

Dell Technologies and NVIDIA Metropolis with iCetana

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Solution Overview

Abstract

NVIDIA has partnered with Dell Technologies to develop the Metropolis video analytics platform. This solution enables iCetana 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 iCetana.

Scope

This guide provides information for iCetana 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 iCetana 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



iCetana

Self-learning, intelligent analysis of surveillance video in real time, at scale. This solution lets organizations analyze hundreds to thousands of camera streams, select and react to abnormal events in real time, and reduce operator headcount that is needed to monitor systems.



Self-Learning intelligent analysis of surveillance video in real time, at scale.

Key solution

Unsupervised Anomaly Detection

Benefits

- System can self-learn to detect abnormalities, such as aggression or violence on all feeds
- Ability to analyze hundreds-to-thousands of camera streams
- Display only abnormal events—selecting only what is important for real time
- System can help reduce operator headcount that is needed to monitor systems

Customer successes

- Curtin University (Australia)
- Majid Al Futtaim (Shopping mall in Dubai)

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 iCetana video analytics applications.