



# Helping to keep people, property, and the planet safer

Organizations across the globe are leveraging intelligent safety and security systems to help keep employees, customers, and the general public safe. Technological advancements in imaging sensors, video resolution, AI, and high-performance edge computing are leading to real-time actionable insights that enable organizations to respond faster and with greater precision than previously thought possible, improving safety for all.

These intelligent video analytics systems include the latest in camera sensors, compute, storage, networking, analytics, and cloud technologies. Beyond the technology framework, the true value of video analytics is realized only when sophisticated background processing combines imaging with additional data using advanced analytics as part of an organization's larger security and operational workflow. As organizations further build out their safety and security strategies, they need to consider an enterprise-integrated approach including:

- ♦ **Integration of a wide variety of sensors:** Safety and security solutions often bring together more than one type of video sensor (e.g., optical, thermal, LIDAR) with audio, biometrics, and IoT, and each component often comes with its own access management software.
- ♦ **Incorporation of security standards:** Organizations should unify their video management systems (VMS), access controls, and corporate-security workflows to gain a 360-degree point of view.
- ♦ **Storage for petabytes of data:** Data volumes from safety and security systems are increasing at a staggering 40.4 percent each year.<sup>1</sup> All of this data requires the ability to process, store, scale, access/search, and secure it, aligned with industry regulations and governing laws (e.g., document retention policies for digital evidence).
- ♦ **Management of multi-cloud environments:** With data residing in multiple locations, organizations need a way to integrate, manage, and secure their data effectively across a multi-cloud ecosystem that extends from the edge to the data center to the cloud.
- ♦ **Analytics and insights tailored to your particular use case:** Data needs to be mined using advanced analytics engines with automation capabilities designed to generate insights that add operational value and deliver business outcomes specific to industry and user needs.
- ♦ **System validation:** To mitigate risks, the entire safety and security system should be validated prior to deployment to determine how distinct workloads and hardware components work together in a cohesive environment.

## DELL TECHNOLOGIES SOLUTIONS FOR SAFETY AND SECURITY

Dell Technologies offerings address your unique requirements to provide a comprehensive strategy that brings together a full range of safety and security components from edge to core to cloud. Every part of the ecosystem is represented by a combination of our infrastructure, services, and industry-leading, validated partner solutions. Working with your organization, our approach will help you to mitigate risk while increasing time to value by ensuring that your safety and security solution is tailored to your business needs.

## KEY BENEFITS AND VALUE

**1 A robust end-to-end portfolio:** Leverage our innovative portfolio from edge to core to cloud that integrates the right hardware and software to precisely suit your particular use case and can scale from point solutions to enterprise environments.

**2 Lower investment risk:** With Dell Technologies, your organization minimizes risk and maximizes value with our tested, optimally-configured, validated designs with best-in-class hardware and in conjunction with software partners.

**3 A comprehensive, lab-validation test approach:** To help deliver a solution to your organization that works from day one, Dell Technologies aligns validation standards with our partners to test hardware and software in extreme, real-world scenarios in order to reduce deployment risk.

# Top Use Cases for Safety and Security Solutions

Driving results for workflows across industries

					
Educational Campuses	Healthcare	Sports Venues, Airports, Event Centers	Government	Energy and Manufacturing	Retail
<ul style="list-style-type: none"> <li>• Safety and emergency response</li> <li>• Theft and vandalism deterrence while maintaining a positive learning experience</li> <li>• Investigation of incidents and identification of suspects</li> <li>• Campus safety including unauthorized intruder identification and entrance, exit, and corridor monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Connected healthcare through onsite and remote monitoring</li> <li>• Bedside telemetry and hospital asset tracking</li> <li>• Security of authorized access/entry points</li> <li>• Staff and visitor safety</li> <li>• Virtual care sitters, pain monitoring, ER visual triage, and drug-compliance management</li> </ul>	<ul style="list-style-type: none"> <li>• Venue safety and security</li> <li>• Enhanced attendee experience</li> <li>• Intelligent transportation systems to enable passenger safety and security</li> <li>• Air traffic monitoring</li> <li>• Freight monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Public safety and emergency response</li> <li>• Body-worn systems</li> <li>• Transportation safety initiatives</li> <li>• Environmental monitoring</li> <li>• Public infrastructure asset management</li> <li>• Digital evidence and forensics</li> <li>• Smart city initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Automation of energy distribution (electricity, gas, water), smart meters</li> <li>• Maintenance and field service</li> <li>• Manufacturing operations</li> <li>• Production asset management</li> </ul>	<ul style="list-style-type: none"> <li>• Asset protection and loss prevention</li> <li>• Greater inventory accuracy and control</li> <li>• Omnichannel operations</li> <li>• NFC payment/shopping</li> </ul>

## Advancing Safety and Security Workflows

Dell Technologies Solutions for Safety and Security extend across a broad range of operational workflows in every industry, providing comprehensive safety and security for people, systems, and data.

In healthcare, for example, hospitals are leveraging integrated safety and security solutions for continuous or periodic remote monitoring of vitals regardless of patient care location—both in-facility (e.g., Tele-ICU, TeleSitting) and at home (TeleNursing). Law enforcement agencies are improving their ability to provide valid legal proof in court cases by using enhanced digital evidence and forensics. Manufacturers rely on safety and security systems to detect impending failures so that maintenance can be preemptive and managed into scheduled downtime. Still further, retail stores are able to improve asset protection and loss prevention by combining sensor data with other IoT data and advanced analytics to deliver deeper insights that can uncover criminal activities as they happen. These use cases represent just a few of the safety and security initiatives currently being deployed across every industry.

### SIMPLIFIED SOLUTIONS

Making the decision to adopt a safety and security solution that scales with your organizational needs requires a trusted partner. That is precisely why Dell Technologies has taken the necessary steps to simplify and streamline your organizational deployment process with solutions that combine validated workloads for bare metal, converged, hyperconverged, and partner-supplied appliances in a scalable architecture.

Our expansive range of essential IT includes client devices and peripherals, servers, storage, converged and hyperconverged infrastructure (CI/HCI), and industry tools such as virtualization and analytics.

### OUR ROBUST PARTNER ECOSYSTEM

Dell Technologies teams with best-of-breed safety and security technology partners, including ISVs, system integrators, and cloud providers, to streamline deployment and improve overall IT performance. Our extensive ecosystem of partners also helps deliver the tailored approach needed to address your business objectives, from simple video capture to advanced monitoring using multiple sensors—turning passive video into scalable, intelligent video analytics systems.

### INTEGRATED, VALIDATED, AND SECURE

Dell Technologies works closely with your organization to identify key business challenges and then provides a foundation to securely connect, aggregate, analyze and transform safety and security data to impact key business outcomes. Aligning your business strategy with the right outcomes requires a scalable, comprehensive approach where processes and technology can be efficiently managed from a single location. Dell Technologies provides access to the required system building blocks from distributed locations to a centralized location. Combined with our ecosystem of SI/SO partners, we help you deploy, manage, and scale your solution as you grow—all without needing additional IT expertise.

Our solutions bring together:

- **Real-time edge compute and analytics:** Gartner predicts that by 2025, 75 percent of enterprise data will be processed at the

edge, compared to only 10 percent today.<sup>2</sup> The need to process compute-intensive workloads at the source quickly is amplified when outcomes are time-critical, as is the case in many safety and security use cases from emergency response to criminal investigations. Our Dell Technologies family of compute platforms, from gateways to high-performing servers, helps capture, analyze, and gain insights from cameras and other sensing devices for real-time data analytics and machine learning at the edge to the data center to the cloud.

- **The software-defined data center:** With Dell Technologies next-generation storage and data protection solutions, you can manage both current data and future workloads with efficiency, security, and scalability. Our Dell EMC VxRail hyperconverged infrastructure combines servers, storage, networking, and virtualization into one cloud-ready solution to achieve true application deployment flexibility.
- **Multi-cloud integration:** As you expand your safety and security capabilities using multiple cloud-native workloads, Dell Technologies Cloud combines VxRail and VMware Cloud Foundation (VCF) into one pre-engineered ready-to-run platform to eliminate silos of operation with service management, governance, security, automation, and orchestration tools. For cloud-based storage, we take a multi-cloud approach via Dell Technologies cloud service providers that leverage VCF. This capability enables customers to easily extend their storage from edge to core to cloud.
- **Secure, resilient IT:** Dell Technologies helps our customers to mitigate cybersecurity risks through our open network community. Our industry-leading hardware and partner offerings help address network complexities in an end-to-end safety and security deployment.

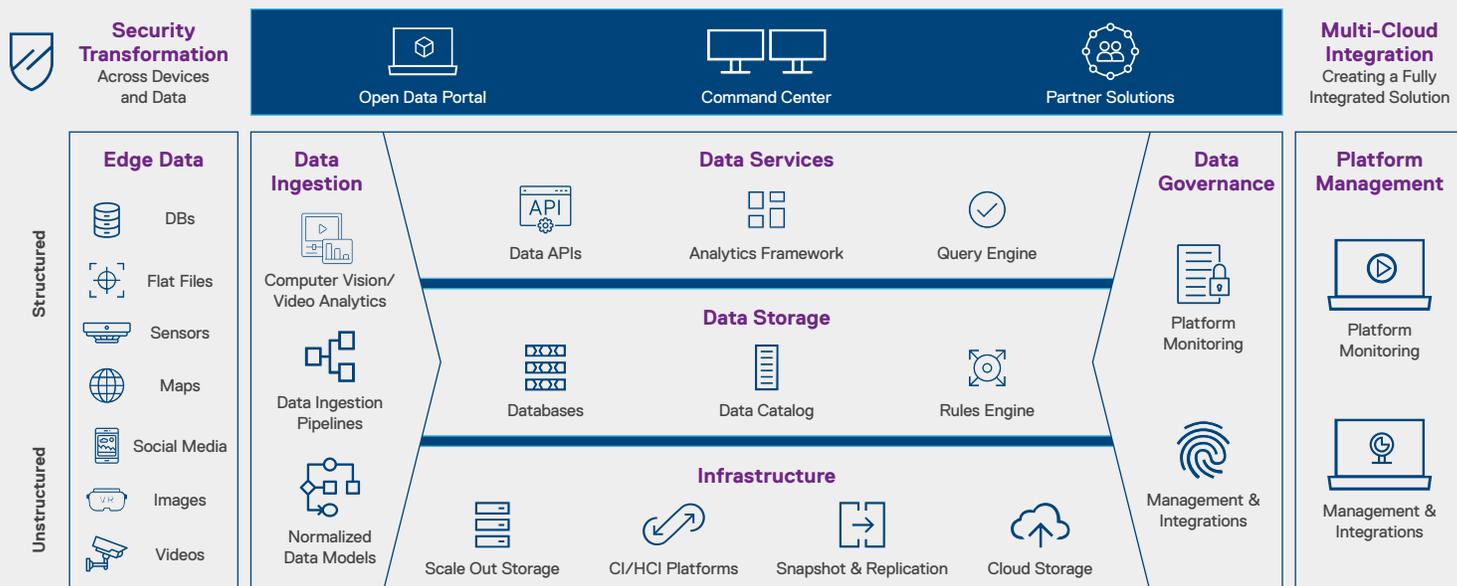
## ACCESS TO ADVANCED SAFETY AND SECURITY VALIDATION LABS

At the heart of the Dell Technologies safety and security offerings is our global validation and testing labs, where reference architectures and design guides are built, implemented, and calibrated to design concepts, all in a scalable and controlled loading environment.

Validating safety and security solutions for hardware and software performance within the customer environment can be complex and time consuming. Dell Technologies Safety and Security Validation Labs are outfitted with leading technology from all major safety and security vendors, allowing the validation of best-of-breed physical security applications with the entire Dell Technologies' edge to core to cloud portfolio. These proven lab validations with key partners accompany extensive documentation to simplify deployment and reduce the risk of data loss for our customers. Our five-step validation process also helps to increase system reliability, thereby reducing overall support costs; gain a proven, repeatable architecture; obtain benchmarking results using a true production workload that produces a zero-data-loss system; test multiple ISV products simultaneously with our fault-tolerance and high-availability options; and validate virtual and non-virtual architectures.

## The Dell Technologies Safety and Security Framework

Simplifying real-time insights at scale



## A Trusted Partner

Dell Technologies has a long history of helping businesses create new opportunities for innovation



infrastructure provider of global safety and security solutions<sup>1</sup>



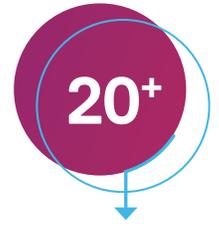
worldwide share in server and storage market for safety and security



cameras managed on Dell Technologies platforms



countries served



industries supplied by Dell Technologies safety and security solutions



billion invested in R&D in the past five years



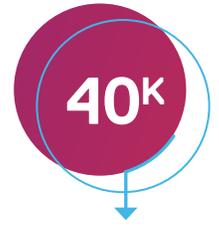
global Safety and Security Validation Labs



validated safety and security partners in ecosystem



Dell Technologies patents and patent applications



global salespeople delivering the Dell Technologies portfolio

### THERMAL VISION SOLUTIONS FROM DELL TECHNOLOGIES

Dell Technologies Thermal Vision solutions combine optical and thermographic sensors, compute, networking, and storage with artificial intelligence (AI), often as part of a larger safety and security workflow. Businesses today are leveraging thermal vision to help ensure the safety of employees, customers, and visitors to their workplace environments, such as using it to identify temperatures over and under a defined threshold at workplace entry points. If required by a public-health mandate, anonymous mask detection integration is an optional feature that can be used to detect whether employees are adhering to mask requirements as stipulated by company guidelines or to determine compliance with social-distancing mandates. A broad range of applications also extend across industries, including patient safety and queuing management in healthcare, leak and stress fracture detection in manufacturing, public safety, and more.

### DIGITAL EVIDENCE MANAGEMENT

The capture, storage, and retrieval of video footage for use in legal and forensics cases is becoming a challenge using traditional, manual approaches. Not only is the sheer volume and variety of data becoming overwhelming, but evidence attached to a case needs to be managed with a reliable chain of custody and kept entirely secure from tampering in order to be admissible in court proceedings. It also needs to be easily accessible to multiple users from both legal

and law enforcement teams. With Dell Technologies, digital evidence management is simplified and centralized, enabling the storage and retrieval of needed footage across teams using an infrastructure platform that allows for the centralized single search of disparate databases in one desktop interface.

### TRANSFORM SAFETY AND SECURITY WITH DELL TECHNOLOGIES

At Dell Technologies, we are committed to providing you with a fully integrated safety and security solution designed to help turn your data into data-driven decisions to drive business insight and advantage—enabling you to strengthen safety and security to help protect people, property, and your business.

Our solutions portfolio and safety and security expertise help reduce the risk, cost, and complexity of implementation by leveraging a comprehensive solution to fit your specific industry requirements. Dell Technologies safety and security solutions offer the scalability, efficiency, simplicity, and agility to fulfill your business needs while providing real-time access to your data for analysis and deep learning. Our advisory, design, build, integration, and lab validation services help deliver the right edge-to-core-to-cloud safety and security system to meet your needs today and tomorrow.



**Learn more**  
about our safety and security solutions



**Contact**  
one of our safety and security experts.



**Connect**  
with us.

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4. "Enterprise & IP Storage Used for Video Surveillance—2019," IHS, April 2019.