10° to 35°C (50° to 95°F) at sea level

Power Supply

1600 W at 200 VAC to 240 VAC input, 1600 W at 240 VDC input

Altitude

Operating:

3050 m (10,000 ft)

Weight

Minimum:
34.12 kg or 75.23 lb

Maximum:
18.45 kg 40.67 lb

Humidity

Operating:
8% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.

PLA: HPE DL 385 Gen 11

Technical Specifications *

Dimensions

SSF Drives:
8.75 x 44.54 x 71.1 cm
3.44 x 17.54 x 28 in

LFF Drives:
8.75 x 44.54 x 74.9 cm
3.44 x 17.54 x 29.5 in

Form Factor

2U rack

Processor

AMD® EPYC® 7002 Series Processors

Temperature

Standard Operating Temperature:
10° to 35°C (50° to 95°F) at sea level

Power Supply

For 1400W Power Supply:
1400W (at 240 VAC), 1400W (at 240 VAC))

Altitude

Operating:
3050 m (10,000 ft))

Non-Operating:
9144 m (30,000 ft)

Weight

Minimum:
15.1 kg / 33.25 lbs

Maximum:
24.7 kg / 54.5 lbs

Humidity

Operating:
8% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.

Gateway: HPE DL 365 GEN 11

Technical Specifications *

Dimensions

SSF Drives:
4.29 x 43.46 x 70.7 cm
1.69 x 17.11 x 27.83 in

LFF Drives:
4.29 x 43.46 x 74.98 cm
1.69 x 17.11 x 29.5 in

Form Factor

1U rack

Processor

Intel® Xeon® Scalable Processor Family with up to 28 cores

Temperature

Standard Operating Temperature:
10° to 35°C (50° to 95°F) at sea level

Power Supply

For 1600W Power Supply:
5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)

Altitude

Operating:
3050 m (10,000 ft))

Non-Operating:
9144 m (30,000 ft)

Weight

SFF Minimum:
13.04 kg (28.74 lb)

SFF Maximum:
16.27 kg (35.86 lb)

LFF Minimum:
13.77 kg (30.36 lb)

LFF Maximum:
16.78 kg (37 lb)

Humidity

Operating:
8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.

Non-Operating:
5% to 95% - Relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non- condensing

* Default Data Center Configuration

Administrators

XD Vision administrators can execute only those functions assigned to their respective role.

The XD Vision administrators are divided into four roles:

- → Security Administrators (SecAdmin)
- → System Administrators (SysAdmin)
- → Log Administrators (LogAdmin)
- → Policy Administrators (PolAdmin)

V2CDS / XD Vision Comparison Matrix

	V2CDS	XD VISION
Meets NCDSMO CDS Baseline Requirements?	Yes	Yes
Multi-domain	Multiple CDSs along with additional Collaboration Hub UC components	One managed CDS with comprehensive administration across all domains
Remote Management & Monitoring	Yes	Yes
DFDL Messaging	Planned v2.1 (2026)	Planned v2.1 (2026)
Full Motion Video	Separate configuration (CDFMV)	Included, may require performance upgrades
Performance	Dedicated per connection. Scales up with multiple CDSs	Load balanced per PLA (3 connections). Scales up with additional PLAs
Redundancy / HA	HA failover per connection with SIP trunk grouping	Failover requires additional complete system
Cost	Can be less expensive for some high availability and high-performance requirements	Less expensive for multiple domains without high availability, and if major performance upgrades are not required

