FirstNet Day 2 Migration - SoaP [WIP]

Document Control

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Project code	
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JIRA	

Version History

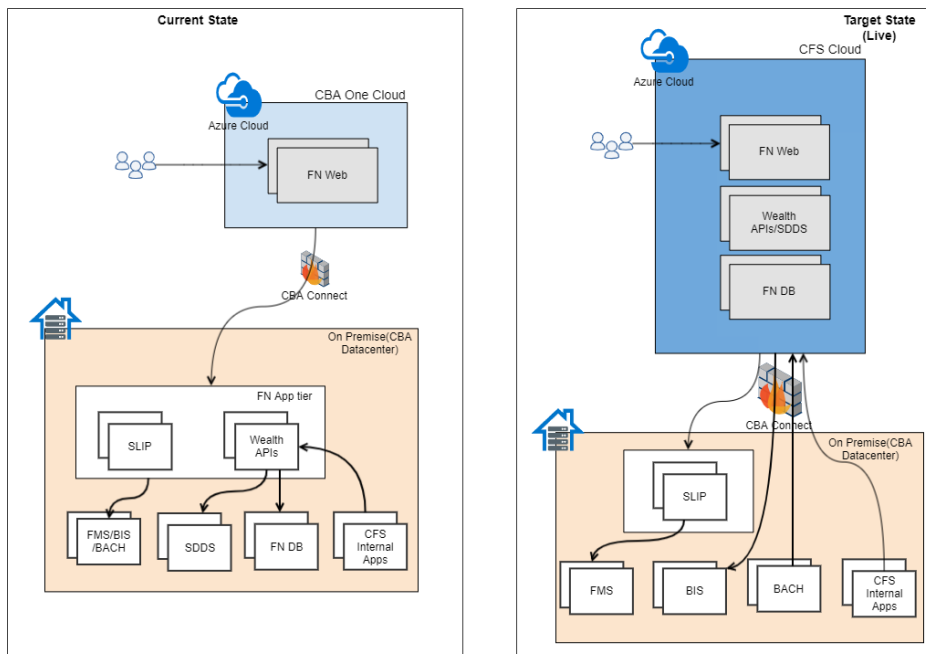| Version	Author	Issue Date	Changes
0.1	Tarun Pabbi	22 Apr 2022	Initial Draft
0.2	Tarun Pabbi	13 May 2022	Incorporated feedback from reviewers

Overview

The FirstNet application is currently hosted within CBA infrastructure and is part of TSA which is due to expire on 1 Dec 2023. The goal of this initiative is to move the FirstNet application from CBA infrastructure to new CFS Cloud hosted within Microsoft Azure. The FirstNet app is currently deployed as a Hybrid setup. It has mainly 4 components.

- FN Web tier
- FN App tier
- FN Database
- FN SDDS

The FN Web tier is hosted in CBA One cloud (Azure) and rest of the components are deployed with CBA private cloud (Burwood and Norwest). As part of this initiative, all the 4 components will be moved to CFS cloud. However, there are few dependencies between FirstNet and existing CFS services, and these dependencies are not in scope for this initiative, which will require FirstNet hosted in CFS cloud to have connectivity back to CBA private cloud.

Migration Transition

Current State

Azure Cloud — CBA One Cloud
FN Web
CBA Connect
On Premise(CBA Datacenter)
FN App tier
SLIP
Wealth APIs
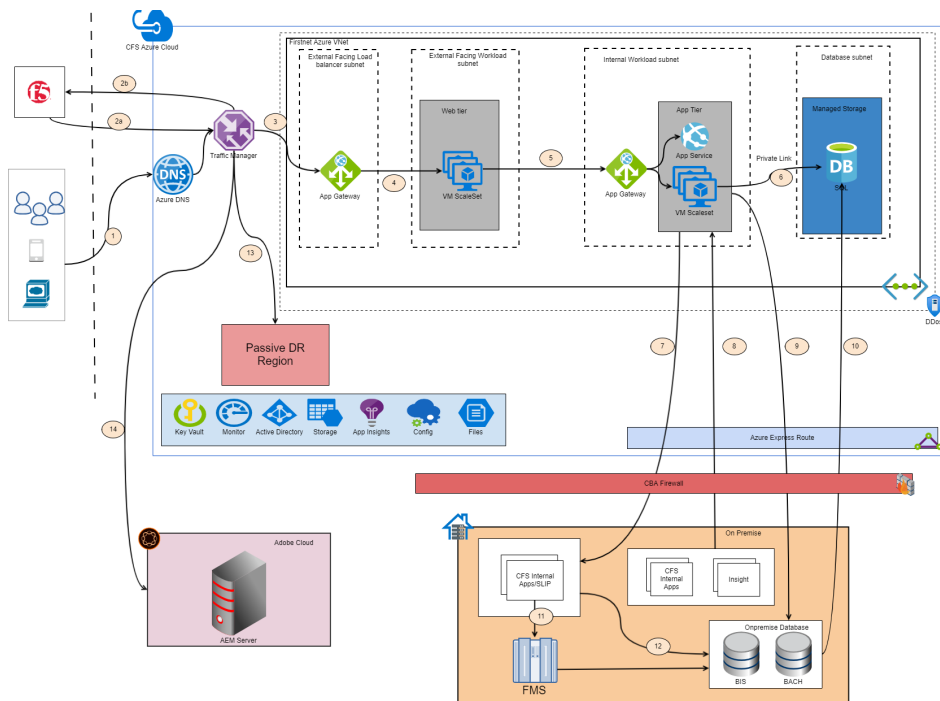FMS/BIS/BACH
SDDS
FN DB
CFS Internal Apps

Target State (Live)

Azure Cloud — CFS Cloud
FN Web
Wealth APIs/SDDS
FN DB
CBA Connect
On Premise(CBA Datacenter)
SLIP
FMS
BIS
BACH
CFS Internal Apps

Current State

AWS
Route 53 DNS
Manual DNS Failover
External Users
Akamai
Azure Australia South East / CBA One Cloud public CFS VNet
Azure Monitor
Azure External Load Balancer
VM ScaleSet FirstNet Web
Express Route
ODP DNS
CBA Connect
Azure Australia East / CBA One Cloud public CFS VNet
ODP DNS
Azure External Load Balancer
VM ScaleSet FirstNet Web
Express Route
Azure Monitor

CBA Data Centres Burwood/ Norwest
ODP S3 Burwood
ODP F5
ODP Firewall
FirstNet App
SDDS active
CFSONLINE Db
Active
Replication
AG Listener
Standby
ODP S3 Norwest
ODP F5
ODP Firewall
FirstNet App
CFSONLINE Db
SDDS standby

IPNET
SDDS NAS
EMC Synchronous NAS
BIS, FMS etc
SDDS NAS

R1 R2 R3 R4 R5 R6 R7 R8 R9b R10b R11b R12b R13b R14b R11 R12 R13 R14 R9n R10n R11n R12n R13n R14n

Legend
Events flows
Runtime flows
Splunk
AppDynamics
SCOM
DR flows

Target State

	Description
1	Request comes to Azure DNS to resolve colonialfirststate.com.au/cfs.com.au and it redirect the request to Traffic Manager.
2a	Traffic Manager will resolve all the request to F5 for WAF(Adobe/CFS Cloud Primary region/CFS Cloud Secondary region)
2b	F5 verifies the request and then resolves to Traffic Manager private zone
3	Traffic Manager redirect the request to App gateway using DNS based routing
4	App gateway determine the appropriate backend and redirect the request to Web tier
5	Web tier interacts with App tier via Internal App gateway(Exposed within the VNet)
6	App tier connects with Data tier using private link(which allows access from within VNet only).
7	App tier connects with on-premise SLIP Services/CFS Internal Apps using Azure Express route. This flow will be used for connection back to FMS system. The protocol used is HTTPS and transferred data include CFS specific data including customer data.
8	CFS internal services hosted on-premise will connect with FirstNet App tier using HTTPS protocol. The data transferred include CFS specific data including customer data.
9	App tier also make direct database calls to BIS database. The protocol is TCP connection and data include CFS specific data include customer data.
10	There are SSIS jobs which run within BACH database which will connect to CFS Cloud database using TCP connection.
11	CFS Internal Apps and SLIP services will continue to access FMS directly.
12	CFS Internal Apps will continue to access BIS/BACH database directly.
13	Azure DNS will redirect the request to secondary region in case of disaster.
14	Azure DNS will redirect the request to Adobe cloud for CFS public website.

# Peripheral Routing Requirements

- Region based filtering to block traffic from Unwanted geographies.
- Routing to Azure backend
- Firewall Protection
- DDos Protection
- Switchover to DR Region

- Switchover to other clouds(Adobe)
- Blue/Green deployment Support
- Lower environment exposed to trusted external third party(May need IP Filtering) like Adobe AEM
- Outbound Internet connections need to be controlled

Current ARC Rating for FirstNet

Availability	Cyber Security	Recoverability	Overall
2	0	1	0

Integrations (CFS Cloud CBA Private Cloud)
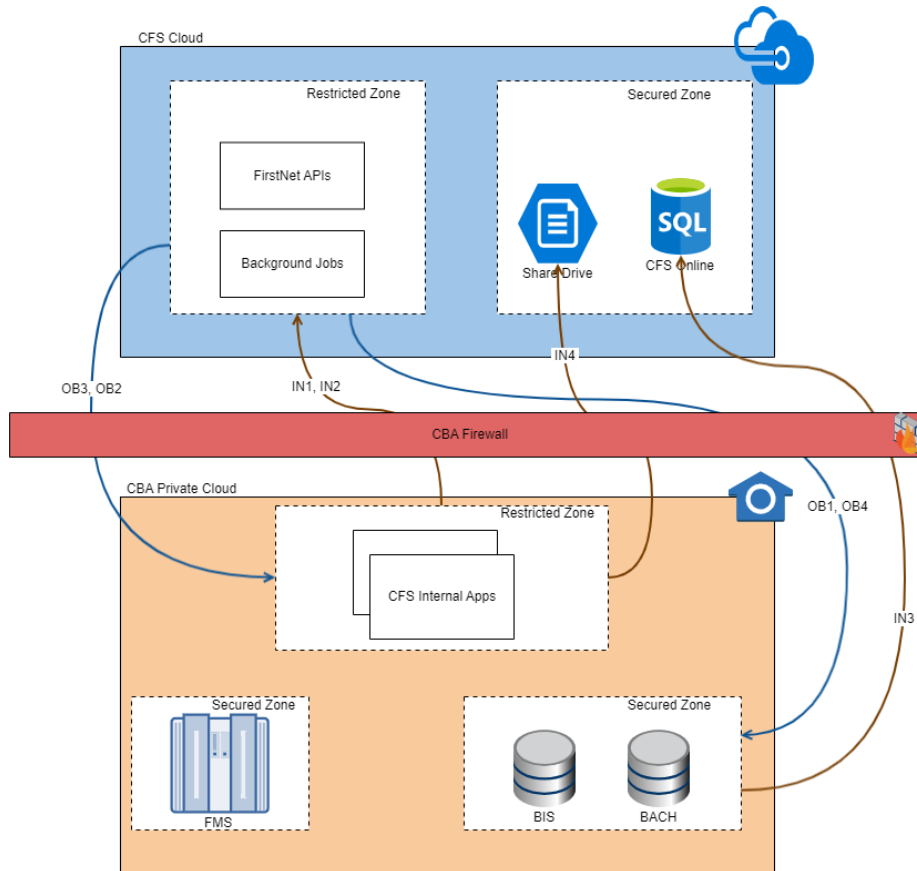
#	Source	Target	Interface type	Description
OB1	FirstNet App tier	BIS Database	TCP	FirstNet APIs hosted in CFS Cloud will access BIS database to fetch customer data. All BIS calls are read-only.
OB2	First App tier	FMS Gateway	HTTPS	FirstNet APIs hosted in CFS Cloud will access FMS gateway(which in turn access FMS) to fetch/update customer data.
OB3	First App tier	SLIP Services	HTTPS	FirstNet APIs hosted in CFS Cloud will access SLIP services for different scenarios.
OB4	SDDS Jobs	BIS Database	TCP	SDDS background jobs hosted in CFS Cloud will access BIS database to sync database in FirstNet CFS Online database(In CFS Cloud).
IN1	Insight	FirstNet App	HTTPS	Insight App hosted in CBA datacentre will access FirstNet App tier hosted in CFS Cloud.
IN2	Ignite Web	FirstNet App	HTTPS	Ignite Web hosted in CBA datacentre will access FirstNet App tier hosted in CFS Cloud.
IN3	BACH Database	FirstNet Database	TCP	BACH SSIS Jobs hosted in CBA datacentre will access FirstNet CFS Online database(In CFS Cloud).

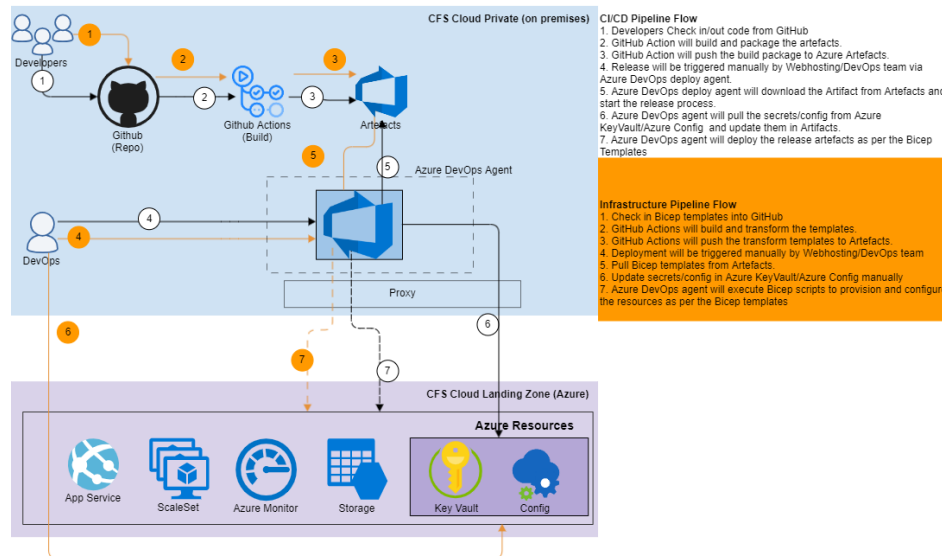| IN4	CFS Internal Apps	Azure Files	SMB	CFS Internal Apps hosted in CBA datacentre will access Azure Files service for temporary file storage. These files are then processed by other Jobs within CFS Cloud.

Migration of Artefacts

All the artefacts will be migrated via Data Migration Factory (DMF).

- Source Code from GitHub
- Build configurations from TeamCity
- Website assets / documents / forms etc
- Data of SQL databases
- Data from NAS locations
- Data within servers
- Configurations from Octopus and ACDC

TBD - Details of Migration

CICD Flows

Two step alternate approach to migration

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Azure Cloud — CBA One Cloud

- FN Web

CBA Connect

On Premise(CBA Datacenter)

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- SDDS
- FN DB
- CFS Internal Apps/DB

Transient State(Live)

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Target State (Live)

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CBA Connect

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