V5 Systems

Outdoor Industrial IoT platform company saves by building their edge based SaaS video and alert monitoring on Oracle Cloud.

V5 Systems has developed an outdoor self-powered computing platform enabling quick Industrial IoT applications. Utilizing this platform V5 Systems has produced self-powered, portable security units for video analytics, acoustics and chemical detection for the outdoors. With computing and communications at the edge, these turnkey solutions provide real-time alert information for objects of interest in a defined zone, gunshot detection and location. Deployment in remote areas means customers do not always have power and communications infrastructure available, so V5 Systems provides self-powered solar units with several types of wireless communication. Customers can view live 24/7 video and configure analytics, which are analyzed on the device, to detect objects of interest and send real-time alerts for immediate action. Customers access and remotely manage these units through V5 Systems' Multi-sensor Monitoring System (V5 MMS), now available as Software-as-a-Service solution built on Oracle Cloud Infrastructure.

Need to reduce costs while managing growth

V5 Systems products need to be able to communicate with other each, and to a centralized facility so their users can receive alerts, view video, and manage their systems. V5 Systems also maintains and updates systems remotely.

V5 Systems had used a third-party provider for their datacenter, but found this approach limited their scalability and availability, and carried a high cost. They explored the possibility of deploying their own on-premises datacenter solution with a hardware partner, but found that acquiring, maintaining, and scaling-out a solution capable of achieving the availability their customers required would have been even more costly.

"When you provide security systems, customers expect very high levels of availability," said Michael Seidler, VP of Global Business Development at V5 Systems. "We wanted an industry-standard public cloud to help us control costs, ensure that level of availability, and help us scale up with growth."

They then explored a major cloud provider whose costs initially appeared low. However, as they dug deeper, they discovered that data retrieval and transmission costs – critical to a video monitoring solution – were high.

Delivering highly available SaaS while saving on data transfers

V5 has built a version of V5 MMS, the application their customers use to respond to alerts and view live or recorded video, on Oracle Cloud Infrastructure. Each device communicates with the cloud to transmit alerts, store data, and for remote management. The architecture

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- Michael Seidler, VP of Global Business Development, V5 Systems

WHY ORACLE?

- Maximizing solution availability with availability domains
- Easily scale-up individual customer deployments, and scale-out for business growth
- Lowering outbound data transfer costs

PROFILE

- Physical Security
- North America

SOLUTION

- Oracle Cloud Infrastructure

ORACLE

isolates customer information in individual virtual machines and storage.

For flexibility, V5 MMS is built on a MEAN-like stack, with PostgreSQL instead of MongoDB. Since some customers have requirements to isolate data to their own on-premises server, V5 Systems supports this deployment model. But, for customers who have the flexibility to utilize the public cloud, V5 Systems recommends their cloud-based SaaS solution, built on Oracle.

With this solution V5 Systems can scale-up any individual deployment if the processing and storage requirements of a security unit or customer increases. They can also easily scale-out capacity to serve additional customers as their business grows. The ability to only pay for the resources consumed helps control costs and keep costs lower for their own end customers.

“Our customers need consistent access to our service, and regularly monitor video, so outbound data cost is important. Other clouds let you freely upload data, but getting it back out again is another matter. Oracle includes the first 10 TB of data transfer per month free,” said Michael Seidler. “We’re also utilizing Oracle’s availability domains, and continuously replicating data to a second datacenter in the region to maximize data durability and solution availability.”

V5 Systems already has several customers using their SaaS solution built on Oracle, and is in the process of transitioning most other customers. They’re in the process of building tools that will spin up a customized portal for new customers in minutes.

V5 Systems Oracle Cloud Infrastructure Architecture