Ascendant Indian City is Becoming Smarter and Safer with Cisco HyperFlex and Cisco AI/ML Technology

Gurugram Metropolitan Development Authority ⋅ Industry: Public sector ⋅ Size: 200 employees ⋅ Location: Gurugram, India

The Gurugram Metropolitan Development Authority (GMDA) is responsible for the integrated planning and development of Gurugram and surrounding areas. Known as Millennium City, Gurugram is a leading financial and industrial hub with the third highest per capita income in India. For more information, visit [gmda.gov.in](http://gmda.gov.in).

**Challenges**
- Increase operational integration and coordination
- Enhance public safety monitoring and emergency response
- Improve data security and analytics

**Solutions**
- Cisco HyperFlex™ system
- Cisco Unified Computing System™ (Cisco UCS®)
- Cisco® Artificial Intelligence and Machine Learning (AI/ML) solutions
- Cisco Kinetic™ for Cities
- Cisco Nexus® 9000 Series switches
- Cisco Firepower® Next-Generation Firewall (NGFW)
- Cisco Stealthwatch®
- Cisco Web Security Appliance (WSA)
- Cisco Identity Services Engine (Cisco ISE)
- Cisco Threat Grid
- Cisco ASR 1000 Series Aggregation Services Routers (Cisco ASR 1000)
- Cisco ASR 900 Series Aggregation Services Routers (Cisco ASR 900)
- Cisco Network Convergence System 2000 Series (Cisco NCS 2000)
- Cisco Video Surveillance IP Cameras
- Cisco Video Surveillance Manager

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**GMDA spokesperson**

**Challenge: Integrate city operations**

Few cities in the world have grown as rapidly as Gurugram over the past three decades. Once a small, agricultural village, the city has emerged as an economic and development powerhouse and a key offshoring center for Fortune 500 companies.

Rampant development and population growth exceeding 85 percent have created challenges in addition to prosperity, and GMDA is continually working to improve the livability of the metropolitan area and the safety of its citizens.

“We are responsible for 115 sectors and a wide variety of civic functions,” a GMDA spokesperson says. “To sustain a world-class city and support a high standard of living, we need to be integrated and coordinated across all of our operations.”

A “Smart and Safe City” project was recently launched to provide better public services and enhance the safety and security of Gurugram. Key to the project is an Integrated Command and Control Center (ICCC), a sophisticated information and orchestration hub for all city operations. The centerpiece of GMDA’s data center, the ICCC is built on the powerful foundation of Cisco HyperFlex, Cisco UCS, and Cisco AI/ML solutions.

“The ICCC is the central hub and single source of information for all civic functions,” the spokesperson explains. “It helps GMDA integrate, analyze, and visualize data from a variety of systems and sensors, giving a full picture of city operations.”
Citywide surveillance and emergency response

Within the ICCC, GMDA is using Cisco Kinetic for Cities to align parking, lighting, waste management, surveillance, e-governance, and city planning systems. A smart city IoT platform, Cisco Kinetic for Cities enables automated, secure data sharing across community infrastructures, applications, and connected devices. The platform is hosted on Cisco HyperFlex, which delivers hyperconverged compute, storage, virtualization, and network components.

“Cisco Kinetic for Cities provides a single, centralized platform for city monitoring and emergency response,” the spokesperson says. “It helps GMDA correlate data sources and make fast, informed decisions during planned and unplanned events.”

The ICCC platform is linked to a city backbone network—via fiber optic ring and Cisco Nexus 9000 switches—that hosts CCTV and adaptive traffic management systems. Built with the Cisco ASR 1000, Cisco ASR 900, and Cisco NCS 2000, the network supports hundreds of Cisco Video Surveillance IP Cameras that deliver real-time analytics. The video data is hosted on Cisco UCS S3260 storage servers, which are optimized for throughput intensive workloads, and the Cisco UCS C480 ML platform provides deep learning.

“GMDA needed a platform that can seamlessly blend data center systems, sensors, and cameras at the edge. Real-time video analytics help improve traffic management, citizen safety, and waste management, and new use cases will be added in the future.”

GMDA spokesperson

Exceptional security and scalability

GMDA’s data center and city backbone networks are protected by a host of Cisco security solutions, including Cisco Firepower NGFW, Cisco Stealthwatch, Cisco WSA, Cisco ISE, and Cisco Threat Grid. The solutions provide complete network and physical security, built-in fault tolerance, and data replication, helping ensure high availability and minimal downtime.

As Gurugram continues to grow, so too will its “Smart and Safe City” infrastructure and capabilities. GMDA is expecting to complete more than 20 integrations on the ICCC platform by the end of 2020.

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