



T-Mobile

Authorized
IoT Service Provider

NB IoT to 5G

Making Our World Smart. Together.

Taking Internet of Things Further

Tri Cascade Inc
Taking Internet of Things Further

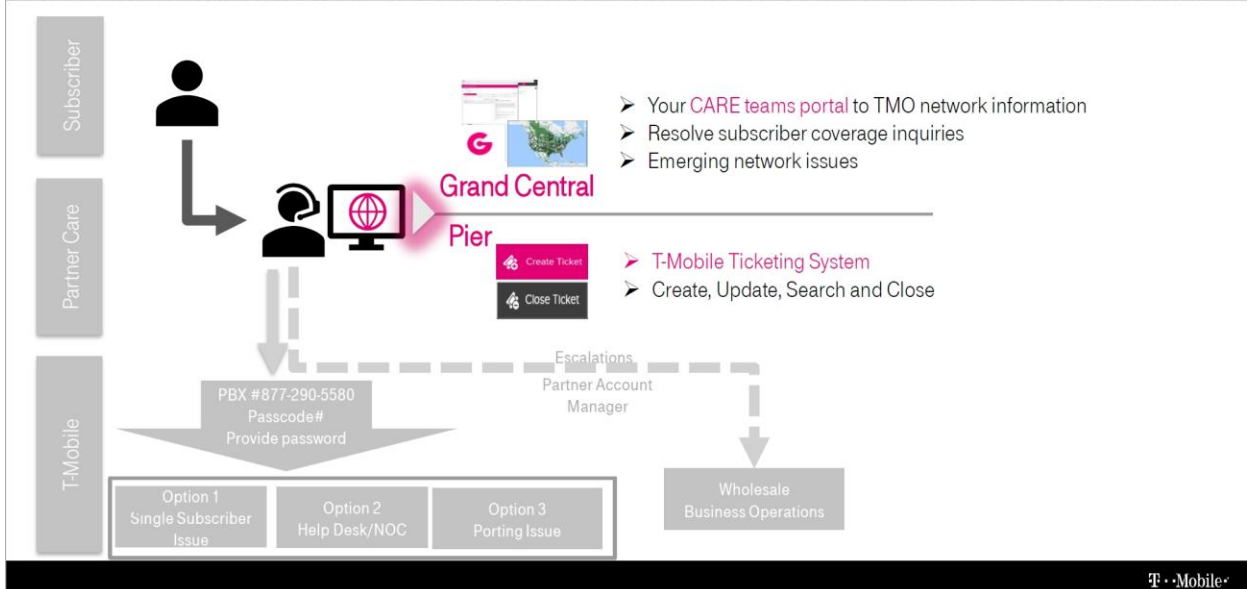
IoT Onboarding and Activation Azure Platform NB IoT to 5G



Tri Cascade IoT Onboarding platform built with Microsoft Azure IoT Hub, it allows you to manage every of your IoT SIM device and monitor the data usage, it also provide API integration for your billing system.

Bi-directional communication	Enterprise scale and integration	End-to-end security	IoT-scale automated provisioning
<ul style="list-style-type: none"> Millions of devices Multi-language, open source SDKs HTTPS/AMQP/MQTT Send telemetry Receive commands Device management Device Twins Queries & jobs 	<ul style="list-style-type: none"> Billions of messages Scale up and down Declarative message routes File upload Web Sockets and multiplexing Azure monitor Azure Resource Health Configuration management 	<ul style="list-style-type: none"> Per device certificates Per device enable/disable TLS security X.509 support IP whitelisting/blacklisting Shared access policies Firmware/Software updates Azure Security Center Support 	<ul style="list-style-type: none"> Zero-touch provisioning Centralize your provisioning workflow Load balance across multiple IoT Hubs Re-provisioning support Supports TPM + X.509

Subscriber & Partner Support – Self-Service Tools



Smart IoT Device and SIM Activation Management on Microsoft Azure IoT Hub from NB IoT to 5G

Tri Cascade taking Microsoft Azure IoT infrastructure develop the most sophisticated IoT Onboardin and SIM activation management platform, in order to fulfill the coming massive IoT devices management operation.

As the next 10 billion IoT devices come online, the industry will face some formidable challenges, such as ensuring the security of its devices, powering billions of sensors, and handling all the resulting e-waste. Despite those issues, Evans isn't bashful about anticipating an even bigger future. "I could see trillions of connected things, ultimately,"



SIM Management

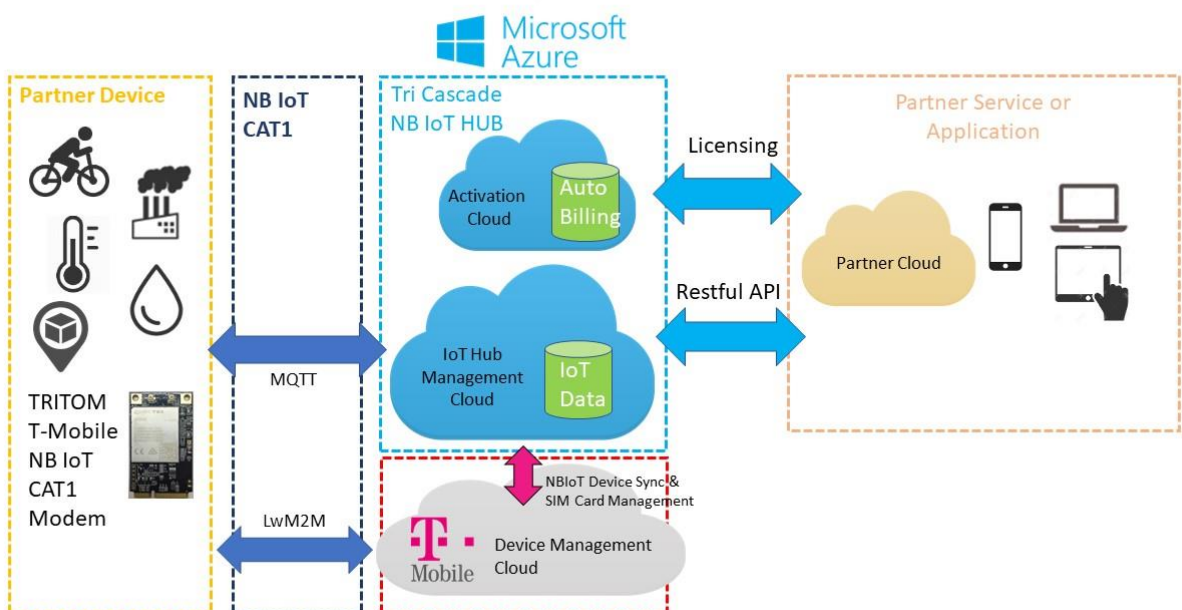
- Easy SIM import (QR/Bar Code Scanner, bulk csv import supported)
- Easy Search (by partner, domain, SIM State, time range and SIM number)
- Bulk Operation (Active, Deactivate, Suspend, Restore, Reactivate)
- Email notification on SIM operation Result (Success, Failure, Timeout statistic and reasoning)
- SIM Detail Information Retrieval and Data usage
- Easy Bulk SIM information Export
- SIM operation event history storage, tracking and easy retrieval
- Location based SIM Signal Strength detection for installer configuration
- Real-time Location based SIM Signal Strength detection for SIM management troubleshoot



Device Management

- View Device Detail information
- Search Device by Domain
- Show/Move/Hide Device On Map
- Download device's last 24 hours data log
- Device Dashboard Embedded HTML Code for 3rd party usage
- Bulk real-time device control by SMS
- Device History Data Export

Tri Cascade T-Mobile NB/CAT1 IoT Platform Architecture



A Total Solution Internet of Things

ABOUT US

- Tri Cascade Inc. is a California corporation established in 2010 based in Newport Beach, with design and manufacturing facilities in Taiwan. We bring leading-edge IoT solutions from NB IoT to 5G, through various IoT devices and platform, to homes, businesses and environment with Energy Conversation—creating both individual and regional Smart Network Systems, which in turn establish Smart Cities.

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**NB IoT
to
5G**

THANK you.

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