

Dell Technologies and NVIDIA Metropolis with VisionLabs

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Solution Overview

Abstract

NVIDIA has partnered with Dell Technologies to develop the Metropolis video analytics platform. This solution enables VisionLabs video analytics applications to co-reside on a single server in a containerized manner, making it easy to deploy, manage, and scale. Intelligent Video Analytics is key to turning this data into insights.



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Solution overview

The video analytics market has seen the emergence of new sensors, higher resolutions, and longer retention times—generating massive streams of data that need analysis. Approximately 94% of video goes unreviewed, and companies struggle to support and scale their present infrastructure to maintain basic levels of service. Intelligent Video Analytics is key to turning this data into insights.

The purpose of this guide is to help you understand the benefits of implementing the Metropolis video analytics platform with leading VisionLabs.

Scope

This guide provides information for VisionLabs using NVIDIA Metropolis for Intelligent Video Analytics.

This guide is intended for use by internal Dell EMC sales and presales personnel, and partners.

It includes the following design considerations:

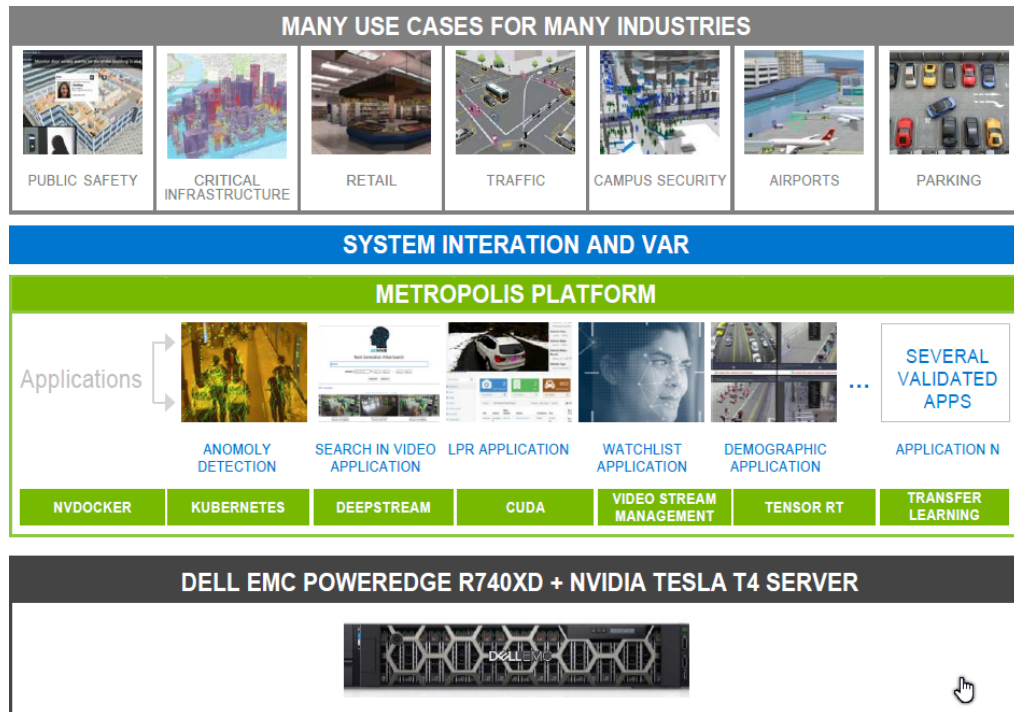
- Design overview of NVIDIA Metropolis
- Verified VisionLabs software vendors

Metropolis platform design

Video analytics solutions are a combination of processing hardware and video analytics applications from Independent Software Vendors (ISVs). These analytics solutions must be designed, sized, integrated, and configured. This can be a complex challenge that can result in increased capital and operating expenses.

Partnering with Dell Technologies, NVIDIA has developed the Metropolis video analytics platform. The combination of an integrated and tested solution based on the Dell EMC PowerEdge R740xd server and NVIDIA T4 GPUs enables multiple video analytics applications to coexist on a single server in a containerized manner. This solution makes it easy to deploy, manage, and scale.

Figure 1 Metropolis architecture

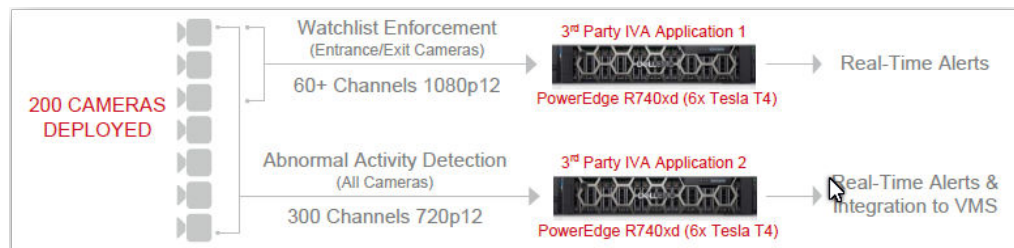


The Metropolis platform provides the following benefits over existing analytics architectures:

- A modular, future-proof, scalable platform for real-time insights
- A proven edge to cloud solution tested with multiple applications on predefined servers configuration
- Containerized applications for ease of installation, deployment, and management
- Ability to augment staff, reduce operational costs and increase operational effectiveness
- Improved ROI on video infrastructure by delivering actionable insights that impact safety and revenue

The Metropolis platform enables multiple video analytics applications to coreside on a single server in a containerized manner.

Figure 2 Metropolis sample deployment



VisionLabs

VisionLabs is a team of Computer Vision and Machine Learning Experts that are recognized as one of the best in the world today by both scientific and engineering communities. VisionLabs offers

GPU-powered LUNA PLATFORM solution for face recognition in uncontrolled and controlled scenarios.



Deep learning based cross-domain real-time face recognition solution.

Key solution

Facial recognition

Benefits

- Most age and race-tolerant algorithm as per NIST FRVT benchmark
- Camera vendor agnostic
- Can operate on large databases (1-110 million faces every sec.) with allowed latency of 1 sec

Customer successes

- EQUIFAX
- KASPI
- MAII.RU GROUP
- VTB GROUP
- SBERBANK

Summary

The NVIDIA Metropolis video analytics platform, combined with Dell EMC PowerEdge R740xd servers, makes Intelligent Video Analytics easy to deploy, manage, and scale. Customers can deploy multiple IVA algorithms on a single server with as many GPUs as needed.

This video analytics solution successfully integrates the Metropolis processing hardware with VisionLabs video analytics applications.