Your Quickest and Safest Route to IoT Device Trust

How our managed service platform, KSaaS, can secure your IoT ecosystem without the burden of infrastructure or dedicated resources
Why is the industry moving to SaaS for IoT Security?

- Achieving Zero Trust in IoT requires a focused approach
- Managing machine identities for IoT is complex
- Simplify deployments & responsibilities
- Op-ex model scales with your business
- Less infrastructure means less overhead
- Consistent and predictable performance
Considerations for a new Software Platform

- Do you have the operational and technical skills required?

- Can you gain a market advantage through “Buy” not “Build”?

- Do you have critical regulatory or compliance requirements that SaaS will help satisfy?

- Are you vulnerable to key skillsets and knowledge leaving the business?
What is KeyScaler?

• KeyScaler is the first IAM platform that can manage and deliver identity and trust at the edge, securing device trust from day 1 to day done

• Fully automated and driven by group policy frameworks, KeyScaler integrates to your existing processes and services - delivering a real-time view of your asset landscape

• Able to scale from 10 to 10,000,000 devices and beyond
KeyScaler™ IoT PKI Automation in Action:

Device-bound, Policy-driven Key Provisioning & Rotation

1. Secure Registration
2. New CSR
3. Certificate Signing
4. Signed Certificates
5. PKI Key Generation

Policy
- Auto-rotation: 90 Days
- Revoke on Quarantine

IoT Devices
- Device Agent

IoT Application/Platform
- Secure Connection

Certificate Authority
- HID
- IdenTrust
- digicert
- Private CA

IoT PKI Auto-Provisioning
- Device Registry
- Policy Management
- API Services
- Device Authentication
- Certificate & Key Management
- Security Events, Alarms, Notifications and Logs

Service Connections

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Platform Delivery

- **ON-PREMISE / VPC**
  - Download and Install the full KeyScaler technology stack
  - Configure server-side software packages
  - Deploy into own data center or Private Cloud

- **MANAGED SERVICE**
  - Subscribe to hosted KeyScaler service
  - No infrastructure deployment or running costs

*OR*
HA On-Premise Architecture

Internet

Internal Network

Node 1

Tomcat
E-API
SAC
I-API

Tomcat
Socket Layer

DAE w/KMS
I-API

MemCached

Node 2

Tomcat
E-API
SAC
I-API

Tomcat
Socket Layer

DAE w/KMS
I-API

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Node 2

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Load Balancer

MySQL DB

MySQL DB

MySQL DB

Galera Replication

CP Admins

DA Agent/Lib

I-API - Internal API Services
E-API - External API Services
SAC - Service Access Controller
DAE - Device Authentication Engine
KMS - Key Management Service

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On Premise Challenges

- People
- Infrastructure
- Deployment and maintenance
- Training
KeyScaler as a Service

- Fully managed, hosted solution
- Secure multi-tenant architecture
- Infinitely Scalable
- Transparent managed updates
- Industry standard approach
Deployment path Comparison

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Self-hosted / On-Premise Deployment

KSaaS Deployment
In-life Roles & Responsibilities

On-Premise / Private Cloud

- User Management
- Device Policy Management
- Device Configuration
- Insight Generation
- HSM management
- 3rd party integration mgmt.
- Platform updates deployment
- Server Configuration
- DB administration
- Infrastructure Maintenance
- Product Support
- Platform Evolution

KeyScaler-as-a-Service

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KSaaS Global Architecture

Highly Available Public Access Points
The Control Panel and Device API both auto-scale to ensure consistent and reliable performance. IP Whitelisting is available, if desired.

Private Internal Network
The core KeyScaler components reside in a secure private network, and auto-scale to ensure consistent and reliable performance. All internal network traffic is cryptographically bound to a private tenant, making inter-tenant contamination impossible.

Platform Management
The KeyScaler components are constantly monitored, and deploy more horsepower, where it’s needed, within seconds. All running components report to a centralized Audit Log, to know exactly when and where a device has been connected.

Global, or Regional Deployment
Azure Global traffic management directs network traffic to the closest, or most performant KeyScaler cluster around the globe. KSaaS Tenants can be configured to geofence data to a single region, if desired, while still retaining high availability and redundancy.

Highly Flexible Integration Framework
The KeyScaler EPIC (Enhanced Platform Integration Connector) framework allows the secure integration of almost any 3rd party platform. From HSMs to Analytics Dashboards, EPIC provides a simple means to integrate with any stage of the KeyScaler workflow.

Highly Available Managed IaaS
Using Managed IaaS services allows us to capitalize on the High Availability and Robustness of the Azure Platform, whilst maintaining the highest level of security and privacy. All managed Services are isolated and have no external connections. Private Endpoints within the KeyScaler Cluster facilitate secure internal communication.

KSaaS Global Architecture

Public Network
- Admin Control Panel
- Device Access Controller

Private Network
- Device Authority Engine
- KeyScaler Key Manager
- EPIC Framework

Platform Management
- Workload Auto-Scalers
- Audit & Metrics log
- Connectivity Management

Monitor
Power BI
Database
KeyVault

Regional High Availability
Global High Availability

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KSaaS Benefits

- Time to Production
- People and Skillsets
- Scale with your Business
- Robust and Reliable
Preview: The Value of Scale

• Aggregated anonymised device data
  • Industry benchmark reports

• Device misbehaviour analysis
  • Semi-supervised AI to recommend the next best action
  • ML techniques to automate misbehaviour prevention
  • Predictive analysis notifications
Try it today – at www.deviceauthority.com
Thank you

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