IoT Platform Modernization

Modernize your IoT platform with cloud-native services.

While the Internet of Things (IoT) is a relatively new buzzword, companies have been creating, deploying and managing connected devices at scale for decades. These devices require a platform to handle provisioning, configuration, firmware updates, data management and processing logic. Before the major cloud providers invested in building IoT services, companies were left to build and maintain homegrown solutions, which took enormous mindshare to operate, and often at the expense of focusing on their core offering. Alternatively, some companies invested in a platform-in-a-box type solution, which promised quick-wins at the expense of the flexibility to innovate and respond to changing user demands.

Rackspace Technology is helping customers modernize and refactor their legacy IoT platforms so they can leverage fully-managed cloud native services that reduce operational complexity and cost while increasing scalability, reliability and focus on their core product offerings. Unlike greenfield IoT solutions, modernization requires unique expertise in identifying a pathway to cloud native without hindering or breaking existing devices, applications or mature processes.

Our approach

Discovery and design

Through a collaborative process, our team of IoT experts will assess and understand your current device, platform and application constraints along with goals for future platform in order to design the modern platform and migration strategy.

Activities include:

- Reviewing existing device capabilities and constraints, including provisioning process, communication protocols and upgradability to work with cloud services
- Understanding existing data processing workflows and supporting applications
- Identifying current pain points and limitations as well as future requirements
- Designing cloud-native platform to support device, data processing, analytics and application use cases
- Designing integration and migration process for existing devices, applications and data sources

Benefits of IoT Platform Modernization

- **Focus on your business:** Leverage fully-managed cloud native services, from device communication to data processing, in order to recapture and reinvest your team's time on your users and business.
- **Improve device management:** Whether you have a dozen devices or millions, you can simplify provisioning, monitoring and management of your entire fleet.
- **Scale your fleet to any size:** By offloading the heavy lifting to the platform, you can onboard devices and gain insights from their data without worrying about scaling infrastructure.
- **Reduce costs:** Stop paying for idle resources by leveraging services, frameworks and infrastructure that's there when you need it and off when you don't.
- **Enhance security:** Leverage secure communication with your devices with end-to-end encryption and use sophisticated machine learning models to detect anomalous behavior.
- **Build smarter applications:** Through real-time data processing and notifications, react to events in real time and add integrations to smart home or other connected products.
- **Add forecasting and predictive capabilities:** Pair your devices' historical data with external data sources to build custom machine learning models that predict failures, optimize resource utilization and improve quality.
- **Support new and legacy devices:** We'll determine what platform best fits your business, including migrating legacy devices without downtime as well as providing a flexible foundation for new device versions and product lines.

Development

Through a transparent and agile development process, our team of architects and engineers will build your new IoT platform and applications.

Activities include:

- Building a cloud environment designed with best practices around account organization, networking, security, logging and monitoring
- Developing a modern IoT platform to handle everything from device provisioning to data processing and alerting
- Creating device monitoring and management tools, including Over the Air (OTA) firmware management
- Refactoring and/or rebuilding applications to leverage cloud native APIs and services
- Supporting or updating the firmware on existing devices for secure cloud communications
- Implementing data and device migration processes and pipelines.

Testing and QA

Through automated testing protocols, our software and QA engineers ensure that we are always delivering quality at every step of the way.

Activities include:

- Designing a suite of tests to validate device, platform and application quality for legacy and new devices
- Performing automated code analysis to flag potential bugs, security concerns or other issues before they're deployed
- Testing the platform to ensure it can scale up to support anticipated device counts and load levels

Deployment

Our cloud engineers automate infrastructure management and application deployment to enable fast, non-intrusive and timely software updates.

Activities include:

- Automating infrastructure management to ensure consistency and reliability between development, QA and production environments
- Utilizing automated CI/CD pipelines that include tests and checkpoints to promote code across environments
- Leveraging cloud-native tools to get insights into the performance and operations of applications, supporting infrastructure and devices in the field

Why Rackspace Technology

Rackspace Technology is your trusted partner across cloud, applications, security, data and infrastructure.

- 2,700+ AWS technical certifications worldwide
- Audited Managed Service Provider

Comprehensive AWS capabilities

15 AWS Competencies
- Data & Analytics
- DevOps
- Education
- Financial Services
- Healthcare
- Industrial Software
- IoT
- Machine Learning
- Microsoft Workloads Migration
- Oracle
- Retail
- SaaS
- Storage
- Travel & Hospitality

11 AWS Service Delivery Designations
- Amazon CloudFront
- Amazon DynamoDB
- Amazon EC2 for Windows Server
- Amazon EMR
- Amazon RDS
- Amazon Redshift
- AWS CloudFormation
- AWS Database Migration Service
- AWS IoT Core
- AWS Lambda
- AWS Server Migration Service

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