San Diego County Sheriff's Office

AI-native networking enhances efficiency and safety in detention facilities and daily operations

Make every connection count

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Industry

Government

Region

Americas

Overview

SDSO simplifies network complexity and enables innovation

California's San Diego County Sheriff's Office (SDSO) provides public safety services across the county's 4,200 square miles, which includes all unincorporated areas plus contract services for seven cities and 18 Native America reservations, covering more than 907,000 residents.

SDSO chose Mist™, Juniper's AI-native networking platform, as part of its strategic adoption of new technologies to enhance efficiency and safety at its detention facilities. Mist promised—and delivered—AIOps, automation, security, and unified management in a network that enhances operations today and prepares the SDSO for future innovation.

Challenge

SDSO strives to be a leader in creating and maintaining safe detention facilities by investing in healthcare, substance use treatment, community reentry, and ongoing improvements that deliver the best outcomes to the community.

SDSO wanted to expand the limited Wi-Fi in its seven detention facilities to enhance safety, including the use of body-worn cameras for deputy sheriffs, with a network modernization at its headquarters campus and over 90 remote locations to follow. But its network vendor didn't have a suitable cloud-managed Wi-Fi option and instead suggested a design that added on-premises controllers to manage switches and wireless access points using legacy technology and architecture.

SDSO IT leadership recognized that the more complex and legacy architecture recommended by the incumbent networking vendor would be challenging to operate and maintain given their lean IT team and they instead decided to replace the legacy controller-based network with an AI-native, cloud-native networking platform.

Transformation

SDSO is modernizing with Mist, starting with its detention facilities. With a full stack Juniper network, SDSO has a secure, FedRAMP-Authorized solution that manages wireless, wired, and SD-WAN under a shared Marvis® AI engine and microservices cloud infrastructure.

SDSO has everything it needs to deploy infrastructure and onboard devices quickly and securely, operate easily, and realize lower TCO and OpEx. Deputies, administrative staff, and the incarcerated community have better digital experiences. SDSO is introducing innovative programs focused on workplace safety, medical and health, and data analytics enabled by Mist.

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Outcomes

Accelerate network transformation

50%

Faster to deploy than previous controller-based Wi-Fi

Better user experience

75%

Decrease in network trouble ticket escalations

Secure, shared infrastructure

1

Network to support both SDSO and incarcerated persons' applications

Solution and implementation

Juniper AP12 Access Point
Juniper AP45 Access Point
Juniper AP63 Access Point
Juniper EX2300 Switch
Juniper EX4100 Switch
Juniper EX4400 Switch
Juniper EX4600 Switch
Marvis AI Assistant
Juniper Wi-Fi Assurance
Juniper Wired Assurance
Juniper Session Smart Router
Juniper SRX380 Firewall
Juniper SRX4200 Firewall
Juniper WAN Assurance
Juniper Indoor Location Services
Juniper Asset Visibility
Juniper User Engagement
Juniper Premium Analytics
Juniper Services

"The biggest concern of moving from on-prem to the Mist GovCloud was **stability and reliability**. We have been satisfied, and the uptime has further validated our decision."

Keith Fernandez
Network and Cybersecurity Operations Manager, San Diego County Sheriff's Office

Full stack, AI-native network that's FedRAMP-Authorized

SDSO applications and digital services are secure and responsive, and the Mist platform is ready to support innovative programs designed to improve health and safety for law enforcement staff and the incarcerated community. The IT team can manage the full stack wireless, wired, and WAN from one cloud-based user-interface, with visibility across each campus and branch site.

Tablets, laptops, body-worn cameras, and other devices connect securely. Juniper APs deliver high performance and vBLE technology, enabling innovative location-based services to enhance safety and security, health and medical monitoring, and asset location. The SD-WAN ensures superior performance and streamlines operations, while protecting data and applications.

SDSO engaged Juniper Professional Services to design the secure SD-WAN connecting its sites. Together, they built a clear set of requirements and goals, and the Juniper services team constructed the solution and implementation plan, including validated configuration templates. Juniper Government Advanced Care Plus Services provide ongoing support and operational assistance.

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Key takeaways and outcomes

Mist excels in tough conditions and breaks ground for innovation

Delivering a good Wi-Fi experience in detention facilities can be particularly challenging due to their size; building materials like concrete, steel, and thick glass; and RF interference from other radio networks.

Mist Wi-Fi works smoothly and securely in these environments, allowing communication, operational, administrative, and medical applications to share the underlying infrastructure with educational and other applications used by incarcerated persons. With secure network segmentation, SDSO eliminated the need to buy and maintain a physically separate network for incarcerated persons, delivering additional CapEx and OpEx savings.

Robust Wi-Fi enabled the rollout of the body-worn cameras used by deputies, specialized units and supervisors, ultimately supporting the safety of the people in custody and those who work within the detention facilities and strengthening the relationship with the community by increasing accountability and trust.

"Mist is a breath of fresh air. Wi-Fi **deployment was efficient**, and troubleshooting is much easier now."

Keith Fernandez
Network and Cybersecurity Operations Manager, San Diego County Sheriff's Office

Speed evidence investigations with Mist location services

The Detention Services Bureau uses Mist location services to speed evidence gathering after an incident. The Bureau's evidence management system has millions of records from its body-worn cameras—with 100,000 new records generated each month. Determining which videos were relevant to an incident that was previously determined to be non-evidentiary was time-consuming manual work.

SDSO uses Juniper Asset Visibility and the BLE capabilities of Juniper APs to determine the location of a body-worn camera at a specific date and time. The relevant video metadata is automatically tagged, allowing SDSO to associate evidentiary data that coincides with personnel and physical locations. Integration between body-worn cameras, the Mist platform, and the evidence management system significantly streamlines record identification and preservation.

"Tagging the videos with locations occurs seamlessly without any additional workload incurred by personnel," said Lieutenant David Blackwell of SDSO's Operational Technology Unit. "Investigators used to pour though hundreds of videos to locate relevant evidence for an investigation. This technology greatly enhances and streamlines this process for our personnel."

"Marvis AI Assistant is **intuitive for the service desk** and less experienced engineers."

Keith Fernandez
Network and Cybersecurity Operations Manager, San Diego County Sheriff's Office

The Marvis AI Assistant wins MVP

The impact of Marvis® AI on network reliability and IT support teams' productivity is significant. With Marvis AI Assistant, concerns that a lean team couldn't manage the larger network have evaporated. The staff is even taking on responsibilities they had previously offloaded, as trouble tickets and network issues dropped dramatically.

"Marvis AI Assistant is intuitive for the service desk and less experienced engineers," said Fernandez. "It gives alerts and conditions that help less experienced engineers troubleshoot issues that previously would have required a more experienced engineer."

Better network visibility reduces trouble tickets

Since deploying the Mist platform, the network engineering team has seen 75% fewer escalated tickets.

The IT team has gained the unified network management they wanted for years. They have visibility across all the wired, wireless, and SD-WAN domains, and Mist's smart dashboards provide the detailed information they need to keep the networks up and running. With Mist, they can minimize network downtime and disruptions and focus on delivering innovative technology solutions for public safety.

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More information

Mist: purpose-built with AI and for AI

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To learn more about Mist, visit our website at https://www.juniper.net/us/en/campus-and-branch.html

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