Overview

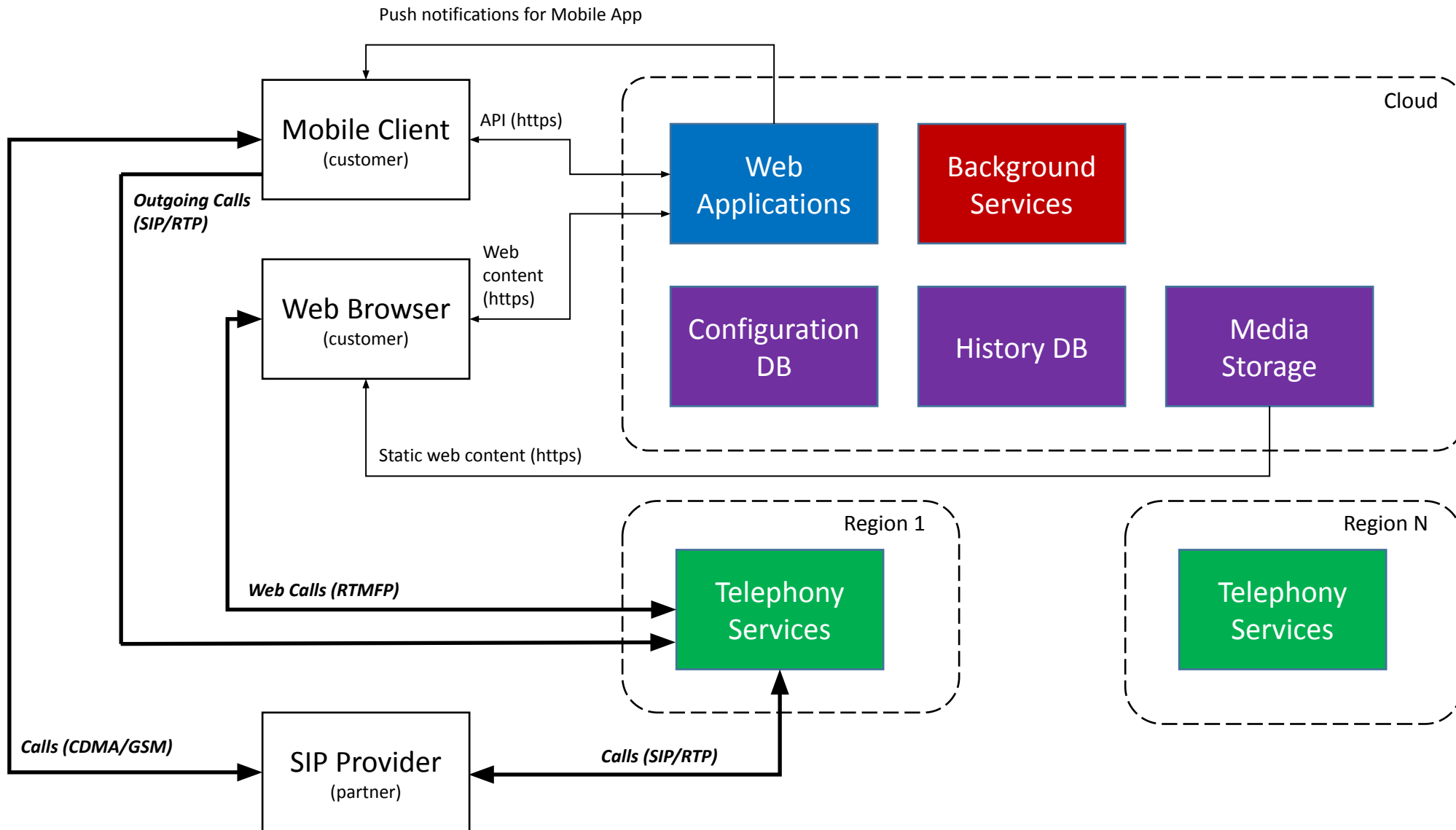|		
Web Applications	Background Services	Telephony Services
Configuration DB	History DB	Media Storage
	Installer	

Functional Overview

Push notifications for Mobile App

Mobile Client (customer)

API (https)

Web Browser (customer)

Web content (https)

Outgoing Calls (SIP/RTP)

Static web content (https)

Cloud

Web Applications

Background Services

Configuration DB

History DB

Media Storage

Region 1

Telephony Services

Region N

Telephony Services

Web Calls (RTMFP)

Calls (CDMA/GSM)

SIP Provider (partner)

Calls (SIP/RTP)

Web Applications Key Features

- Works under IIS
- Works at VMs, Scalable by VMs
- Built with MVC 4.0
- Could be deployed at multiple domain names (multiple Geo regions)
- Almost all applications could be Balanced by External Balancer for High Availability
- Used for user interaction: sign-up procedure, IVR configuration, Voicemail listening, Activities management, etc.) including API for iOS and Android clients

Web Applications List (US)

~~Yola~~	Wix TollFree	Wix React	ShopifyApp	~~GoDaddy~~
~~MightyCall Store~~	~~ReactStore (UI + API)~~	*New Store (UI + API)*	ClickConnect Button	Contact API
MightyCall WebUI (UI + API)	File Handler	~~Combined Login (obsolete)~~	~~Infratel Phone Numbers~~	Recurly
Mobile API	~~APS API~~	~~Phone Market API~~	Public API	*CountryCom*
Metrics API	SMS Listener	*Yandex App*	*Blob Handler*	*Push Proxy*

Web Applications List (RU)

~~Yola~~	Wix TollFree	Wix React	ShopifyApp	~~GoDaddy~~
~~MightyCall Store (obsolete)~~	~~ReactStore (UI + API)~~	*New Store*	ClickConnect Button	Contact API
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Mobile API	~~APS API~~	~~Phone Market API~~	Public API	*CountryCom*
Metrics API	SMS Listener	*Yandex App*	*Blob Handler*	*Push Proxy*

Web Applications Interaction
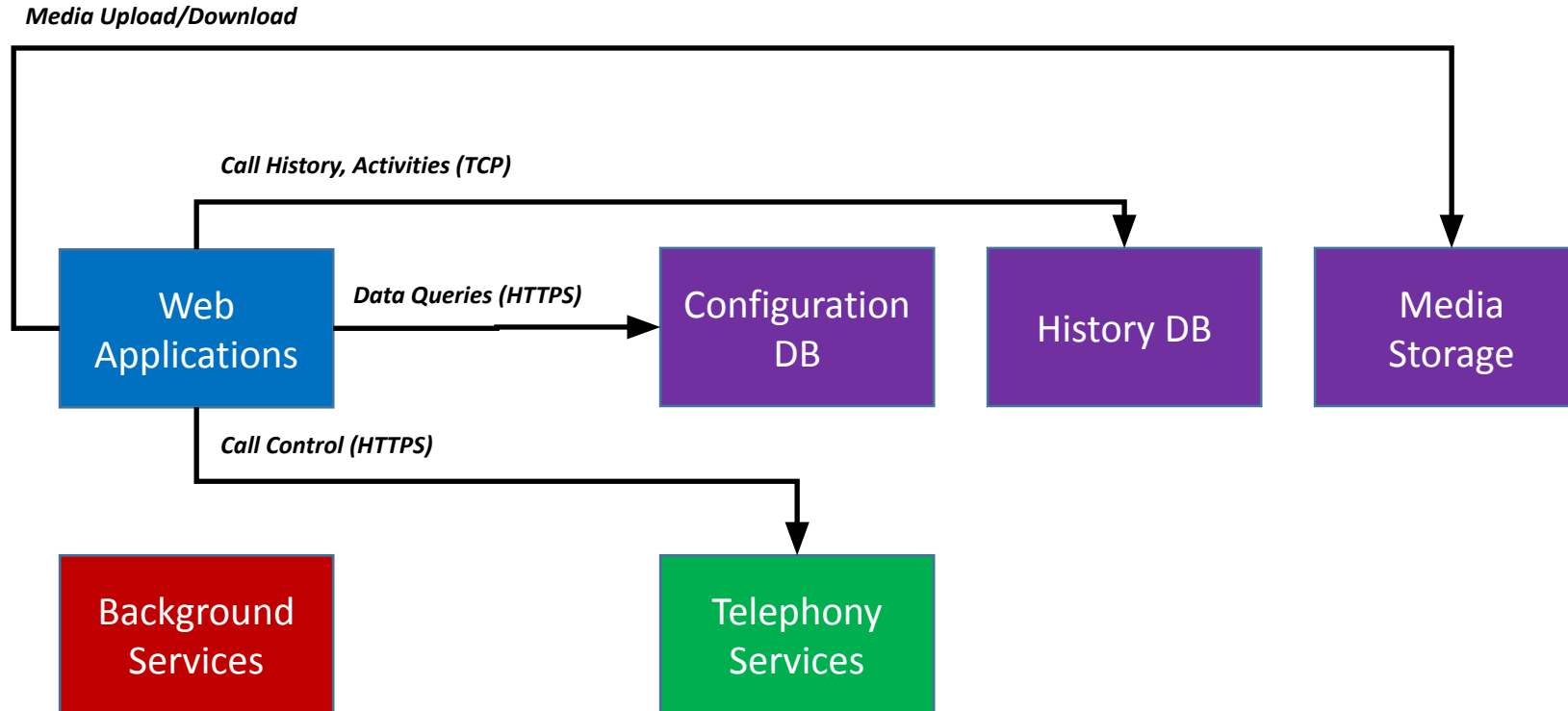
Background Services Key Features

- Works as standalone applications or Windows Services
- Works at VMs, Scalable by VMs
- Could be deployed at multiple domain names (multiple Geo regions)
- Used for background processing tasks: report generation, trial deactivation, data cleanup

Background Services List (US)

Vitelity SMS Queue	CountryCom DB Sync	Config Replicator (obsolete)	Email Sink
Marketing Sync	PreRecurly Trial Stopper	Reminder	Reporting Utils
	Tenants Cleaner	Voice Quality Analyzer	
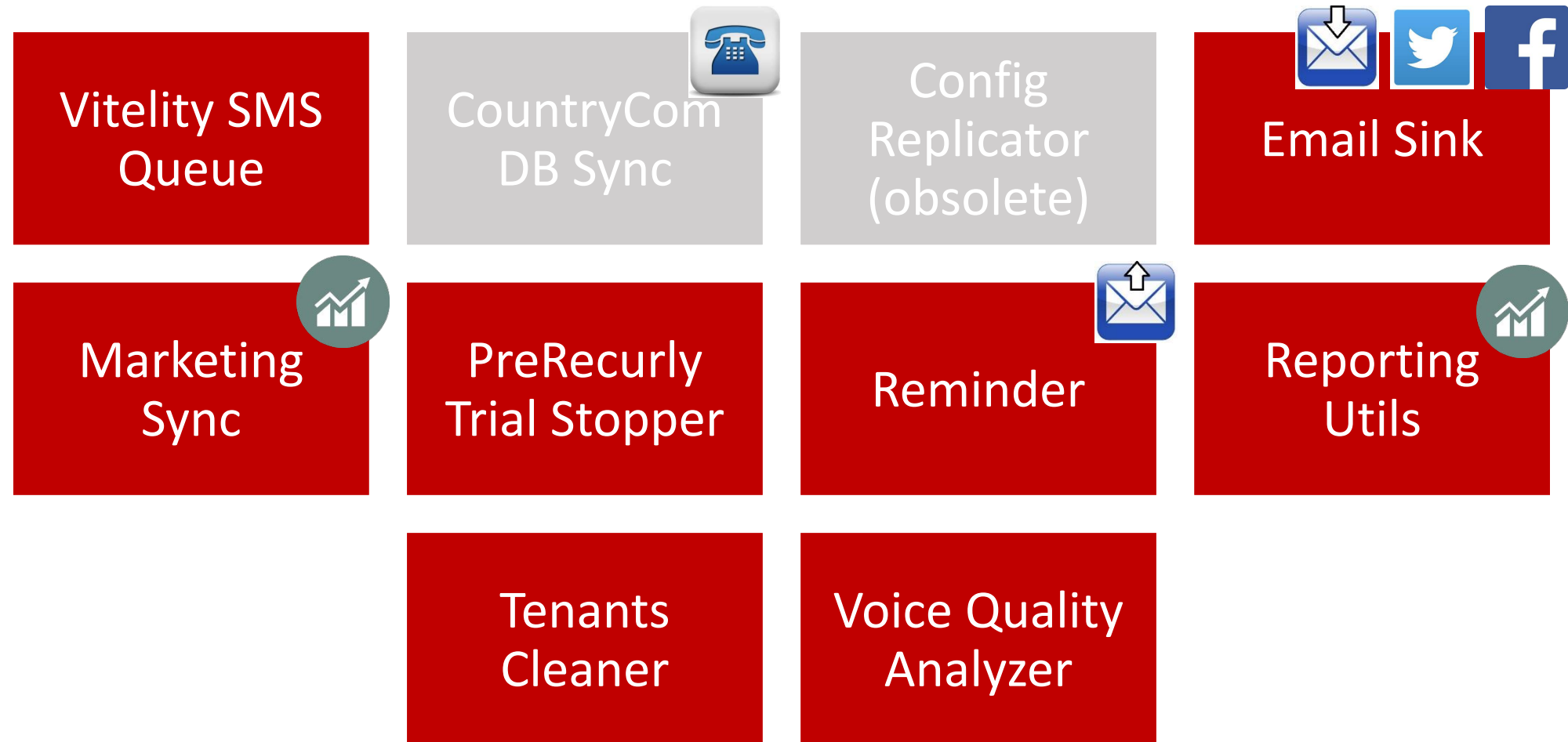
Background Services List (RU)

Vitelity SMS Queue

CountryCom DB Sync

Config Replicator (obsolete)

Email Sink

Marketing Sync

PreRecurly Trial Stopper

Reminder

Reporting Utils

Tenants Cleaner

Voice Quality Analyzer

Background Services Interaction
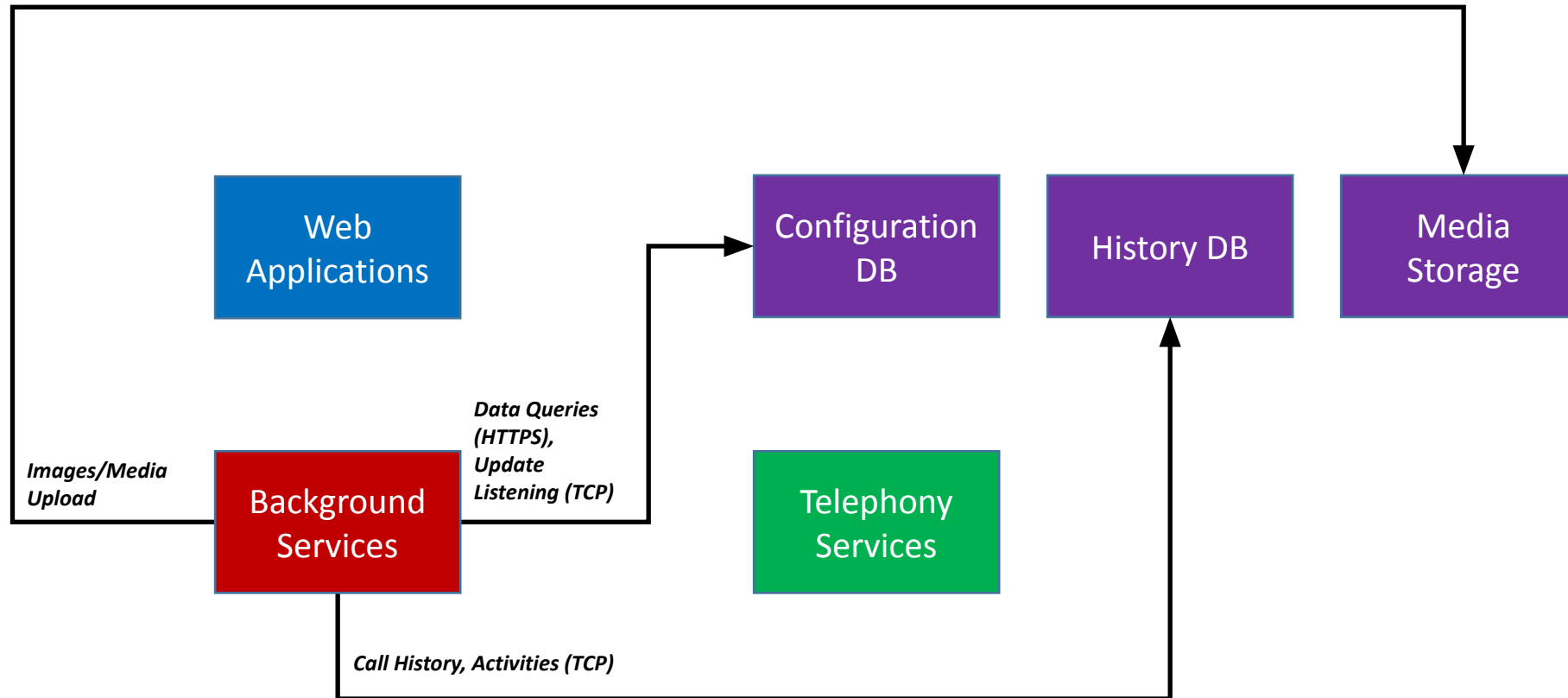
Configuration DB Key Features

- Used for storing Tenants configurations (users, IVRs, etc.)
- Based on Level DB
- Master-Master Replication
- Provides Update listening functionality for Telephony services and Background services
- High Availability (3 Instances of data)
- Geo-Sharding
- TBD

Configuration DB

Region 1

- **Shard 1** (Instance 1)
  - ConfigDB Service
  - SPREAD
  - Level DB
- **Shard 1** (Instance 2)
  - ConfigDB Service
  - SPREAD
  - Level DB
- **Shard 1** (Instance 3)
  - ConfigDB Service
  - SPREAD
  - Level DB

- **Shard N** (Instance 1)
  - ConfigDB Service
  - SPREAD
  - Level DB
- **Shard N** (Instance 2)
  - ConfigDB Service
  - SPREAD
  - Level DB
- **Shard N** (Instance 3)
  - ConfigDB Service
  - SPREAD
  - Level DB

Configuration DB Interaction (1/2)

Configuration DB Interaction (2/2)

Region 1

Background Services

Data Queries (HTTPS)

Update Listening (TCP)

Web Applications

Data Queries (HTTPS)

Telephony Services

Discovery(HTTPS)

Snapshots (TCP), Update Listening (TCP)

- Shard 1 (Instance 1)
  - ConfigDB Service
  - SPREAD
  - Level DB
- Shard 1 (Instance 2)
  - ConfigDB Service
  - SPREAD
  - Level DB
- Shard 1 (Instance 3)
  - ConfigDB Service
  - SPREAD
  - Level DB

ConfigDB Services sync their Level DBs via SPREAD

History DB Key Features

- Used for storing Call Logs, Activities, Statistics and other data
- Powered by Mongo
- Master-Slave Replication
- High Availability (3 Instances of data)
- Geo-Sharding
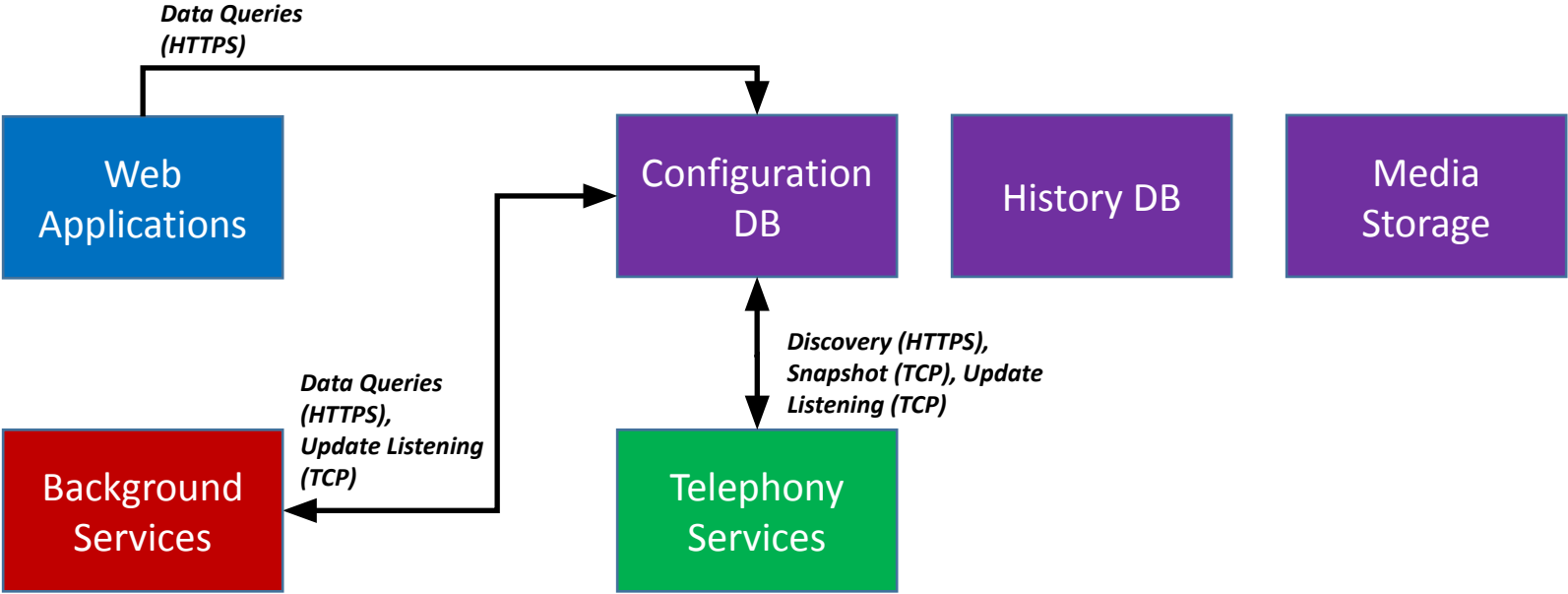- TBD

History DB

- **Client Env**
  - MongoS Service

Routing

Region 1

Region N

- **Shard 1** (Master)
  - MongoD Service
  - DB
- **Shard 1** (Replica 1)
  - MongoD Service
  - DB
- **Shard 1** (Replica 2)
  - MongoD Service
  - DB

- **Shard N** (Master)
  - MongoD Service
  - DB
- **Shard N** (Replica 1)
  - MongoD Service
  - DB
- **Shard N** (Replica 2)
  - MongoD Service
  - DB
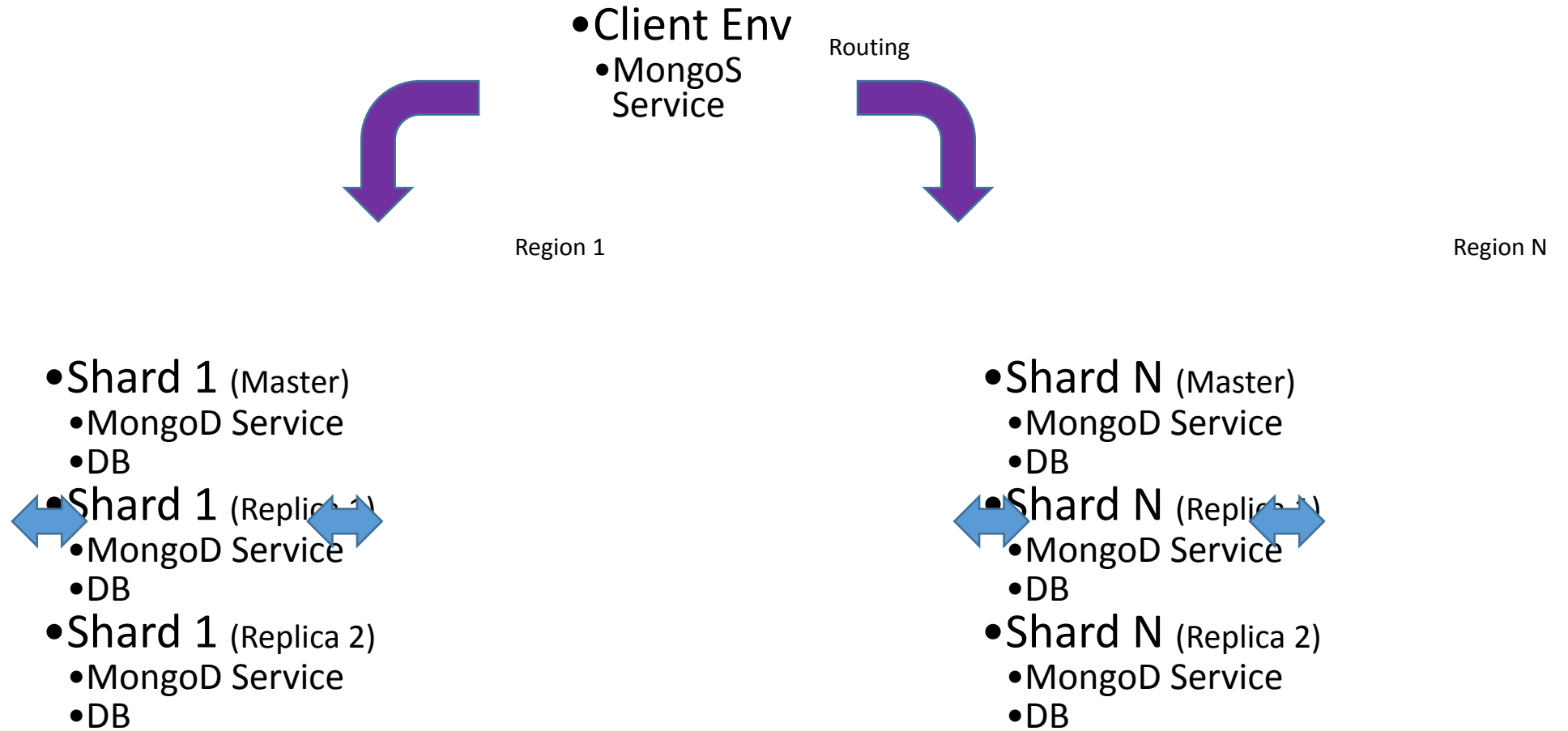
History Storage Interaction
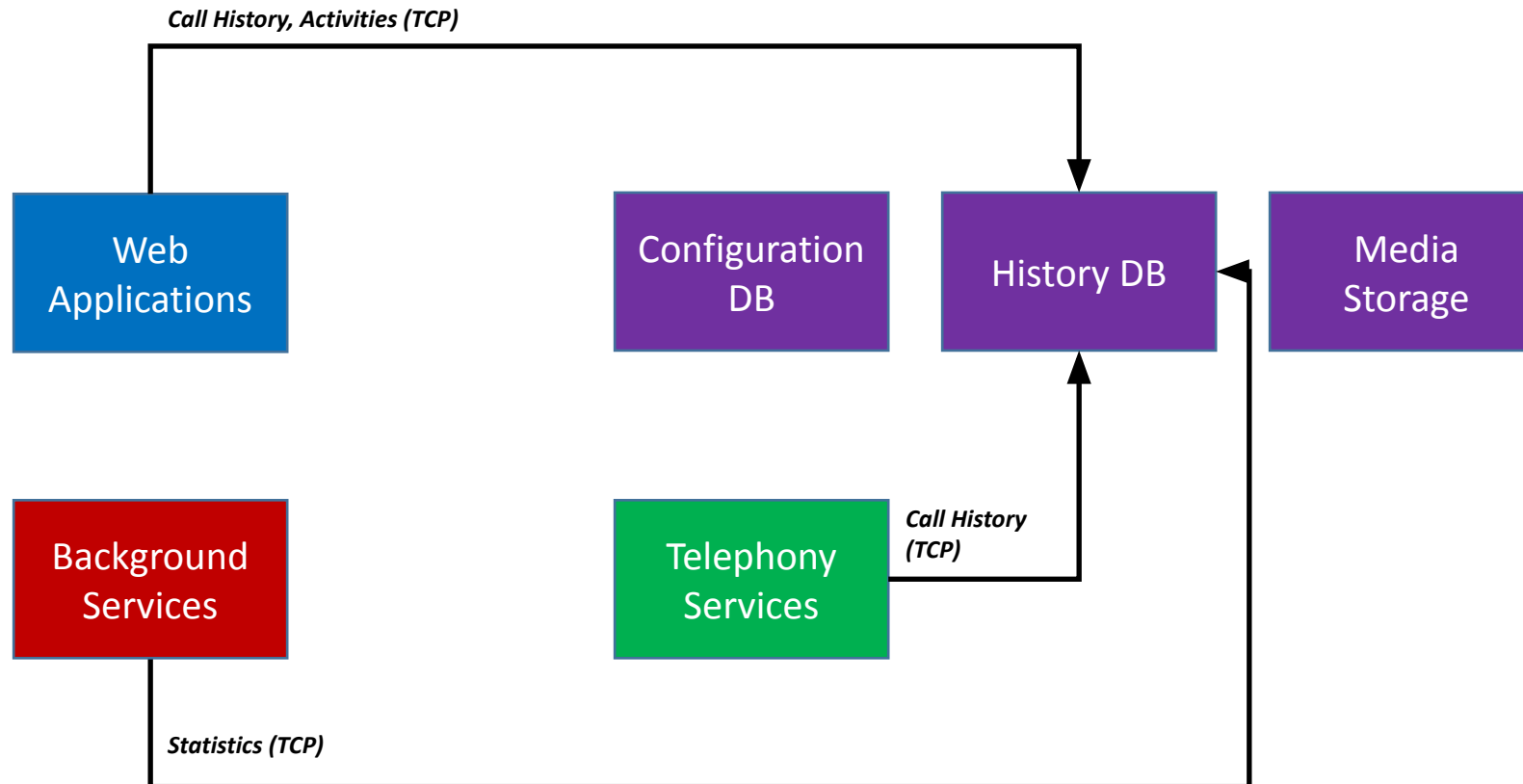
Media Storage Features

- Used for storing Prompts, Call Records, Voicemails
- Used for storing some binary data (Call Rates, Reports, TODO Emails, etc)
- Powered by Azure Blob
- High Availability (3 Instances of data)
- Proxied by FileHandler for external world

Media Storage Interaction

File Handler

Prompt, Voicemail, Call Recording Download

Prompt Upload
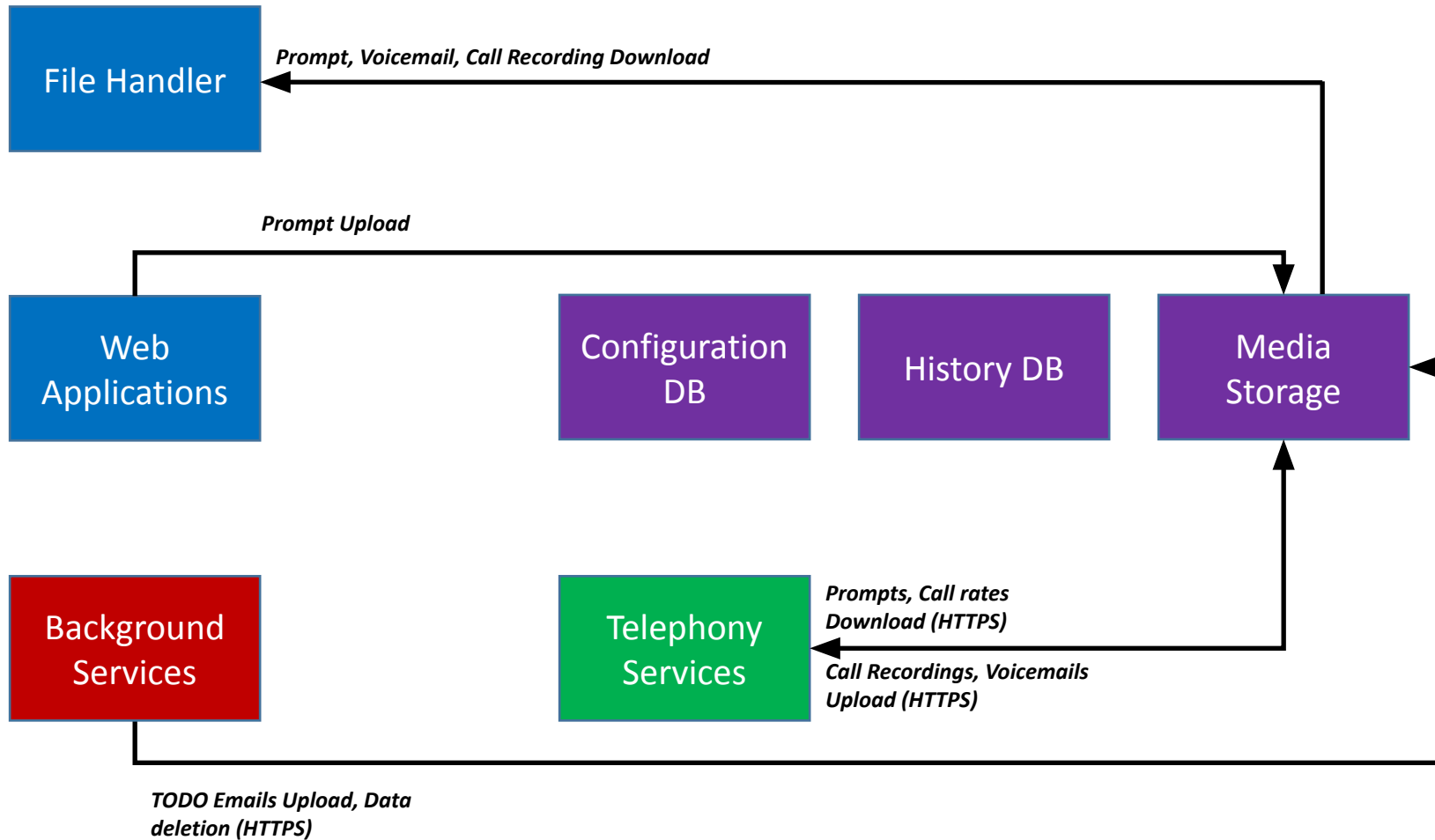
Web Applications

Configuration DB

History DB

Media Storage

Background Services

Telephony Services

Prompts, Call rates Download (HTTPS)

Call Recordings, Voicemails Upload (HTTPS)

TODO Emails Upload, Data deletion (HTTPS)

Installer Features

- Standalone application
- Used for Initial setup of Telephony Services
- Used for Initial setup of Web Applications
- Used for Initial provisioning of Configuration DB
- Used for Initial setup of Media Prompts in Media Storage
- Used for Data Migration, periodical Update of Media, Email and other configuration entities.