

Dell Technologies and NVIDIA Metropolis with OpenALPR

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Solution Overview

Abstract

NVIDIA has partnered with Dell Technologies to develop the Metropolis video analytics platform. This solution enables OpenALPR 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](#) 4
- [Scope](#) 4
- [Metropolis platform design](#) 4
- [OpenALPR](#) 6
- [Summary](#) 6

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 OpenALPR.

Scope

This guide provides information for OpenALPR 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 OpenALPR 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 coreside 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



OpenALPR

The OpenALPR commercial engine enables high-speed, real-time License Plate Recognition software applied to video streams from IP cameras.



Automatic license plate recognition and vehicle make, model, color, and body type recognition that is applied to video streams from IP cameras.

Key solutions

- License Plate Recognition
- Vehicle Recognition

Benefits

- Support for US, Europe, and Australia styles plates, Software only
- Works with any IP camera
- Fast and accurate
- Affordable

Customer successes

Watchtower security—260 LPR cameras in public housing and HOAs

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 OpenALPR video analytics applications.