CLEARBLADE

Google Cloud

ClearBlade IoT Core & GCP Automated Migration

V5 - January 25, 2023
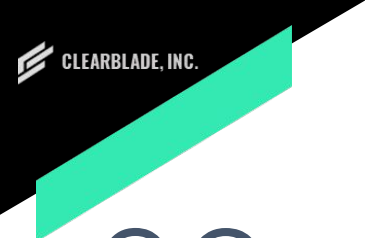
Table of Contents

01

ClearBlade Introduction

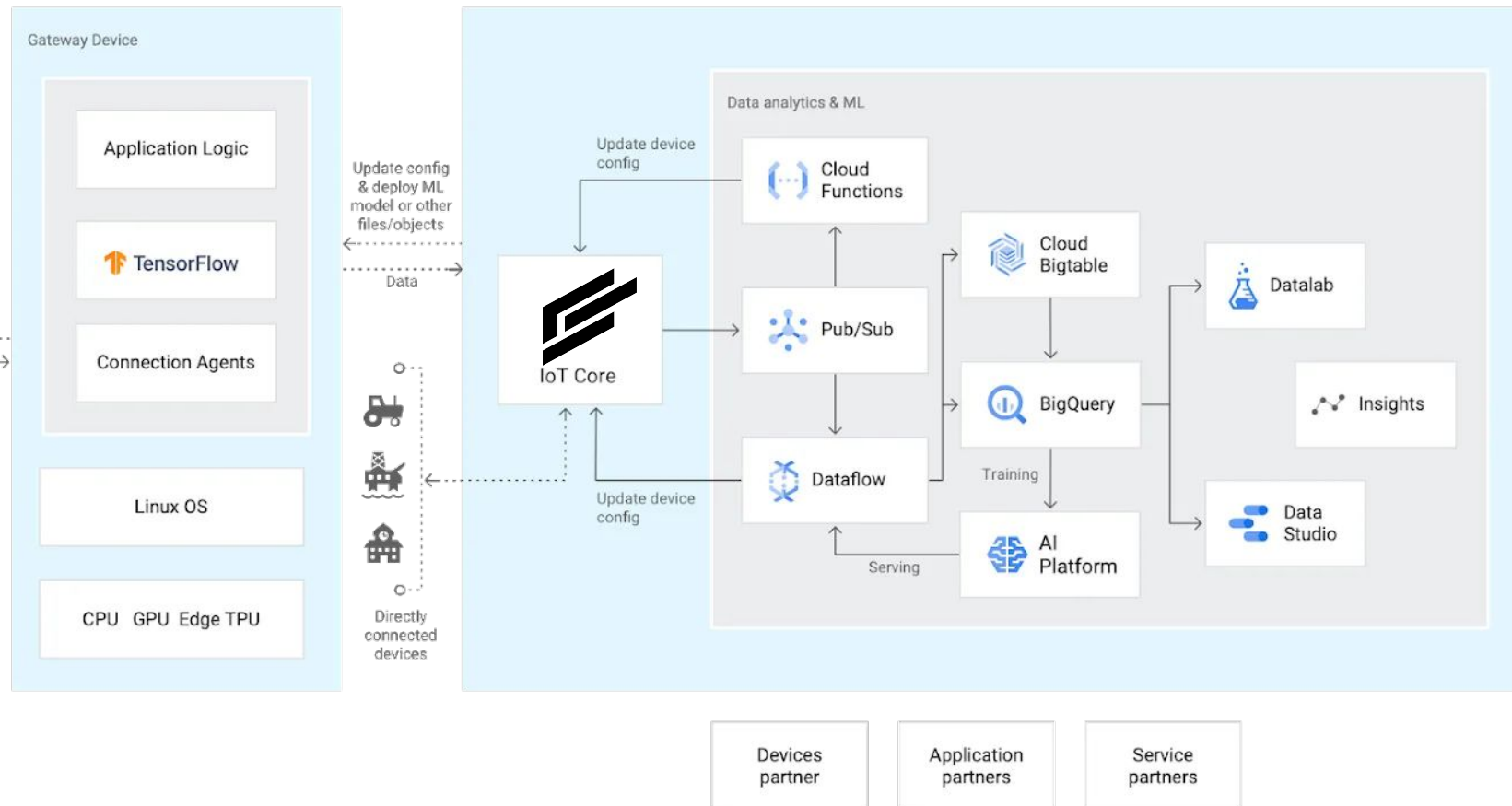**CLEAR**BLADE **is an IoT, Edge, and AI software company**

Solution Overview

- ClearBlade is an IoT, Edge computing and AI software company to enable running secure, real-time and scalable IoT applications

- Built as a Universal Platform for several industries including Transportation, Manufacturing, Oil & Gas, Healthcare, Energy, Smart cities

- Edge Platform to get data from several sources and centralizing information in the Cloud

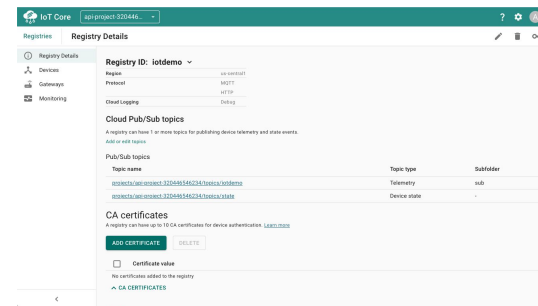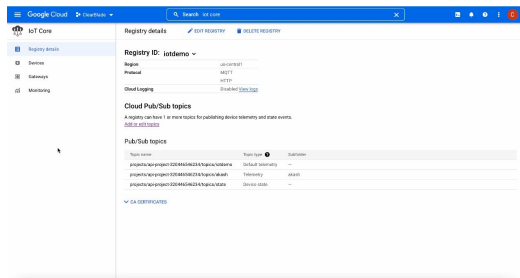- Fully Automated, Quick Deployment and Fast-track migration to GCP

02

ClearBlade IoT Core

ClearBlade is complementary to GCP Cloud Architecture

Gateway Device
- Application Logic
- TensorFlow
- Connection Agents
- Linux OS
- CPU GPU Edge TPU

Control
Data

Update config & deploy ML model or other files/objects
Data

Directly connected devices

IoT Core

Update device config
Update device config

Data analytics & ML
- Cloud Functions
- Pub/Sub
- Dataflow
- Cloud Bigtable
- BigQuery
- AI Platform
- Datalab
- Insights
- Data Studio

Training
Serving

Devices partner

Application partners

Service partners

ClearBlade capabilities easily map to Google IoT Core

- **Scalable**
- **Fast**
- **Flexible**
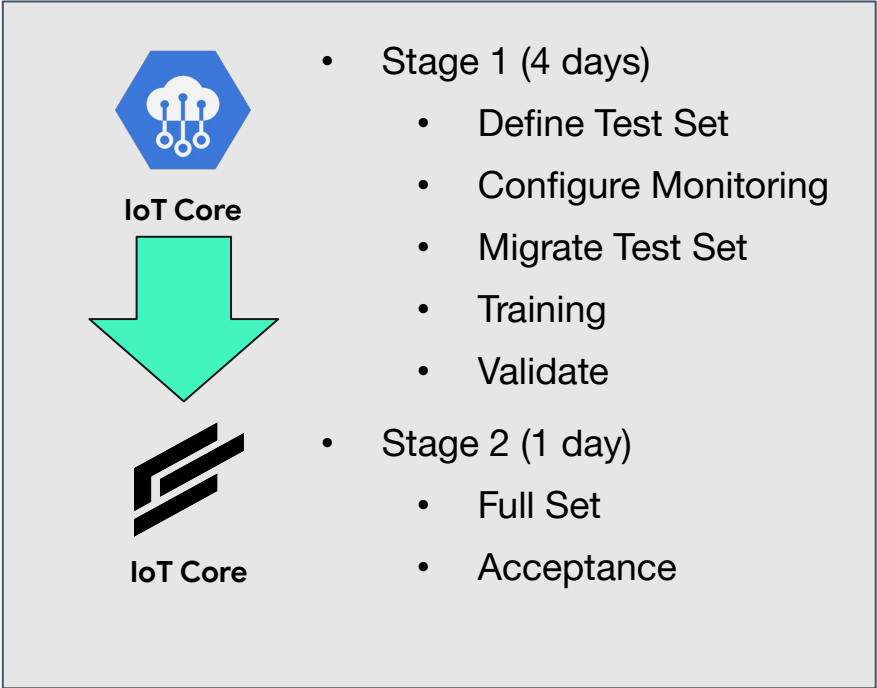
03

Google IoT Migration
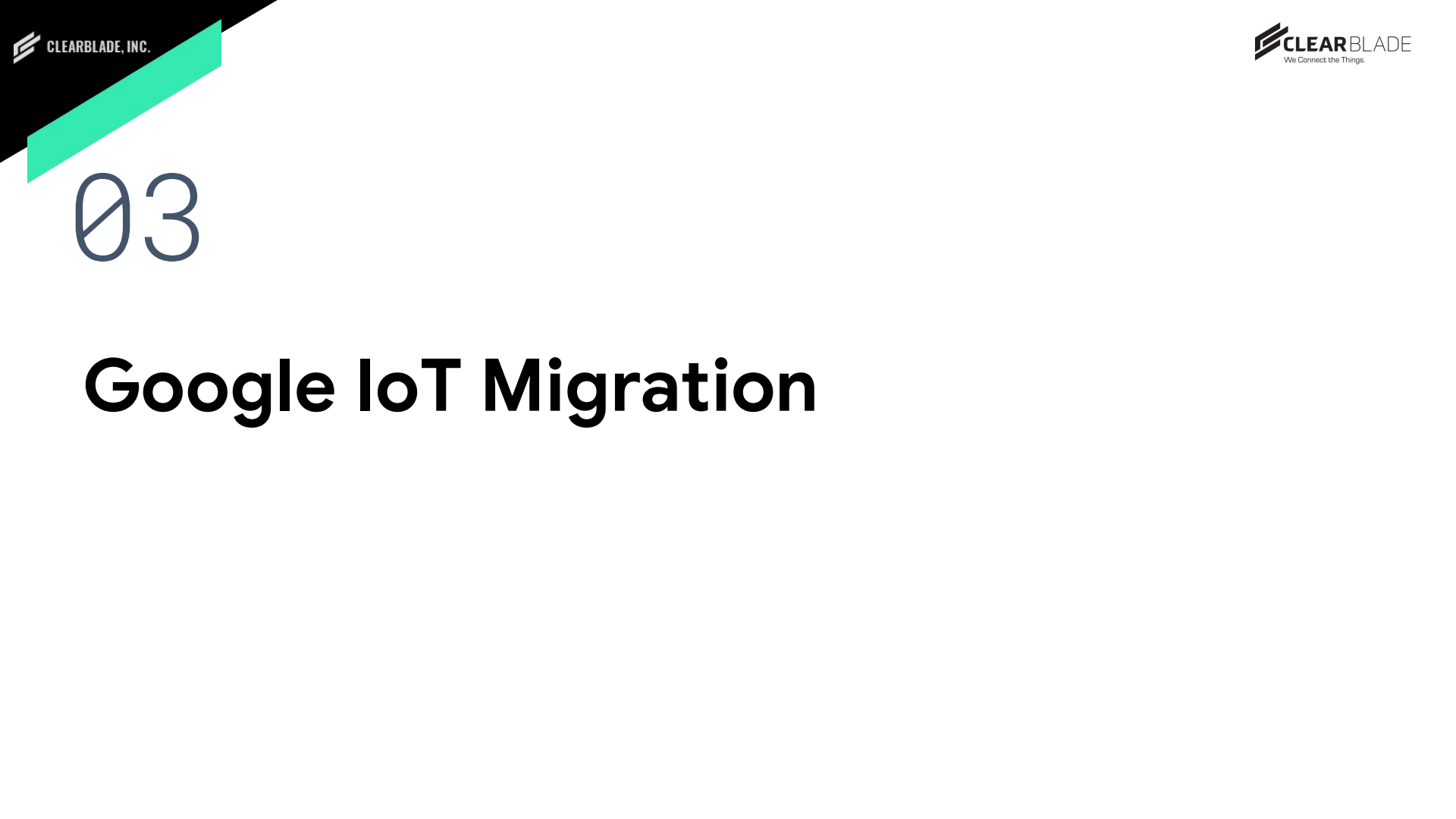
ClearBlade provides a simple "1-click" Migration

- **Low Impact**
  - No cloud services impacted
  - Device updates
- **Fully Automated**
  - Device Registries
  - Any Cloud Region
  - Authorization
  - Pub/Sub Topic Mappings
- **Flexible Deployment**
  - Customer Project Areas
  - Hosted by ClearBlade

IoT Core

IoT Core

- Stage 1 (4 days)
  - Define Test Set
  - Configure Monitoring
  - Migrate Test Set
  - Training
  - Validate
- Stage 2 (1 day)
  - Full Set
  - Acceptance

ClearBlade Migrations Readiness & Timeline

July 25th

Start Development

September 13th - September 26th

Customers begin Production Migrations

January 26th

100 successfully migrated Google
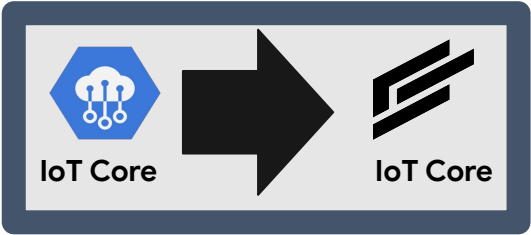IoT Core customers

August 29th - September 12th

First Pilot Migration Completed
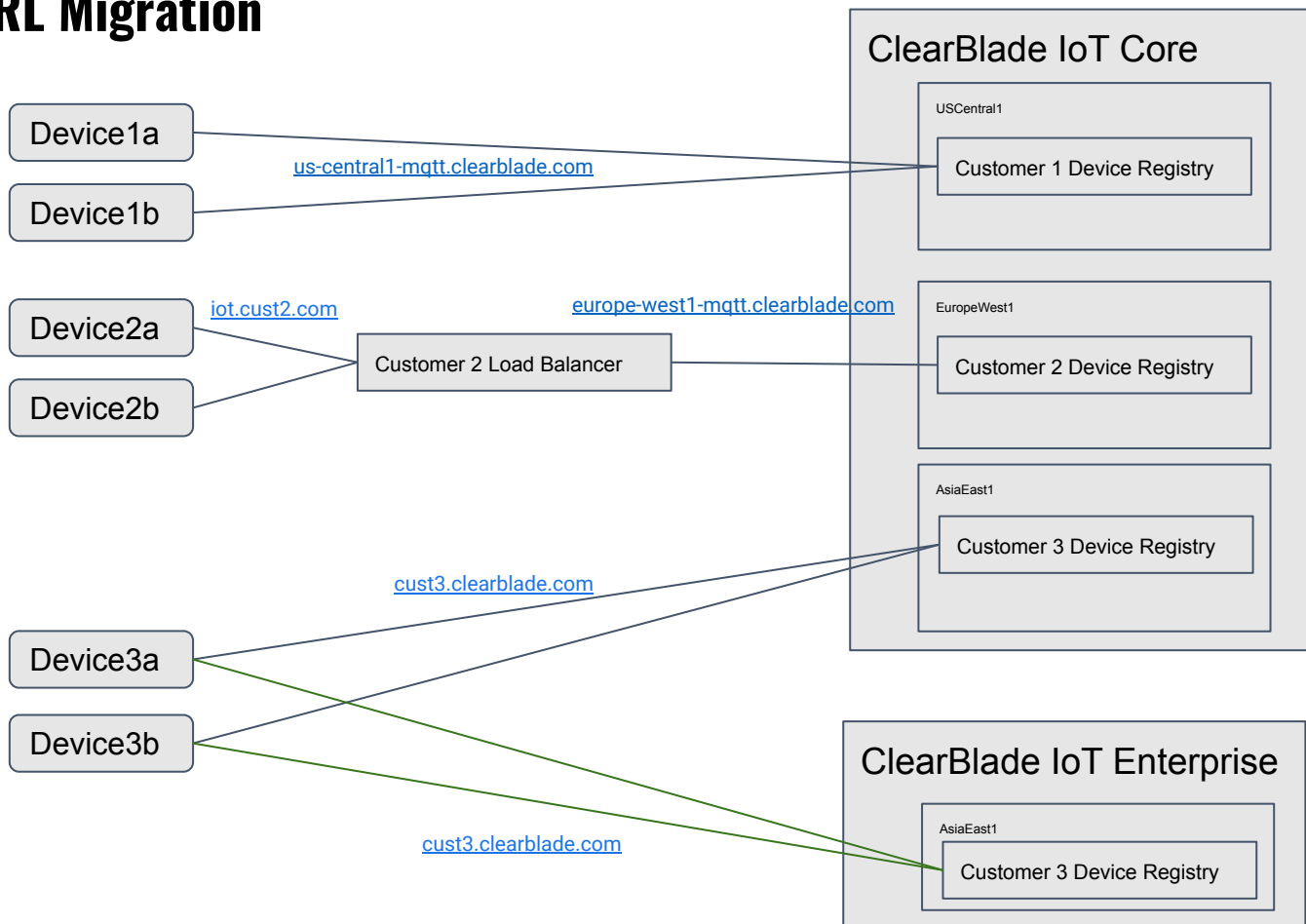(expected two (2) weeks)

October 15th

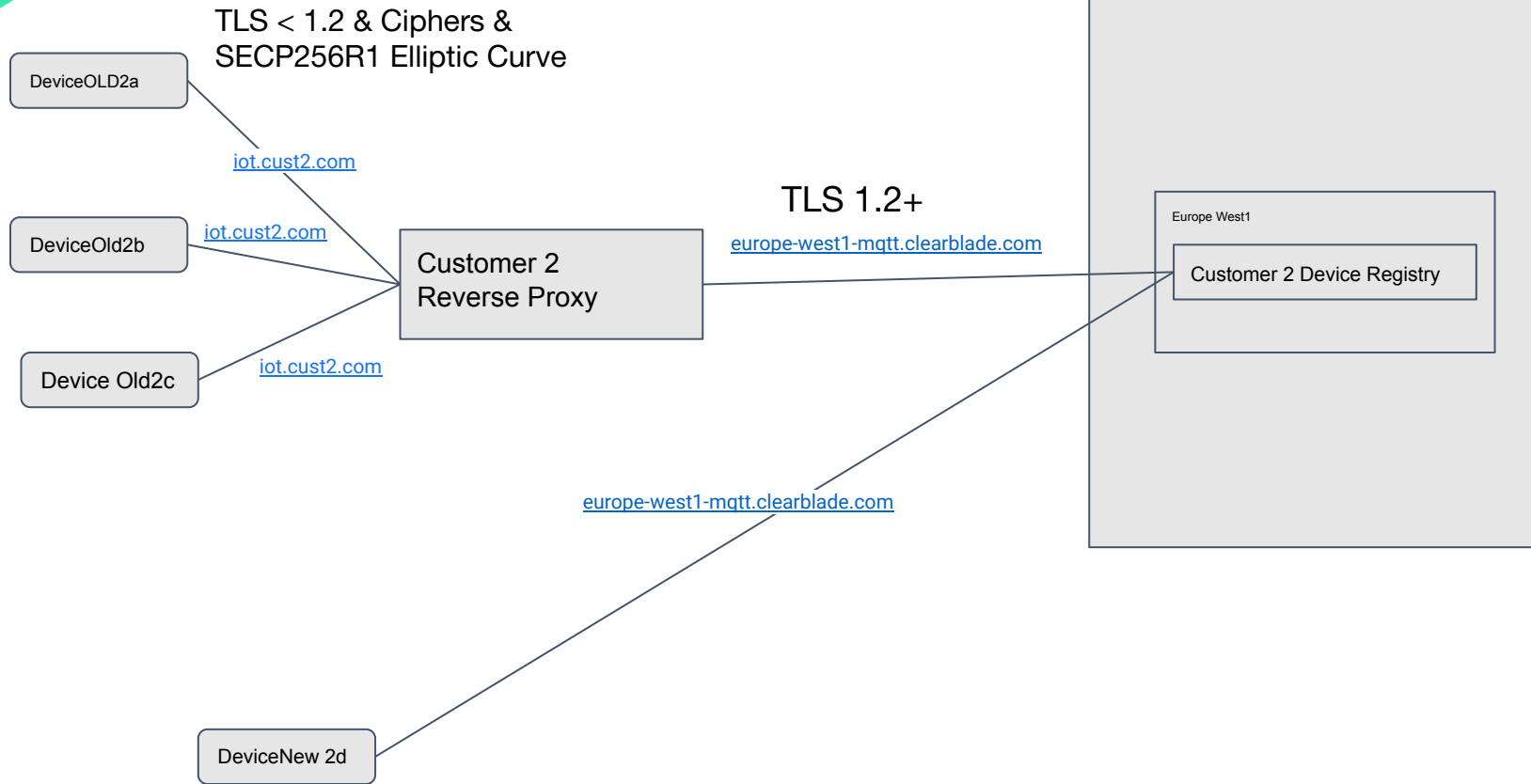General Availability on Google
Marketplace

August 16th

Official Google IoT Core Migration
Deadline

IoT Core

IoT Core

Google Cloud

URI / URL Migration

Retargeting Devices

Replacement of MQTT URL / URI
- Googleapis.com

  ⬇

- Clearblade.com

Update for Root CA on device
- Google Pseudo self signed

  ⬇

- DigiCert Global Root CA

New SDK forks

Collapse [- IoT Core / How-to guides

Retargeting Devices

Created by Aaron Allsbrook
Last updated: Dec 12, 2022 by Jeff Slavin · 1 min read · 18 people viewed

While all information is copied during a migration to make authentication and data flow unchanged, it is necessary to retarget each device and gateway to the new ClearBlade IoT Core offering. Information regarding that change is here.

Production URL / URLs

MQTT (regional)
- us-central1-mqtt.clearblade.com
- europe-west1-mqtt.clearblade.com
- asia-east1-mqtt.clearblade.com
- ports available **8883** and **443**

HTTP (regional - for device calls)
- https://us-central1.clearblade.com
- https://europe-west1.clearblade.com
- https://asia-east1.clearblade.com
- port **443**

HTTP (global - for list registry calls)
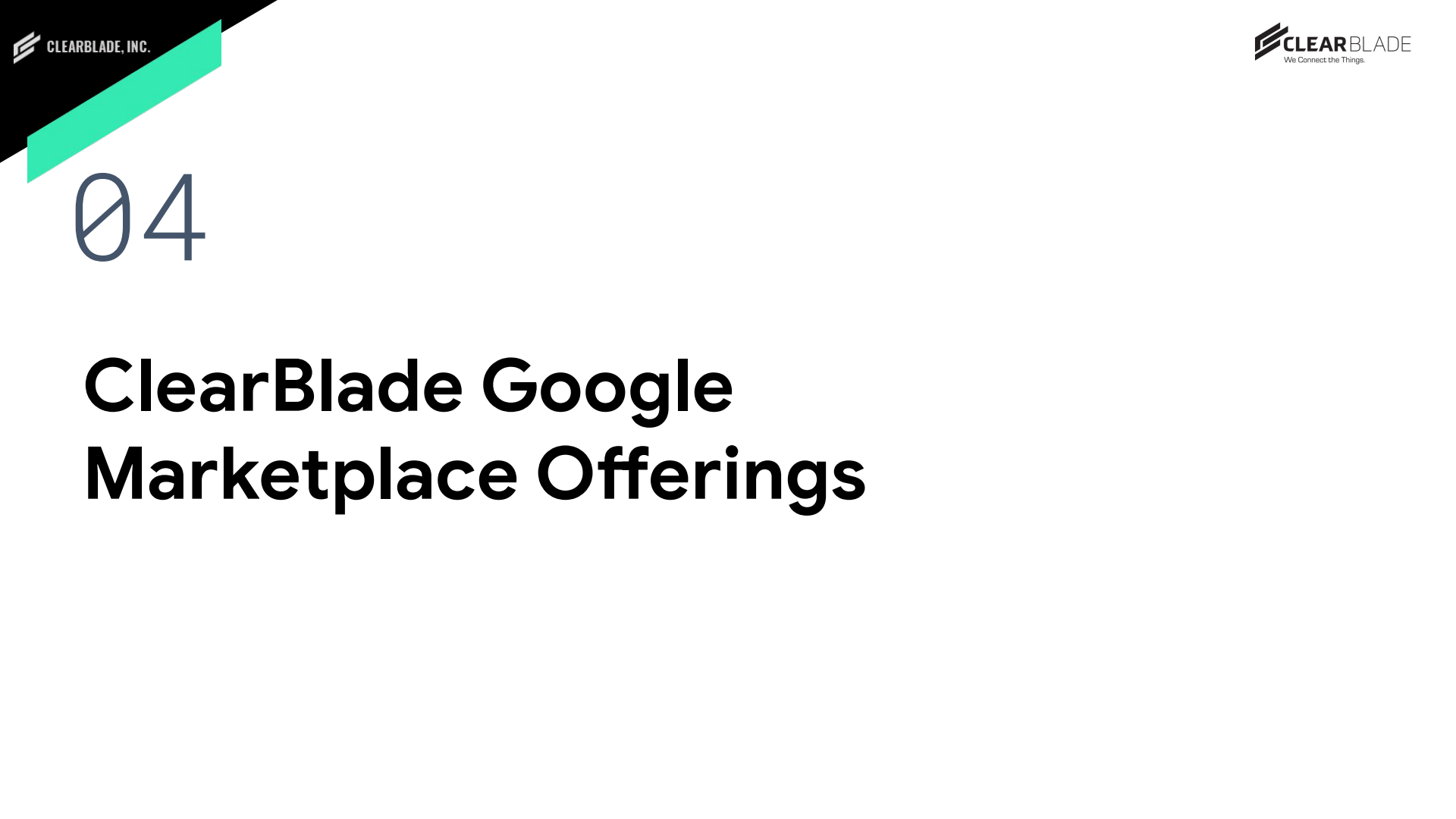- https://iot.clearblade.com

Root CA

The ClearBlade IoT Core environments leverage DigiCert root certificates for SSL / TLS termination. The current Root CA from DigiCert can be downloaded here.

Replacement SDKS

ClearBlade is providing SDKs for drop-in replacement.

04

ClearBlade Google Marketplace Offerings

ClearBlade IoT Core available in the Marketplace

IoT Core Pricing (ClearBlade hosted)

Monthly data volume	Price per MB
up to 250 MB	$0.00
250 MB to 250 GB	$0.0045
250 GB to 5 TB	$0.0020
5 TB	$0.00045

Additional Terms Available for

- Customer Environments

- Enterprise Tiers

ClearBlade IoT

ClearBlade Inc.

We connect the things.

VIEW ALL PLANS

OVERVIEW   PRICING   DOCUMENTATION

Overview

ClearBlade is an IoT, Edge, and AI Software company driving enterprise digital transformation through its IoT Core, IoT Enterprise, and Intelligent Assets offerings on Google Cloud. ClearBlade offers fully scalable, secure, flexible, and autonomous solutions that enable companies to ingest, analyze, adapt, and act on any data in real-time and at extreme scale.

Learn more

Additional details

Runs on: ClearBlade Inc. Cloud Servers
Type: SaaS & APIs
Last updated: 8/15/22
Category: Big data, Analytics, Machine learning, Compute

About managed services

Managed Services are fully hosted, managed, and supported by the service providers. Although you register with the service provider to use the service, Google handles all billing.

Other ClearBlade Offerings:

- **IoT Core**
  - Priced by MB
  - Monthly

- **IoT Enterprise**
  - Per vCPU
  - Per Edges Pricing Available

- **IoT Enterprise w/ Intelligent Assets**
  - Per vCPU
  - Supports Multiple Applications
  - Per Edges Pricing Available

Pricing

	IoT Core	IoT Enterprise	IoT Enterprise with Intelligent Assets
	Free + usage fee	Free + usage fee	Free + usage fee
	Subscription Period* 1 month - Free + usage fee	Subscription Period* 1 month - Free + usage fee	Subscription Period* 1 month - Free + usage fee
	SELECT	SELECT	SELECT
Device Registry	Yes	Yes	Yes
Certificate Authentication	Yes	Yes	Yes
Highly Scalable Rest & MQTT Communication	Yes	Yes	Yes
Google Pub/Sub Integration	Yes	Yes	Yes
Streaming/Microservice Enginer		Yes	Yes
Realtime AI Engine		Yes	Yes
Data as a Service		Yes	Yes
Enhanced Permissions for Users & Devices		Yes	Yes
Edge Orchestration		Yes	Yes
Protocol Translation		Yes	Yes
Portal Visualizations		Yes	Yes
No Code IoT Application			Yes
Customizable Assets & Areas			Yes
Rules Engine, Events & Alerts			Yes
Dashboards & Reports			Yes
Mobile, Tablet, & Web Views			Yes

IoT Core Usage Fee
This plan charges for usage of certain services on top of the monthly fee. Usage fee is billed every month.
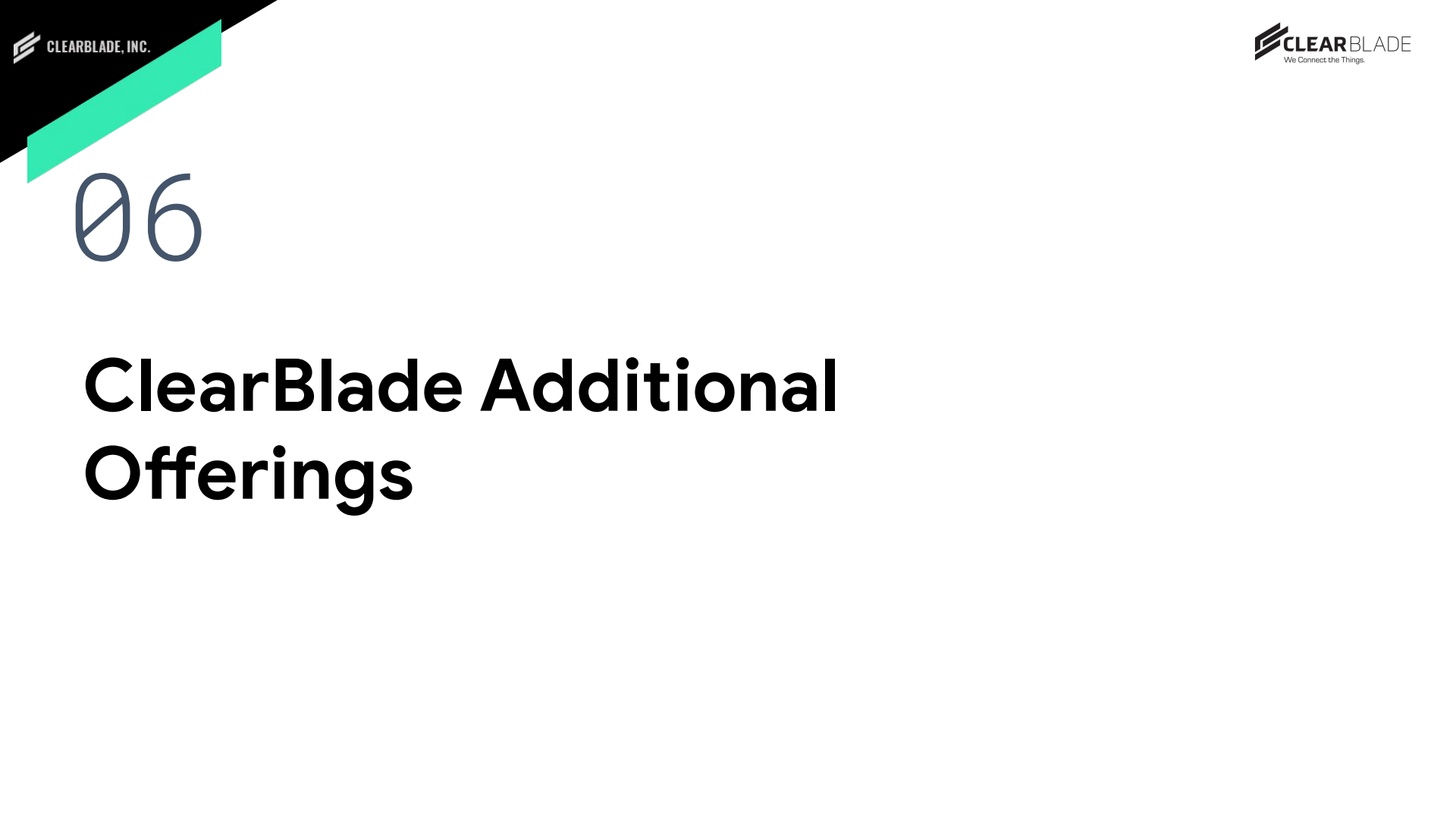
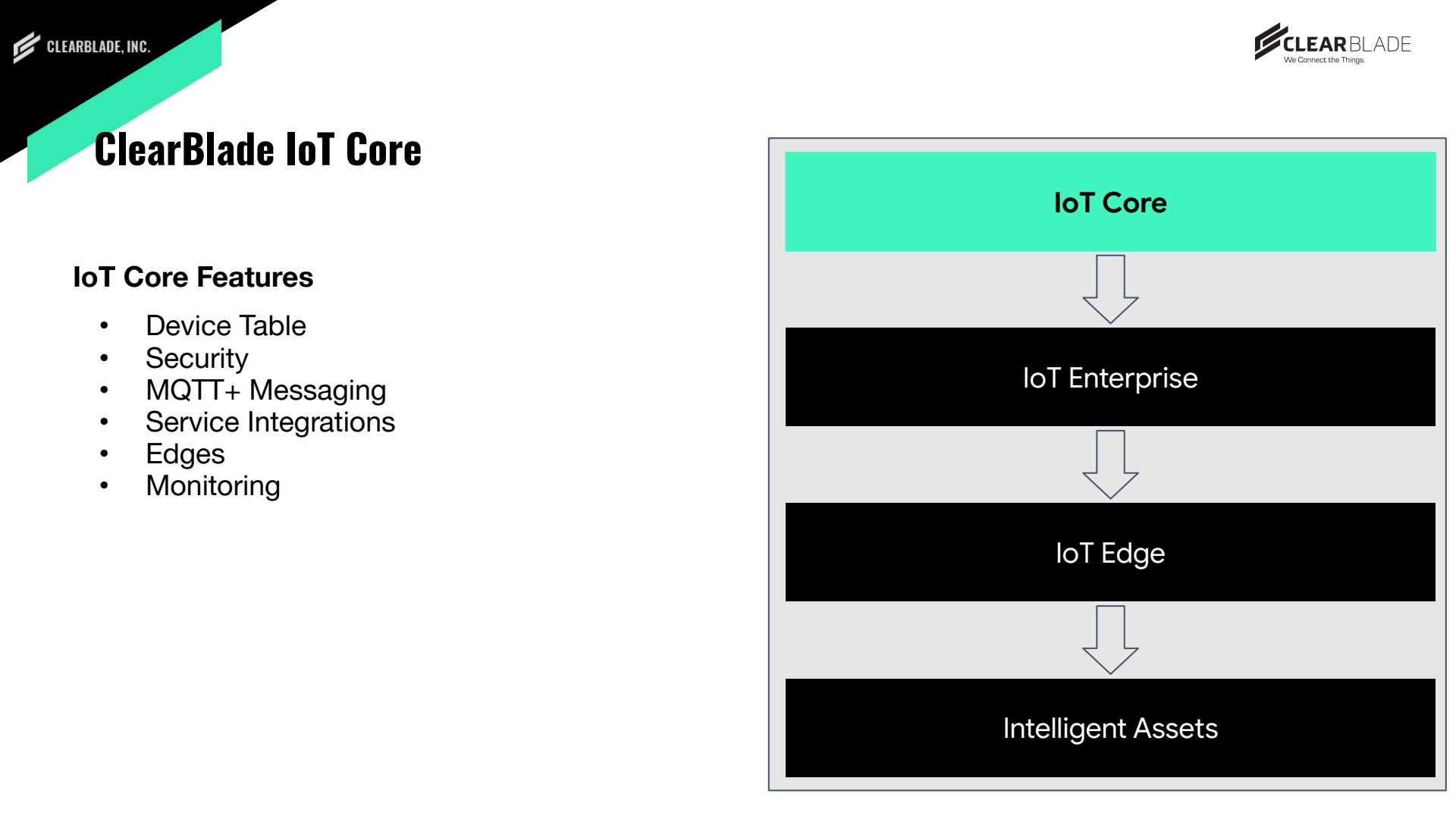|	FREE	TIER 1	TIER 2
IoT Core Price per MB ?	USD 0.00 /mebibyte	USD 0.0045 /mebibyte	USD 0.002 /mebibyte
	Starting after: 0 mebibyte/month	Starting after: 250 mebibyte/month	Starting after: 250K mebibyte/month

05

ClearBlade Google Cloud Integrations

ClearBlade includes additional GCP cloud services
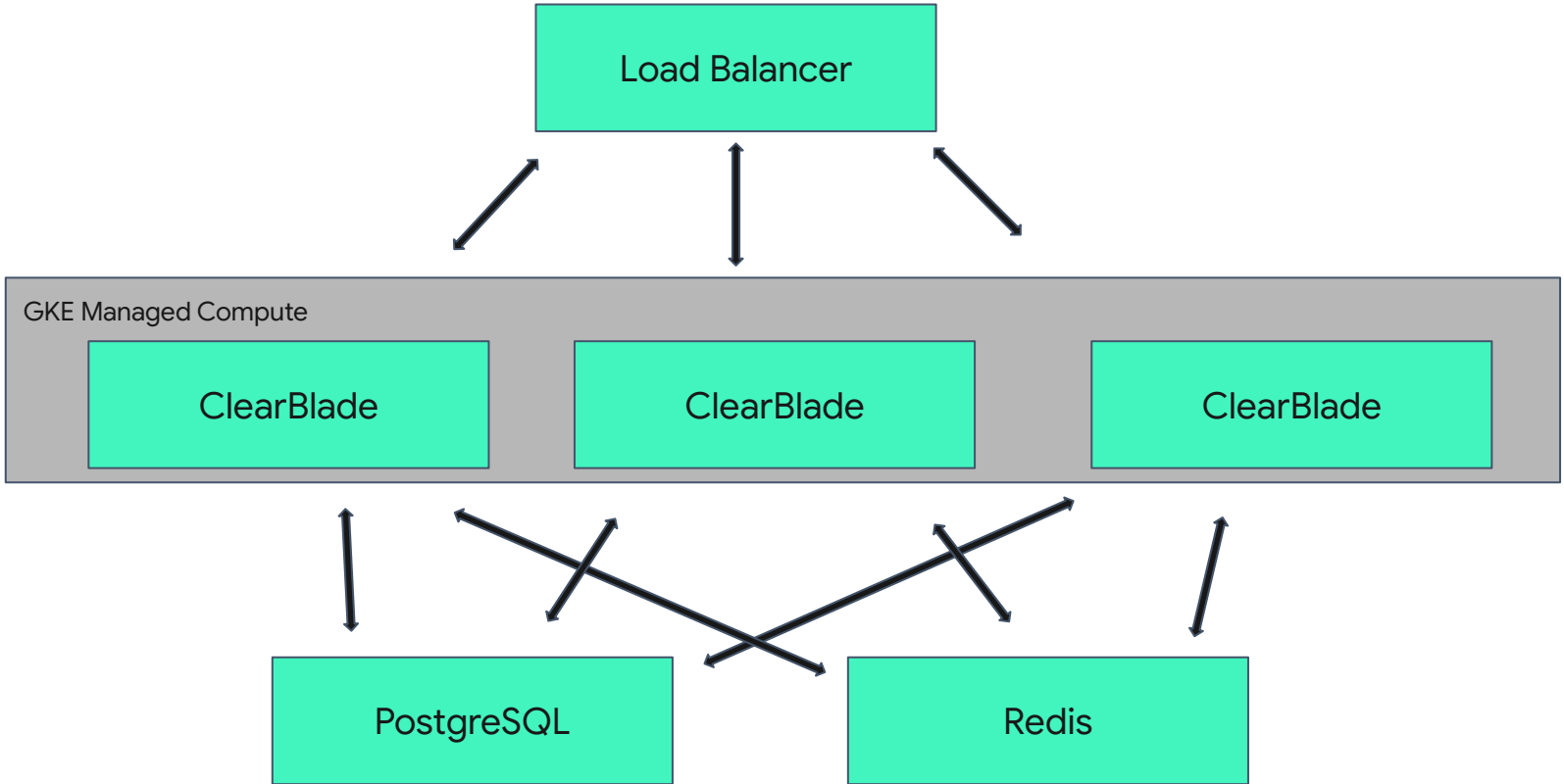
06

ClearBlade Additional Offerings

ClearBlade IoT Core

IoT Core Features

- Device Table
- Security
- MQTT+ Messaging
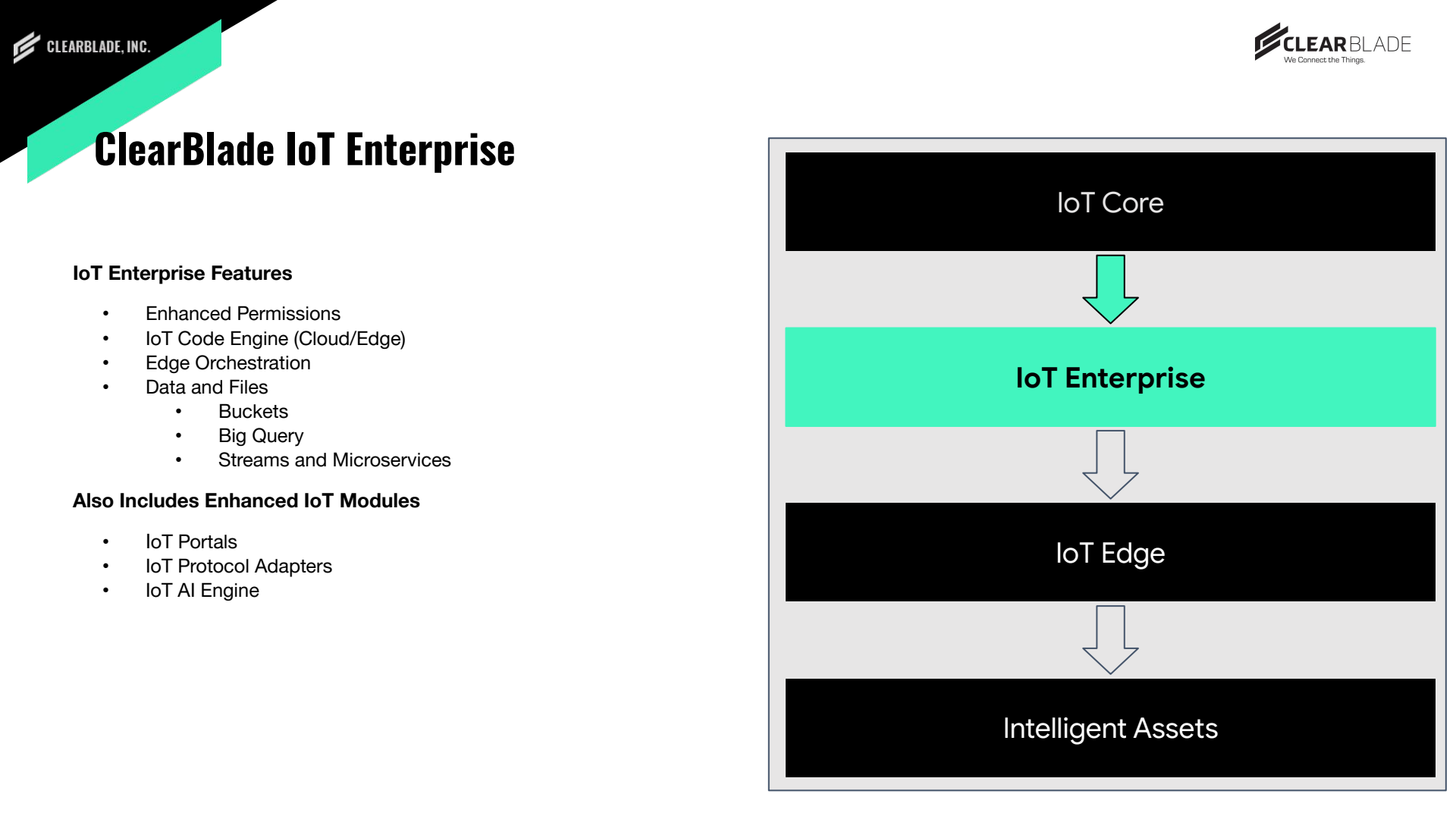- Service Integrations
- Edges
- Monitoring

IoT Core

↓

IoT Enterprise

↓

IoT Edge

↓

Intelligent Assets

ClearBlade IoT Enterprise

IoT Enterprise Features

- Enhanced Permissions
- IoT Code Engine (Cloud/Edge)
- Edge Orchestration
- Data and Files
    - Buckets
    - Big Query
    - Streams and Microservices

Also Includes Enhanced IoT Modules

- IoT Portals
- IoT Protocol Adapters
- IoT AI Engine

ClearBlade IoT Edge

IoT Edge - *Full IoT Enterprise Stack at the Edge!*

- Enhanced Permissions
- IoT Code Engine (Cloud/Edge)
- Data and Files
- Cloud/Edge Synchronization

Also Includes Enhanced IoT Modules

- IoT Edge Portals
- IoT Edge Protocol Adapters
- IoT Edge AI Engine
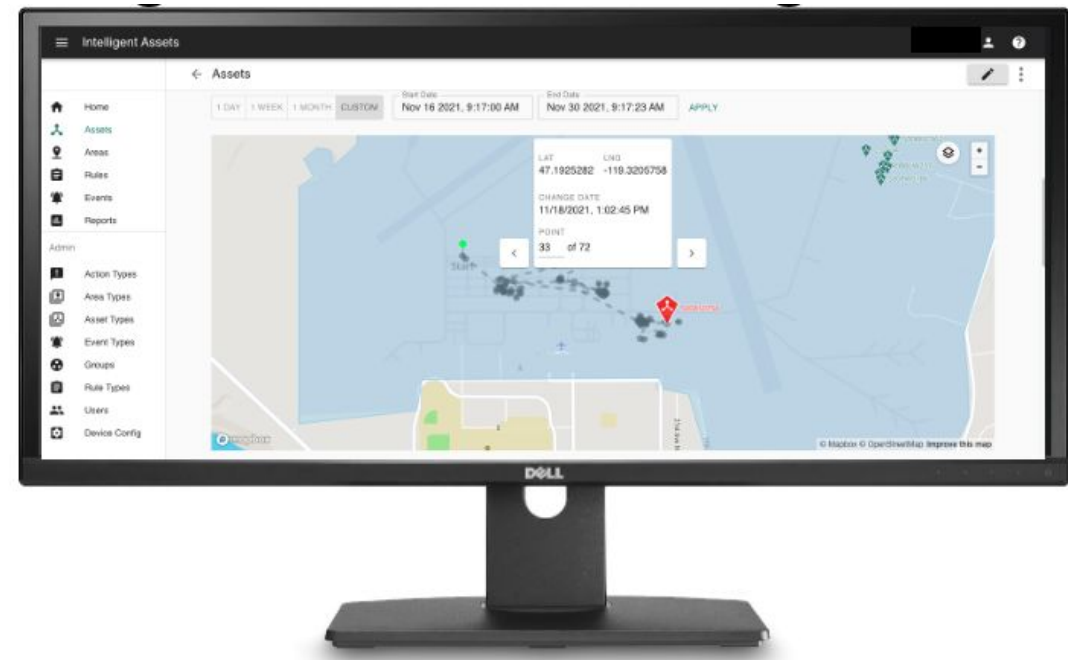- IoT Network Connectivity
- IoT Out of the Box Gateways

IoT Core

↓

IoT Enterprise

↓

IoT Edge

↓

Intelligent Assets
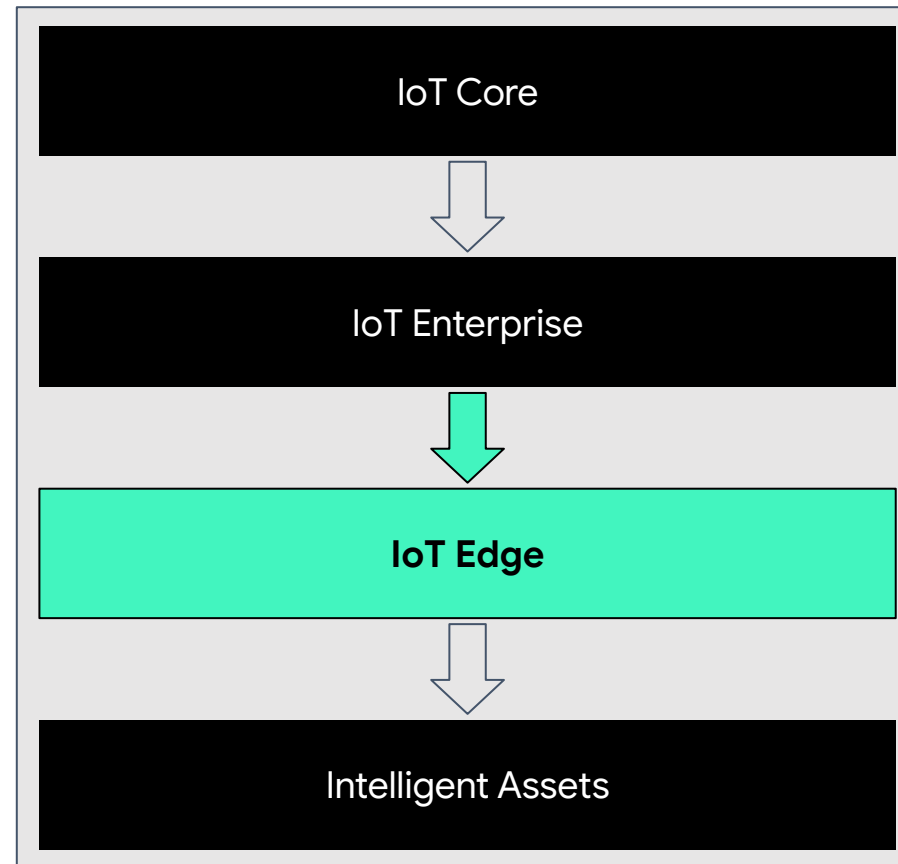
ClearBlade Intelligent Assets

Intelligent Assets

- No code application for operators
- Monitor/Track/Control any asset
- Edge integrated
    - Rules
    - AI
    - Data storage
- Proven across multiple industries
    - Aerospace
    - Rail
    - Manufacturing

Intelligent Assets

07

Questions

Casey Beauchamp
ClearBlade Director of Partnerships
cbeauchamp@clearblade.com