

Use Case: Surgical Products

Situation

A medical device manufacturer specializing in surgical products required automated Identity Lifecycle Management for their IoT devices using X.509 Certificates. Device Authority was asked to help automate the device identity lifecycle to streamline their processes.

The solution had to support devices both connected directly to the cloud along with offline Edge devices that connect to the cloud via secure gateways.

As a medical device manufacturer, patient safety, procedure management, data security, and industry compliance were of the utmost importance. Cloud integration with Microsoft Azure IoT was also a key requirement.

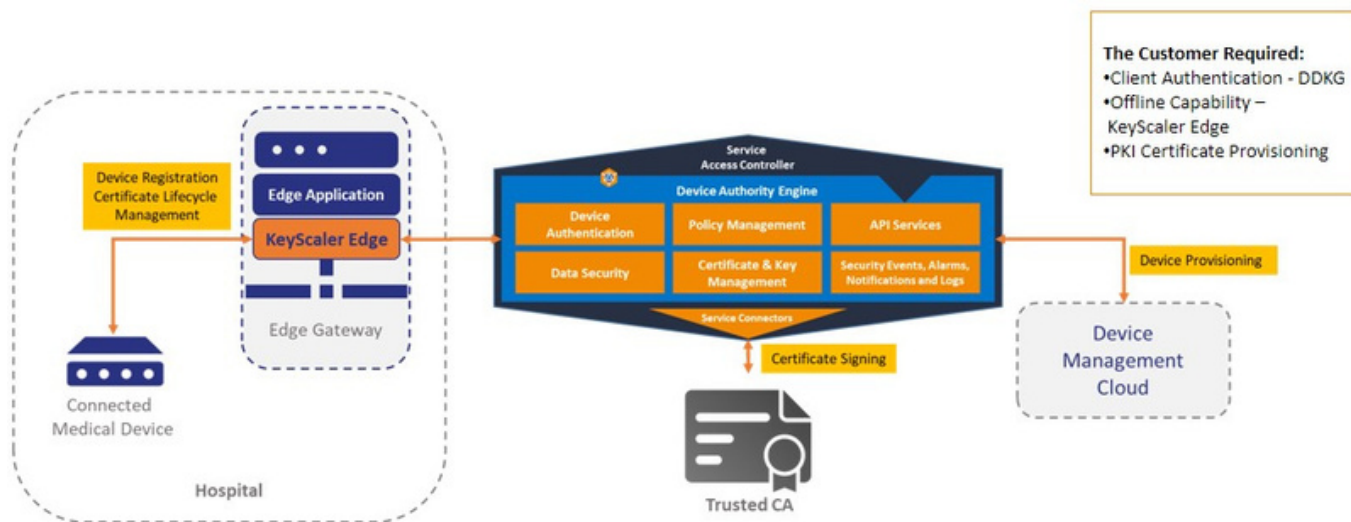
Solution

By implementing the KeyScaler platform, Device Authority was able to provide the following:

- KeyScaler's Dynamic Device Key Generation (DDKG) automatically generates a software root of trust that will be used for the initial device attestation, authentication and registration
- Automated PKI Services for IoT with X.509 certificates, includes initial certificate provisioning, certificate rotation, and certificate revocation
- KeyScaler Security Suite for Microsoft Azure was able to provide Automated Device Provisioning to Azure IoT Hub
- KeyScaler Edge enables automated Identity Lifecycle Management for devices that do not have connectivity to the cloud, or those with infrequent access
- The organization also needed to meet FDA requirements for Software Bill of Materials (SBOM), meaning that it must have Continuous Assurance and Threat Validation based on the devices software components



Medical IoT: Surgical Products



Conclusion

Device Authority's KeyScaler platform allowed the organization to automate the full Device Identity Lifecycle based on x.509 Certificates from their enterprise PKI platform, reducing overall liability and decreasing the number of issues arising during the audit process.

The introduction of automation across the organization's product teams led to a reduction in the cost of product development, faster time to market with new products, and the creation of new revenue streams via Device-as-a-Service offerings.

Overall device operational costs were also reduced by eliminating costly manual processes and minimizing human error.

Automation also meant that the organization was able to keep pace with important new industry regulations such as support for a device Software Bill of Materials (SBOM).



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