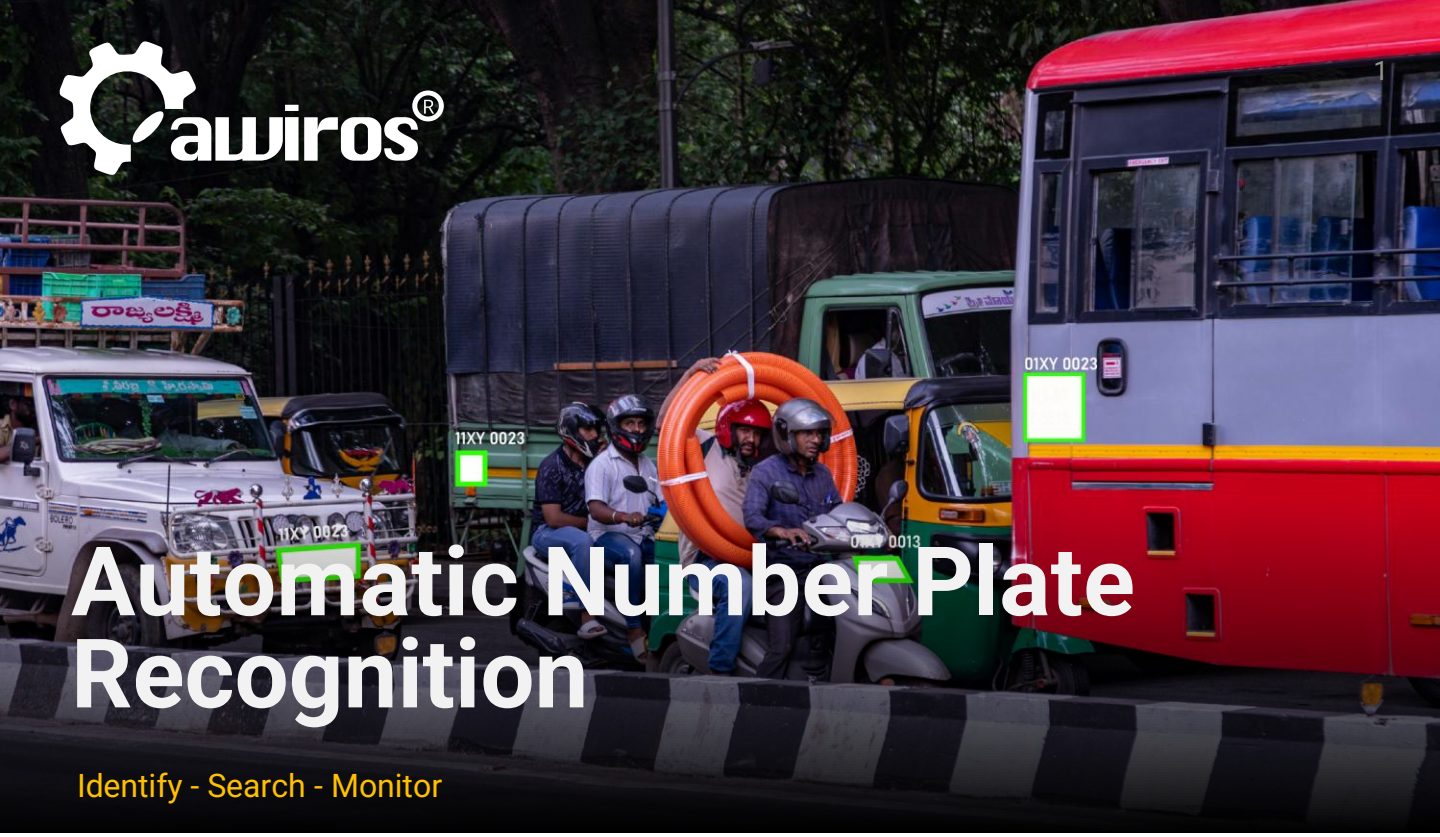
awiros®



Automatic Number Plate Recognition

Identify - Search - Monitor

Automatic Number Plate Recognition (ANPR) is an advanced technology that uses imaging and machine learning to detect, read, and store vehicle license plate information. It processes real-time data from cameras placed in key locations, automating tasks like **traffic monitoring, access control, and toll collection**. With high accuracy, even under challenging conditions, ANPR reduces manual effort, ensures precise data collection, and integrates easily with existing systems. Its scalability makes it suitable for a range of applications, from **small parking lots to large-scale traffic management.**

Value Proposition

1. Enhanced Security: Real-time vehicle identification, stolen vehicle detection, and unauthorized access prevention.
2. Operational Efficiency: Automated toll collection, parking management, and reduced labor costs.
3. Improved Customer Experience: Streamlined access, reduced wait times, and convenient parking.
4. Data-Driven Insights: Traffic pattern analysis, parking occupancy monitoring, and regulatory compliance.
5. Cost Savings: Reduced labor costs and operational expenses.
6. Fraud Prevention: Verification of vehicle authenticity and prevention of misuse.

> **Enhances Road Safety and Monitors Public Behavior.**

- Traffic Flow Analysis
- Parking Management
- Traffic Vehicle Enforcement
- Toll Collection
- Border Control
- Campus Security
- Hospital Access Control
- Stolen Vehicle Detection
- Urban Traffic Management
- Claim Management
- Emergency Response
- Gated Communities
- Property Security
- Fraud Prevention
- Transportation Services

Technical Specification

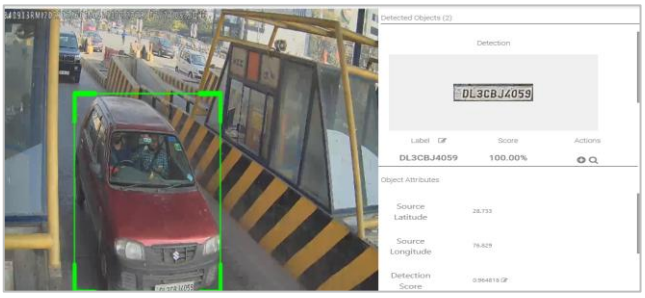
Parameter	Recommended Value
Minimum fps	**>15 fps**
Ideal Camera Height	**6-8 feet**
Ideal Focal Length	**5mm**
Compatible camera Type	**vari-focal IP Cameras**
Object of interest	**License Plate**
Ideal Size of object of interest (WxH)	**100 X 20 pixels**
Ideal lighting Type	**Infrared Illumination**
Hardware	**Intel CPU or NVIDIA GPU**
Vehicle Type	**Truck, Bike, Car & all 7 categories as per MORTH Guidelines**
Speed	**Recognizes number plates accurately at any speed, including above 120 km/h.**

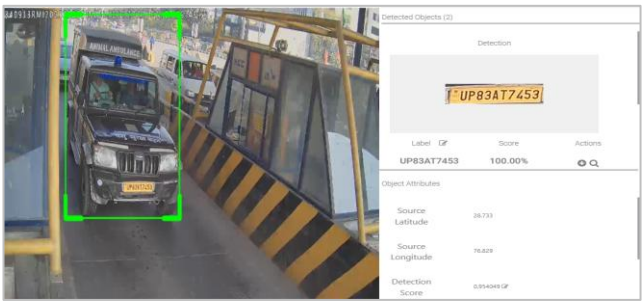
ANPR: The Eyes of the Road

- The app is compatible with **vari-focal IP cameras**, eliminating the need for specialized ANPR cameras.
- Awiros' proprietary Bi-Directional LSTM based OCR engine, trained **on hundreds of thousands of images**, is utilized by the app to recognize all types of number plates.
- Under optimal conditions, the app achieves **over 95% accuracy** at the character level for **standard (HSRP) number plates**.
- A single camera can **capture number plates of vehicles** moving on **both lanes of the road** simultaneously.
- The app can be activated and deactivated on any camera in the network as required.
- When **a number plate** is recognized, a **snapshot** of it is also **captured and saved**.
- The **Awiros event grid** displays all detected number plates together, and individual instances of number plate detection can be viewed in a gallery.
- **Real-time number plate detection** can be utilized for vehicle identification at **entry/exit points** or for identifying vehicles that are breaking traffic rules.
- The application can be used alongside other camera applications, such as those for detecting **speeding vehicles** or vehicles in the **wrong lane** and can also be integrated into other security systems.

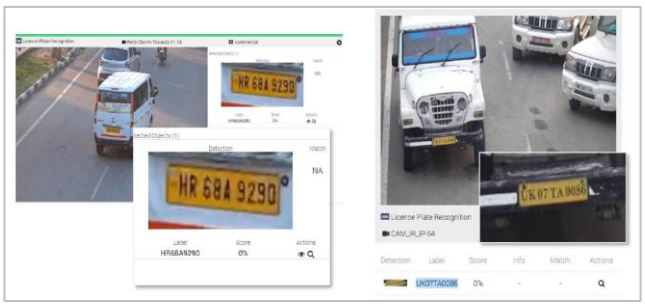


Actual Alerts from Deployment Sites

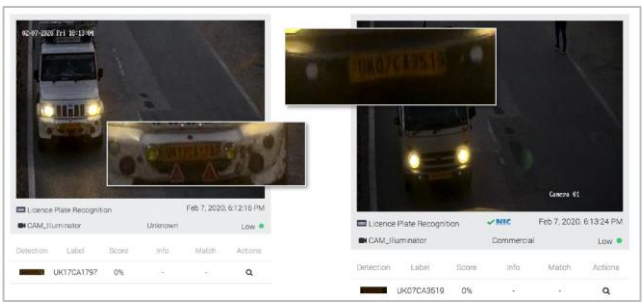




Standard Number Plates



Commercial Vehicle Number Plates



Detection in Low Light

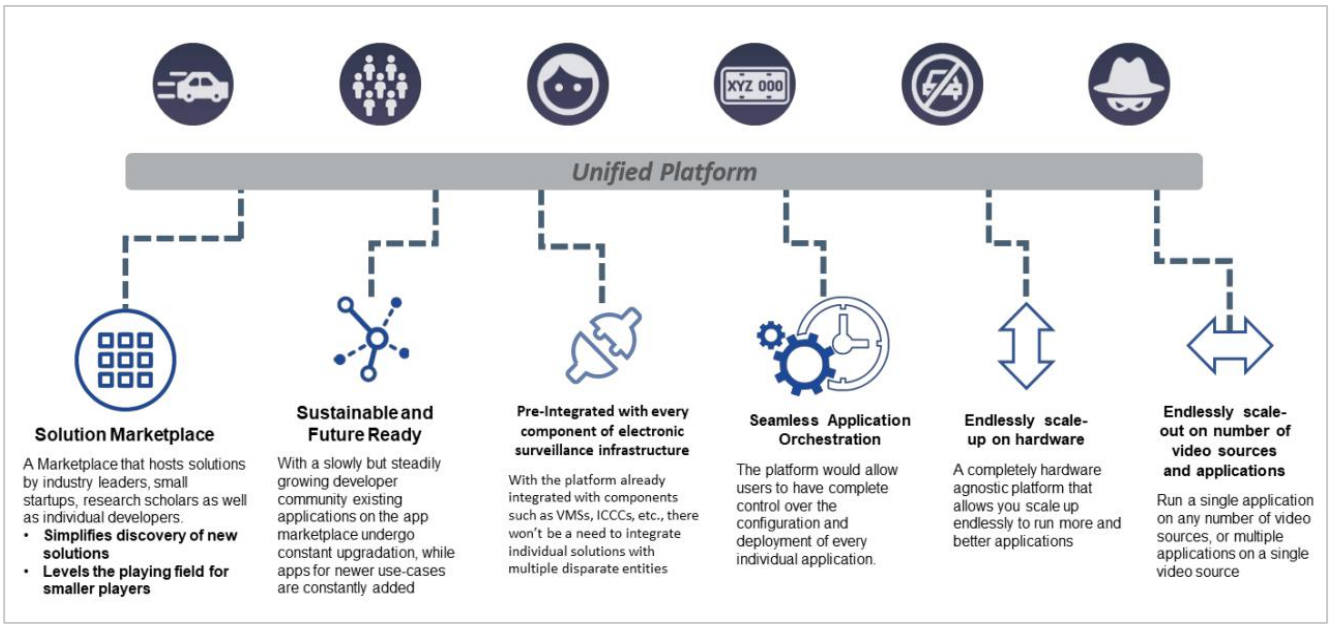




Detections at night using IR Illuminations

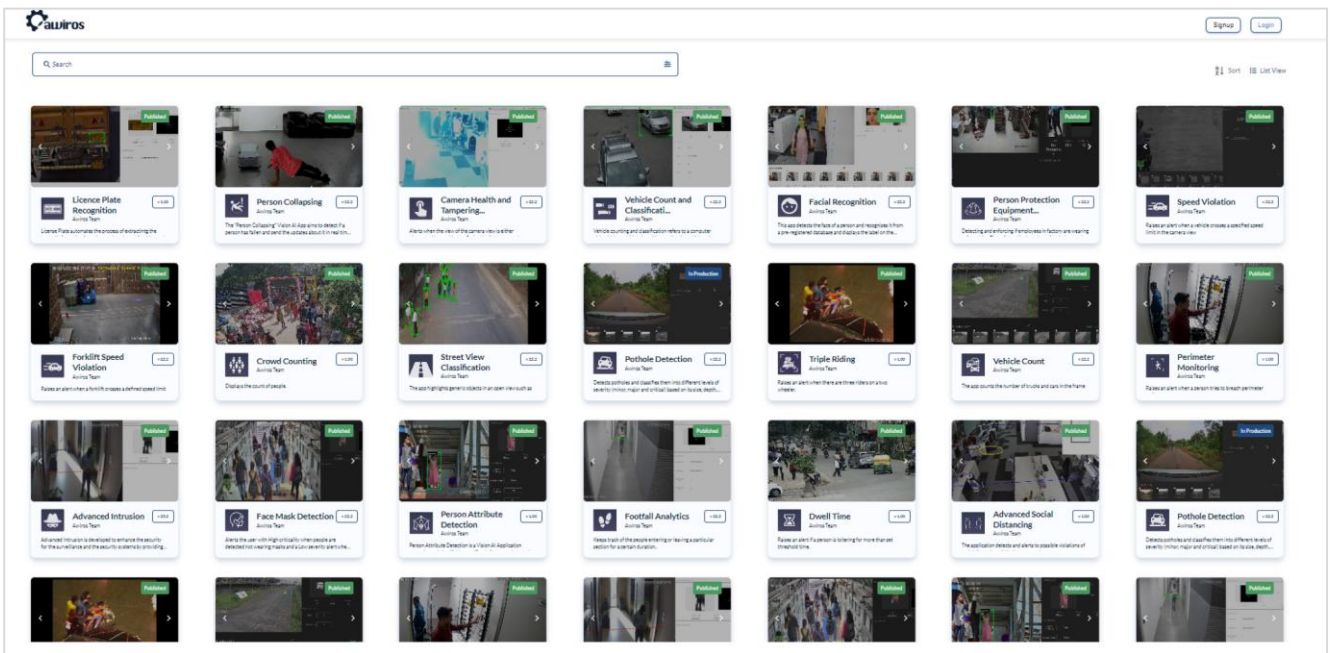
Advantages of the Awiros OS

While Functioning as a unified OS that us capable of orchestrating multiple video AI apps simultaneously, Awiros delivers the following over traditional Video AI solutions.



Deploying Apps from the Awiros AppStack

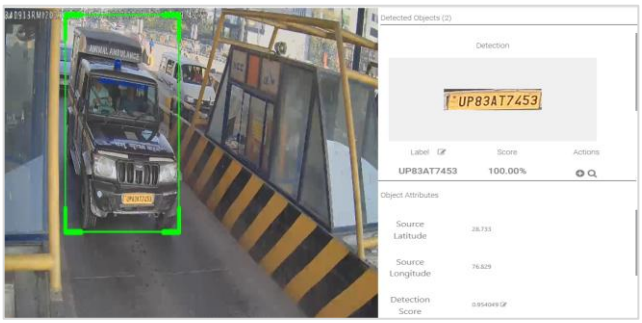
Awiros AppStack is a pioneering Video AI marketplace that offers a diverse range of pre-built applications for various industries. These applications, developed by Awiros' in house team, address a wide array of video-centric use cases.



App Orchestrator

Awiros AppStack is a pioneering Video AI marketplace that offers a **diverse range of pre-built applications for various industries**. These applications, developed by Awiros' in house team, address a wide array of video-centric use cases.



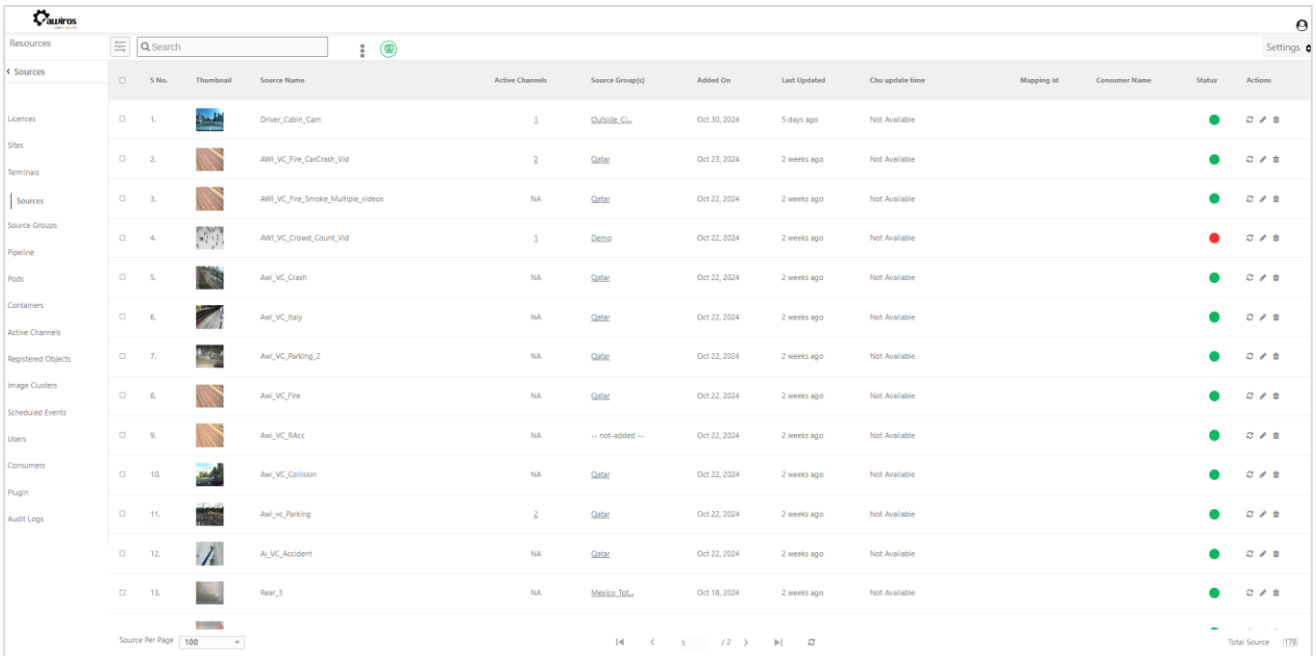


Viewing results generated by the App on the Awiros Grid

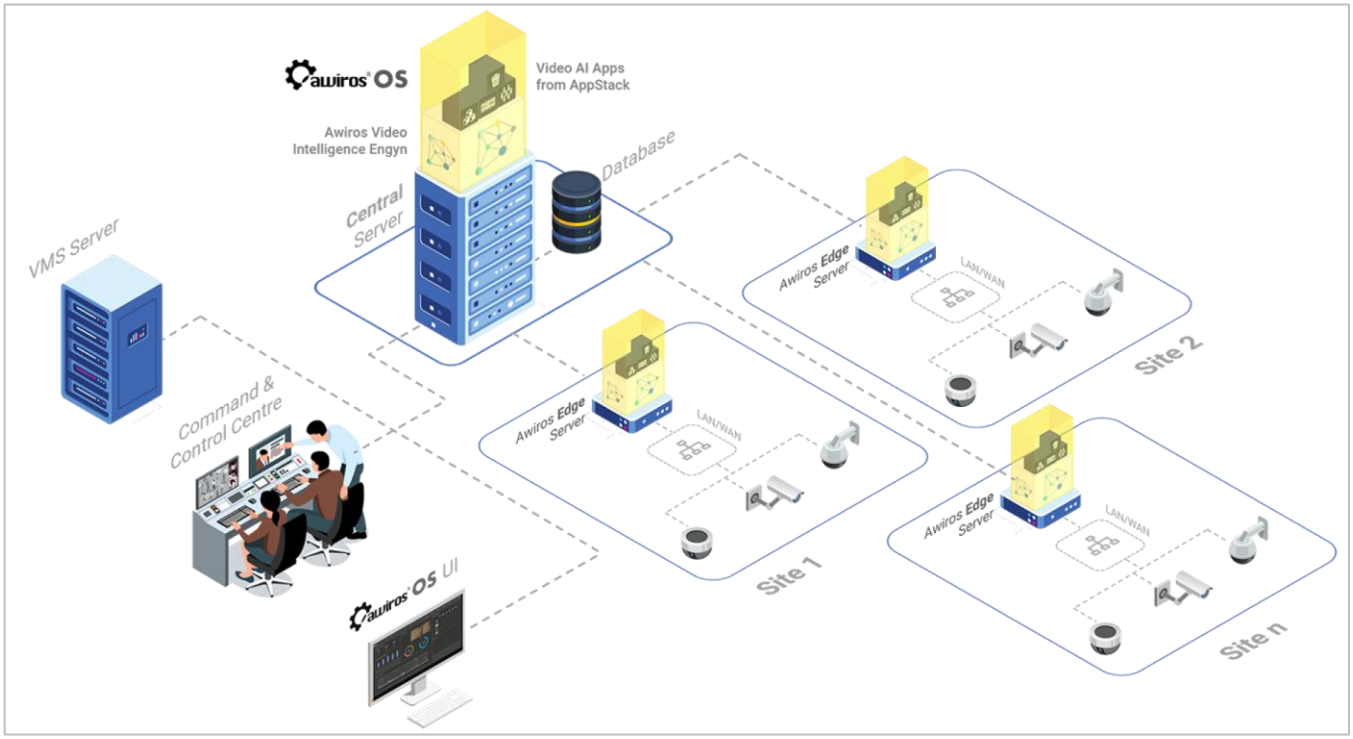
Awiros Grid offers **a centralized view of events from all active applications**, organized by application columns. Users can sort by severity or video source, filter alerts, and search for specific vehicles across multiple cameras, enabling efficient data analysis and tracking.

Resource Management

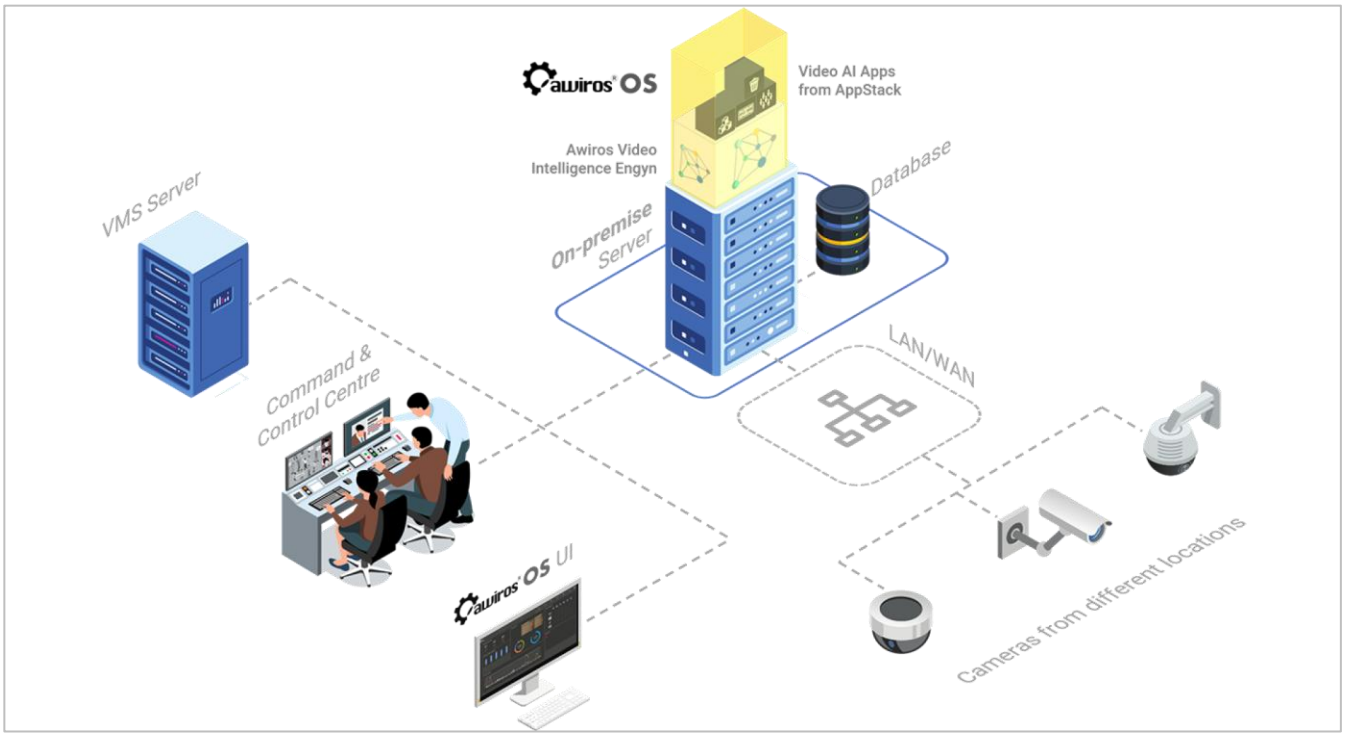
Awiros has a tightly integrated resource management module that **manages the availability and uptime of resources in real-time.** Resources include: all the processing terminals, cameras and video sources, registered objects and various deep-learning models. In case of any unavailability, Awiros can notify the user via email or an event notification.



Deployment Architecture



Edge + Cloud



On-Premise