

ForgeRock Internet of Things (IoT)

Elevating Your Intelligent Devices to First-Class Identities

The Growing Challenge and Opportunity for IoT

If your organization is like most, connected devices such as printers, servers, sensors, IP cameras, and industrial controllers, now outnumber your human identities. While most organizations would not even think of letting an unknown human user onto the network without proper security vetting, many IoT devices are provisioned and placed into service without so much as being registered or properly authenticated. This can leave the organization open to massive breach exposure.

But beyond security risks, the IoT landscape is rich with opportunity. Today, organizations are looking to transform their businesses. They are looking to automate and optimize their business processes and factory floors. They are seeking to incorporate Zero Trust into their network and apply it to all identity types. They are seeking new ways of reaching out to customers. It's no longer enough to connect with users through web applications. IoT device data in the same users' hands can be used to create personalized experiences and deliver additional value-added services and revenue. To accomplish all this, you need an effective way of managing both your human users and your IoT devices in a single comprehensive identity stack. In other words, IoT devices need to be managed as first-class identities, just like your human identities: fully known to the organization, registered, and managed throughout their entire lifecycle journey.

ForgeRock Internet of Things: One Place to Manage All Your Identities

ForgeRock Internet of Things (IoT) is a complete set of IoT capabilities that are part of the ForgeRock Identity Platform and handle the most crucial aspects of managing connected devices. Leveraging our experience

Features and Capabilities

ForgeRock IoT creates strong, trusted relationships between devices, systems, data, and people. It increases the security of IoT devices and non-human entities. It breaks down silos between users and things, and, ultimately, enables organizations to create meaningful relationships between users and devices that can be managed together to drive the business forward toward new opportunities.



Automatic Registration

Instantly register new devices as first-class identities, providing them with credentials and setting them up to be productive from day one. And do all this in a programmatic, policy-driven way that ensures no "rogue" devices get on your network.



Zero-Touch Authentication

Quickly set up your IoT devices to authenticate with no human interaction required. Enforce your policy-driven authentication to all your IoT devices consistently across your organization while minimizing the effort for your IT department.



Standards-Based Authorization

Leverage standards like JWT Profile REST-based services provided by the OAuth 2.0 framework to streamline OAuth 2.0 Device Authorization Grants. Utilize these protocols to standardize and speed implementation, so you can get your IoT devices the access to the systems and data they need to start working for you.

in operating and scaling a variety of identities (such as workforce and consumer) in a range of complex environments, the ForgeRock Identity Platform enables you to gain control of all your IoT devices and human users within the same platform. Your consumer, workforce, and IoT identities are managed together as first-class identities in a single full-featured, powerful identity and access management platform (IAM).

When all identities are managed together, silos are eliminated. Access can be uniformly managed throughout your enterprise, regardless of the identity type. Relationships between your human users and their devices can be established to open new possibilities for efficiencies, next-generation digital services, and revenue opportunities.

ForgeRock IoT: The Solution

ForgeRock IoT is a set of capabilities available in the ForgeRock Identity Platform. The ForgeRock IoT software development kit (SDK) and IoT Gateway are provided under an open source software agreement. Some of the components that make the ForgeRock IoT solution work include:

IoT Endpoints

joins devices directly to REST-enabled ForgeRock IoT Endpoints to deliver IoT-optimized registration, authentication, and authorization. Also supported are device configuration and credential and certificate delivery.

IoT SDK

accelerates working with the IoT endpoint and runs in your IoT devices to create a smart interface for your devices to connect with ForgeRock Access Management or ForgeRock IoT Gateway. Since most IoT devices do not respond to requests, the IoT SDK enables authentication, authorization, configuration management, certificate updates, and more. The IoT SDK also runs as open source software under the Apache 2.0 license.

IoT Gateway

acts as a CoAP server and adds offline capabilities for devices that may not be able to connect directly to HTTP. IoT Gateway helps to deliver identity to any device on the edge and can manage identities for services, devices and users. It is available as open source software under the Apache 2.0 license.

Features and Capabilities



Configuration Management

Easily set and update configuration and device properties using ForgeRock's configuration management. Make uniform changes to multiple devices and push them out quickly, securely, and consistently to all your IoT devices everywhere in your enterprise.



Certificate Management Capabilities

Request, deliver, and rotate digital X.509 certificates for IoT Devices. Streamline and simplify the management of certificates within your IoT infrastructure.



Offline and Constrained Device Support

Fully support all your IoT devices as first-class identities, even those that operate in the far-flung corners of your organization, like in remote field locations with intermittent connectivity. These edge devices can and should be provisioned and operated using the same authentication and authorization policies as network-connected devices to prevent any gaps in security.



Single View of Identities

Enjoy a complete 360-degree view of all your identities – consumer, workforce and IoT devices – on a single identity platform that allows you to manage your IoT devices in the same way you manage your other identities. Eliminate silos of identity that can create security, compliance and coverage gaps.



Relationship Binding

Create, manage, and build relationships between IoT devices and users to facilitate end-to-end capabilities for communications, data-sharing, personalization, and new services that can transform the way your organization interacts with its employees and customers.

ForgeRock Access Management

allows you to set up access policies and authentication capabilities for your IoT devices the same way you would for your human users.

ForgeRock Intelligent Access Nodes and Trees

allows for “no-code/low-code” access journeys to be established using easy “drag-and-drop” orchestration for your IoT endpoints. This includes an IoT-specific registration node and authentication node.

ForgeRock Trust Network

is a digital identity partner network of pre-built, tested, and always updated partner integrations for you to utilize in your IAM deployment.

ForgeRock DevOps

is a framework that allows you to use multi-cloud and containerization technology to flexibly deploy your IAM solution in a way that will best support the needs of your organization.

ForgeRock Identity Management

allows you to create user and device accounts, provision new application or system access, and deprovision these accounts when they are no longer needed. It also enables you to manage and use relationships between users and devices.

Directory Services

delivers an internet-scale database capable of storing and indexing all the attributes you need to collect on your devices. It can retrieve them in record time to keep your organization running.

ForgeRock IoT for the Connected Future

IoT devices need to be managed as fully recognized, first-class identities, not something separate from your existing IAM. As your organization looks to the digitally connected future, the importance of managing your IoT devices along with your human identities will only continue to grow. The ForgeRock Identity Platform with its IoT capabilities has the capabilities to help you manage these identities and to help you secure, streamline, and grow your business at the same time.

To learn more:

www.forgerock.com/iot

About ForgeRock

ForgeRock®, (NYSE: FORG) is a global leader in digital identity that delivers modern and comprehensive identity and access management solutions for consumers, employees and things to simply and safely access the connected world. Using ForgeRock, more than 1300 global customer organizations orchestrate, manage, and secure the complete lifecycle of identities from dynamic access controls, governance, APIs, and storing authoritative data – consumable in any cloud or hybrid environment. The company is headquartered in San Francisco, California, with offices around the world. For more information and free downloads, visit www.forgerock.com.



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