DELLTechnologies

Dell Technologies
Safe Cities Customer Ready Solutions

Cities are growing with rapid urbanization and facing unprecedented challenges with public safety and law enforcement. Dell Technologies Safe Cities Customer Ready Solutions are highly scalable pre-validated ISV partner solutions designed on purpose-built Dell Technologies Infrastructure Solutions to deliver cost effective solutions to address these challenges.

Introduction

Building for humanity's urban future

Cities have always been at the forefront of innovation and human progress. Today, two powerful forces are propelling humanity to the next chapter in our urban story.

On one hand, city populations are rising both in absolute terms and as a proportion of global population. UN figures predict that by 2050 some 6.7 billion people – 68% of humanity – will live in cities. On other hand, cities are constrained by limited infrastructure and resources.

Today's preparation for this growth will define how tomorrow's cities meet its challenge. From health, transport and housing to education, security, waste management, culture and tourism, every facet of urban life will have to operate at greater scale than ever before.

The Role of Digital Cities

Maintaining and improving citizens' quality of life in the megacities of tomorrow needs a fresh approach. At Dell Technologies, we're pioneering solutions to empower cities to thrive in the next phase of their evolution.

Our vision is of Digital Cities – built on foundations of robust technology and flexible IT infrastructures – that provide essential services from a common platform.

From open-source software and standardized hardware economies to frictionless scalability, predictive and preventative data services and cutting-edge security, we offer the tools to start building your city of tomorrow.

Public Safety Challenges

Situational awareness has moved from simple image recording to AI-powered abilities to analyse, understand and respond to data near instantaneously. Visual sensors offer ever greater resolution, with correspondingly large data volumes – 110Gb/Hour for one 4k camera, for example. And this data must be managed, protected and retained for longer than ever before.

This is a challenge for city administrators and others responsible for public safety in growing cities. From higher education institutions, transport companies and law enforcement to retailers, stadia, schools and prisons, all need to make far-reaching decisions on their long-term safety and security infrastructure.'

Cities need enterprise-class solutions that combine compute, storage, and network capacity with top-flight security, reliability, scalability and overall system resilience. Meeting these demands with one solution is not a trivial task. Making it easy to deploy and scale is very difficult to achieve.

Dell Technologies Customer Ready Solutions for Safe Cities

Dell Technologies Safe Cities Customer Ready Solutions give civic government, business and public institutions clear, cost effective pre-validated paths to transition to modern infrastructure.

Built by the sector's #1 global infrastructure provider[1], Safe Cities Customer Ready Solutions offer:

- Pre-integrated, pre-tested, lab validated solutions for use with your own data and your choice of devices and sensors, software (e.g. analytics) and services
- Built around a modular approach that addresses public safety solutions' unique requirements in storage, analytics and situational awareness.
- Solutions that are ready to deploy and manage quickly, delivering advanced civic safety capabilities efficiently, predictably and to clearly defined budgets
- A flexible and open architecture that's massively scalable and ready to adapt to changing demands
- Proven use cases for digital public safety including video surveillance, video analytics and situational awareness.

1 IHS Markit report, "Enterprise and IP Storage used for Video Surveillance", October 2019

Safe City Outcomes

The Dell Technologies Customer Ready Solutions for Public Safety can help cities realize a range of outcomes under various categories like the following:

Campus Safety (Airports, Malls, Universities, Museums)

- High-value asset protection
- Perimeter protection of remote sites
- Obstacles, slip and fall scenarios
- Unauthorized after-hours access
- Security and safety incidents monitoring
- Visitor behavior understanding for retail

City wide Safety (City Councils, State & Federal Governments)

- Crime, violence, vandalism monitoring
- Unauthorized movement in restricted areas
- Illegal and/or excessive crowd, fighting monitoring
- Situational awareness
- Security and Safety of the residents
- Fire hotspots detection

Homeland Security (Public Safety agencies, Border Control)

- Crime, violence, terrorism
- Unauthorized movement in restricted areas
- Person of Interest and Vehicle Of Interest for safety
- Situational awareness and multi-agency response
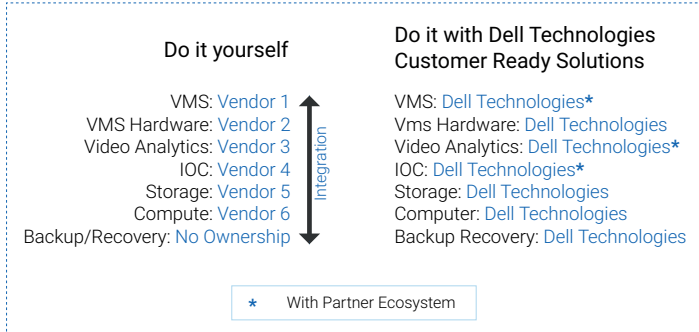- Security and Safety of the citizens

These complex outcomes are achieved through video analytics algorithms to enable use cases like Intrusion detection, object detection and counting, face detection and recognition, video synopsis, behavioral analytics etc.

Dell Technologies Advantage

Dell Technologies is a unique family of businesses that provides the essential infrastructure for organizations to build their digital future, transform IT and protect their most important asset information.

With Dell Technologies, customers can have a one-point-of-contact for lab validated components, domain expertise and integration capabilities instead of having to work with multiple vendors to achieve the end to end goals.

Dell Technologies also has a wide infrastructure portfolio and extensive experience with processing video workloads for surveillance and analytics use cases and can help deliver end to end validated solutions.

Do it yourself

VMS: Vendor 1
VMS Hardware: Vendor 2
Video Analytics: Vendor 3
IOC: Vendor 4
Storage: Vendor 5
Compute: Vendor 6
Backup/Recovery: No Ownership

Integration

Do it with Dell Technologies Customer Ready Solutions

VMS: Dell Technologies*
Vms Hardware: Dell Technologies
Video Analytics: Dell Technologies*
IOC: Dell Technologies*
Storage: Dell Technologies
Computer: Dell Technologies
Backup Recovery: Dell Technologies

* With Partner Ecosystem

Dell EMC PowerEdge Servers:
Industry's leading Compute platform

RACKS   TOWERS   MODULAR

Dell EMC Storage Portfolio:
Industry's leading Storage platform

BLOCK   UNIFIED *(block and file)*   UNSTRUCTURED *(file and object)*   HYPER-CONVERGED INFRASTRUCTURE *(VMware and multi-hypervisor)*

Conclusion

Dell Technologies Safe Cities Customer Ready Solutions are enabled by Dell Technologies Infrastructure for Compute, Storage and Networking resources. These hyper-converged solutions are purpose-built for demanding, multi-sense situational awareness, such as video, sound, and barometric pressure. The IoT solutions include both hardware and software.

Our pre-integrated solutions deliver a consistent foundation from edge to distributed core to the cloud, in an open, flexible architecture.

By pre-integrating, testing and validating solutions in our labs, we help reduce deployment risk, increase system reliability, reduce support costs and gain a proven, repeatable architecture

Our Customer Ready Solution architectures also provide a flexible, scalable infrastructure on which to build future smart cities initiatives. At a time of rapid urban growth, this facilitates faster technology uptake and maximizes return on civic resources.