Why We Stayed On-Prem (for now)

John Ceynar

2/2018

Disclaimer

- This is only my opinion and summaries based on presentations we'd seen over the last year and various meetings with Oracle, etc. to try to understand the cloud components and our effort to migrate current applications to it.

- Do your own research and make your own opinions.

- Every company's situation is going to be different.

Agenda

- My Backgroud
- Cloud Benefits
- Current Environment & Processes
- On Prem to Cloud Mapping
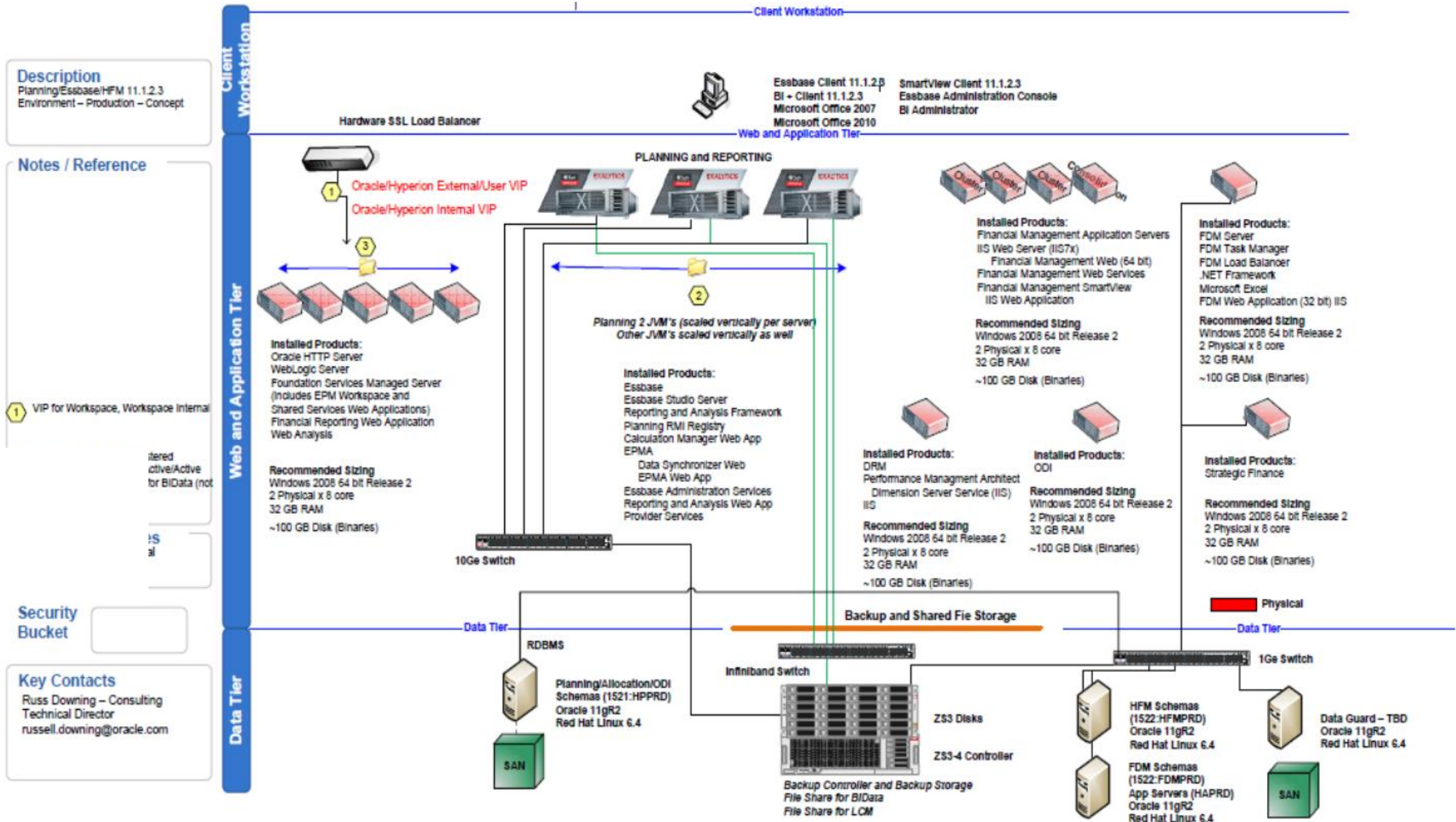- Cloud Concerns
- Cloud Roadmap

My Background

- 10+ Years BI/EPM Consulting
- 10+ Years Employee Supporting BI/EPM and/or Software Development
- 10+ Years Hyperion
- Halliburton, The Palladium Group, ThinkFast, Accenture, American Airlines/Sabre Group, Burlington Northern Sante Fe Railroad, Minnesota Mutual Insurance, FedEx, CVS, etc.

Cloud Benefits We Saw

- Cloud Lease OPEX versus Buy/Own CAPEX model
  - Cloud Rent Hardware and Software
  - Though there are Alternatives to Rent Hardware and Own the Software (Managed Services) basically offsite On-Prem
- Includes IT Infrastructure and Hyperion Infrastructure support, DBA, Monitoring, Backup, DR, etc.
- Automatic (but forced) O/S and Application versions and patching
- New functionality – Cloud first, then On-Prem
- SmartView Excel is still main self-service end user interface, so should be easy transition for end users
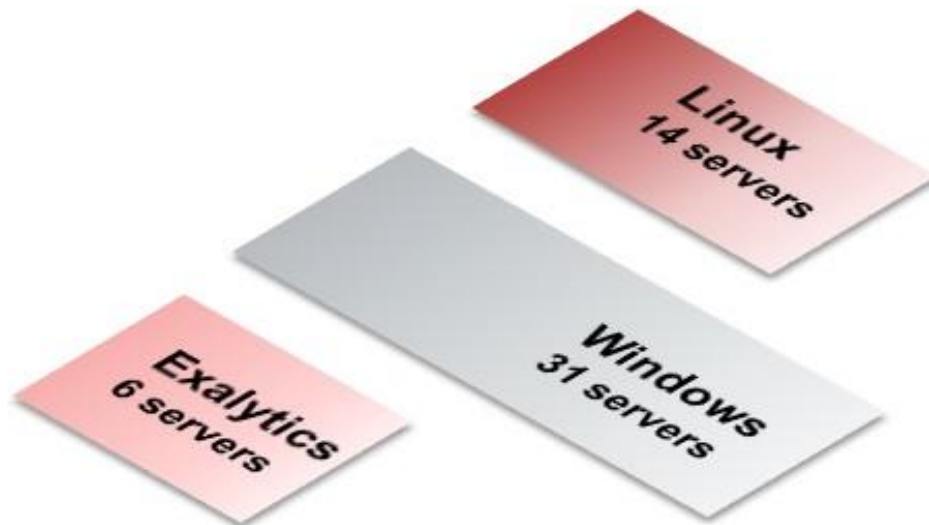
Current Environment - Prod

Client Workstation

Description
Planning/Essbase/HFM 11.1.2.3
Environment – Production – Concept

Notes / Reference

Hardware SSL Load Balancer

Essbase Client 11.1.2.3   SmartView Client 11.1.2.3
BI + Client 11.1.2.3   Essbase Administration Console
Microsoft Office 2007   BI Administrator
Microsoft Office 2010

Web and Application Tier

Oracle/Hyperion External/User VIP

Oracle/Hyperion Internal VIP

PLANNING and REPORTING

1 VIP for Workspace, Workspace Internal

Installed Products:
Oracle HTTP Server
WebLogic Server
Foundation Services Managed Server
(Includes EPM Workspace and
Shared Services Web Applications)
Financial Reporting Web Application
Web Analysis

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

Planning 2 JVM's (scaled vertically per server)
Other JVM's scaled vertically as well

Installed Products:
Essbase
Essbase Studio Server
Reporting and Analysis Framework
Planning RMI Registry
Calculation Manager Web App
EPMA
   Data Synchronizer Web
   EPMA Web App
Essbase Administration Services
Reporting and Analysis Web App
Provider Services

Installed Products:
Financial Management Application Servers
IIS Web Server (IIS7x)
   Financial Management Web (64 bit)
Financial Management Web Services
Financial Management SmartView
   IIS Web Application

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

Installed Products:
FDM Server
FDM Task Manager
FDM Load Balancer
.NET Framework
Microsoft Excel
FDM Web Application (32 bit) IIS

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

Installed Products:
DRM
Performance Managment Architect
   Dimension Server Service (IIS)
IIS

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

Installed Products:
ODI

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

Installed Products:
Strategic Finance

Recommended Sizing
Windows 2008 64 bit Release 2
2 Physical x 8 core
32 GB RAM

~100 GB Disk (Binaries)

10Ge Switch

Physical

Security Bucket

Data Tier

RDBMS

Backup and Shared Fie Storage

1Ge Switch

Infiniband Switch

Key Contacts
Russ Downing – Consulting
Technical Director
russell.downing@oracle.com

Planning/Allocation/ODI
Schemas (1521:HPPRD)
Oracle 11gR2
Red Hat Linux 6.4

SAN

ZS3 Disks

ZS3-4 Controller

Backup Controller and Backup Storage
File Share for BIData
File Share for LCM

HFM Schemas
(1522:HFMPRD)
Oracle 11gR2
Red Hat Linux 6.4

FDM Schemas
(1522:FDMPRD)
App Servers (HAPRD)
Oracle 11gR2
Red Hat Linux 6.4

Data Guard – TBD
Oracle 11gR2
Red Hat Linux 6.4

SAN

Current Hyperion Infrastructure & Application Suite

Current Infrastructure

45 servers in total
- Prod – 19
- Stage – 15
- Dev - 11

Linux
14 servers

Windows
31 servers

Exalytics
6 servers

Current Hyperion Application Suite		Current Patchset
Foundation	Foundation	11.1.2.3.000
Shared Services	HSS	11.1.2.3.000
Workspace	Workspace	11.1.2.3.000
Hyperion Planning	HP	11.1.2.3.501
Essbase	Essbase	11.1.2.3.505
Calculation Manager	CM	11.1.2.3.500
Essbase Administration Services	EAS	11.1.2.3.505
Analytic Provider Services	APS	11.1.2.3.505
Hyperion Financial Management	HFM	11.1.2.3.501
Financial Data Quality Management	FDM	11.1.2.3.500
Hyperion Financial Reporting	FR	11.1.2.3.505
Hyperion Strategic Finance	HSF	11.1.2.3.503
Smartview	Smartview	11.1.2.5.210
Data Relationship Management	DRM	11.1.2.3.503
Oracle Data Integrator	ODI	11.1.1.7.000

Current Apps & Users

- 20 Planning Apps (14 are geo copies of 2 main models) – 2000 Users Ess/Pln
- 10 Essbase ASO Cubes
- FDM, HFM – 50 Users
- DRM, ODI – Admins - 5
- HSF – 5 Users

Current Compliance Status & 2018 Upgrade Scope

HARDWARE

Windows hardware will become out of compliance beginning January 2018

OS

Server OS is out of compliance
- Oracle Enterprise Linux (OEL) 5 is obsolete as of June 2016
- Windows Server 2008 will be obsolete by end of December 2017

APPLICATION

- Current patch set (PS) version is 11.1.2.3.500; grace period support ended as of Feb 2016
- Premier support will end in Dec 2020
- Extended support will end in Dec 2021

UPGRADE SCOPE

- Upgrade Oracle Enterprise Linux from version 5.5 to 7.3

- Upgrade Hyperion applications to version 11.1.2.4 or 11.1.2.5
- Convert FDM application (phased out) to FDMEE
- Upgrade Exalytics firmware to be compatible with 11.1.2.4
- Performance tuning / configuration changes based on Oracle recommendation

- Refresh Windows & Linus Hardware
- Potential virtualization of environments

Process Flow & Supporting Components

SAP

BW

ODS

FDM/HFM

HSF

Essbase/Planning

Allocations PLSQL & Tables

HypUsage

Custom Window/Linux scripts and Essbase cube HypUsage to scan select logs for usage stats.

Hierarchy & Allocation Sender/Receiver Updates

DRM **ODI**

Application Oracle Tables HFM, FDMEE, DRM, Planning, ODI
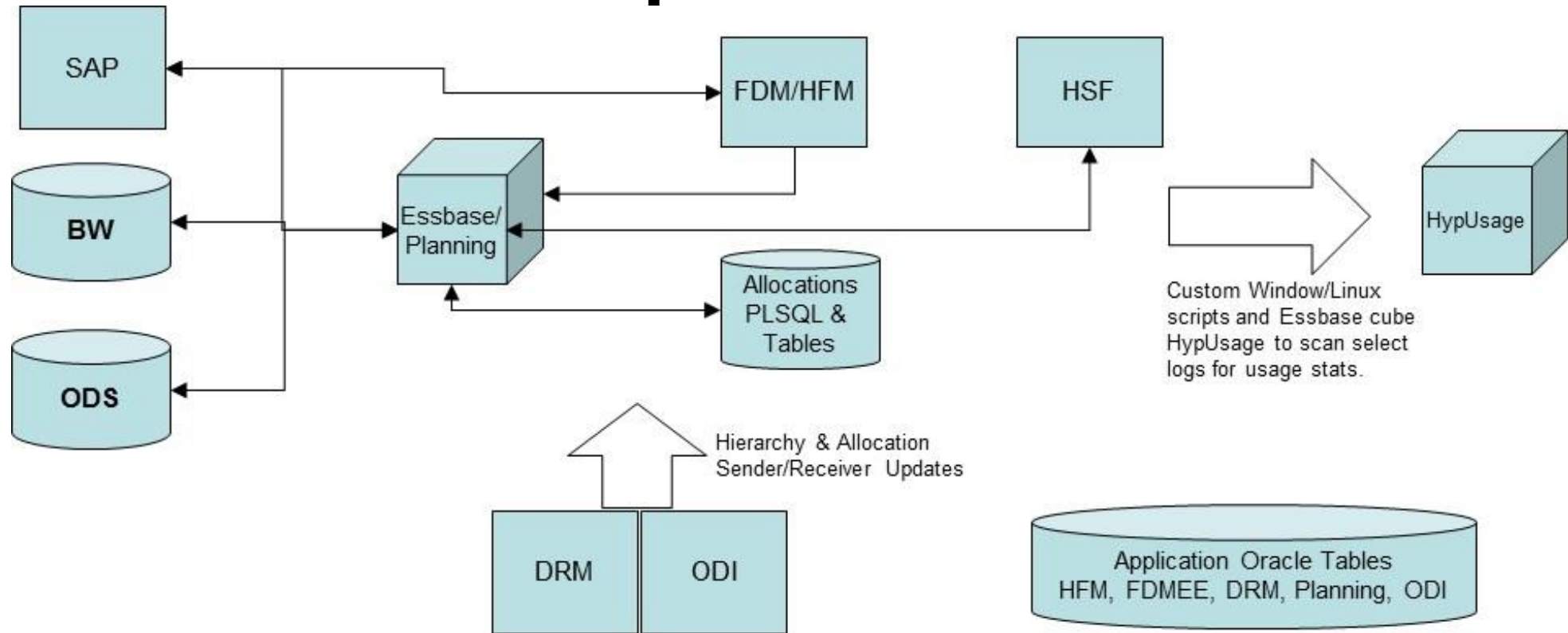
Batch Automation (100's of scripts/objects)		
Cronacle Triggers	Cronacle Triggers SAP, etc. Exports and Triggers Hyperion Custom Linux Shell Scripts calling MaxL.	Custom Powershell, etc scripts for FDM/HFM Day 3 automation

Backups & Disaster Recovery			
Standard File Server Backups	RMS Standard Oracle DBMS Backups	Linux targeted backup & copy to Recovery environment scripts	Windows targeted backup & copy to Recovery environment scripts

ZFS

Hyperion Infrastructure & Testing				
Monitoring ProactiveNet	Service Start/Stop Manual HP	Log Analysis Manual HP	Performance/Stress Testing – Load Runner (Only during Upgrade)	COE Testing & Post O/S Patch Testing - Manual

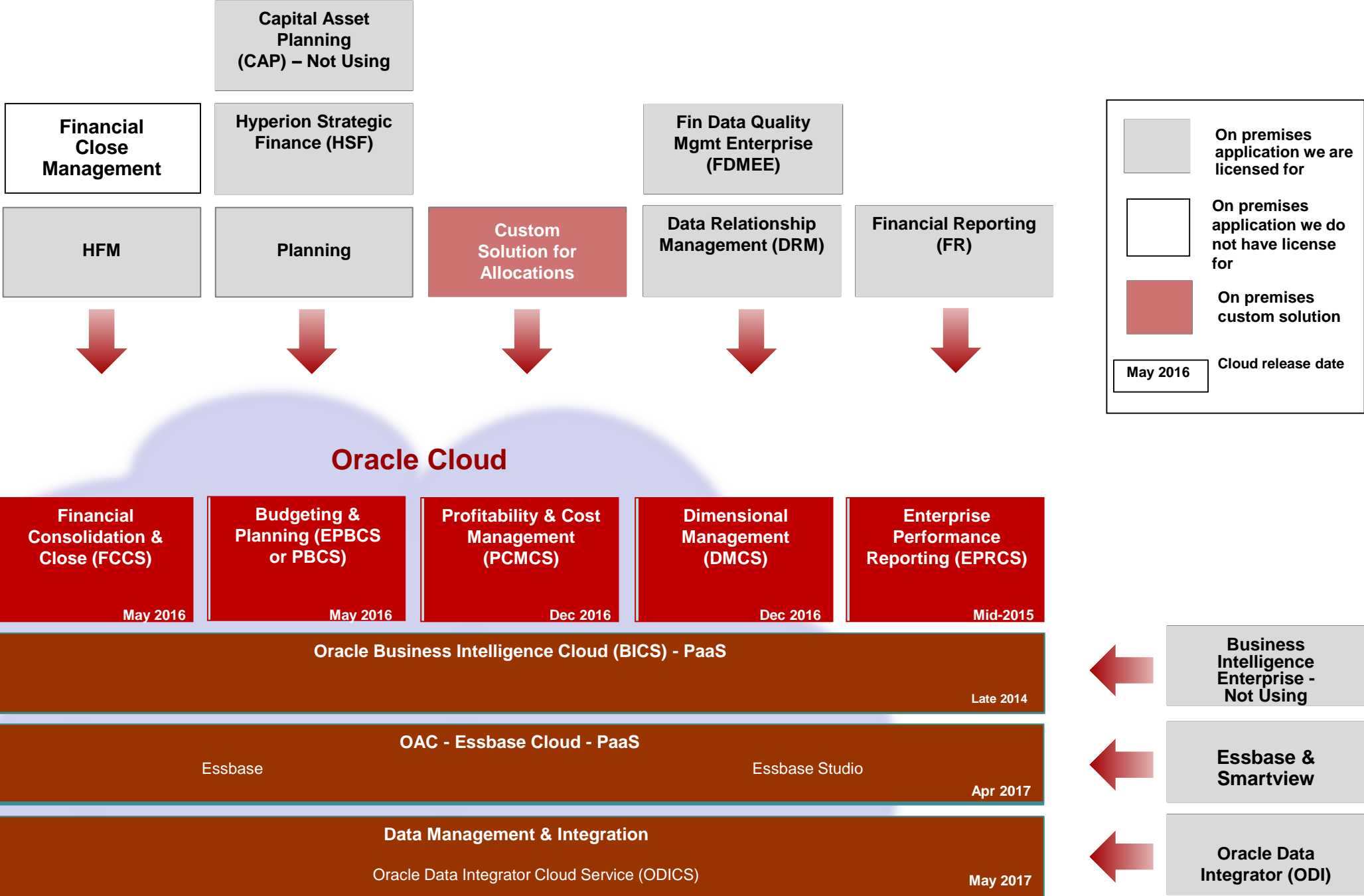# CORE Essbase/Planning Applications – Interfaces Overview

ASO BSO Planning

⋯⋯▶ Forecast
——▶ Actual

SAP, HFM & Other Source System – Generally every 3 hour refresh loads

FLD_*
7 Geo

HAL_CON

Alloc

SS_*
7 Geo

LMK_REVP

HAL_Cust

Mgt_Rpt

Alloc Tbls
& PL/SQL

Mgt_CC

LMK_REVD

Mgt_Cust

MgtAlloc

Mgt_HR

Mgt_Well

Art_Lft

Mkt_Shr

NOVA_DSO

CVA_NOVA
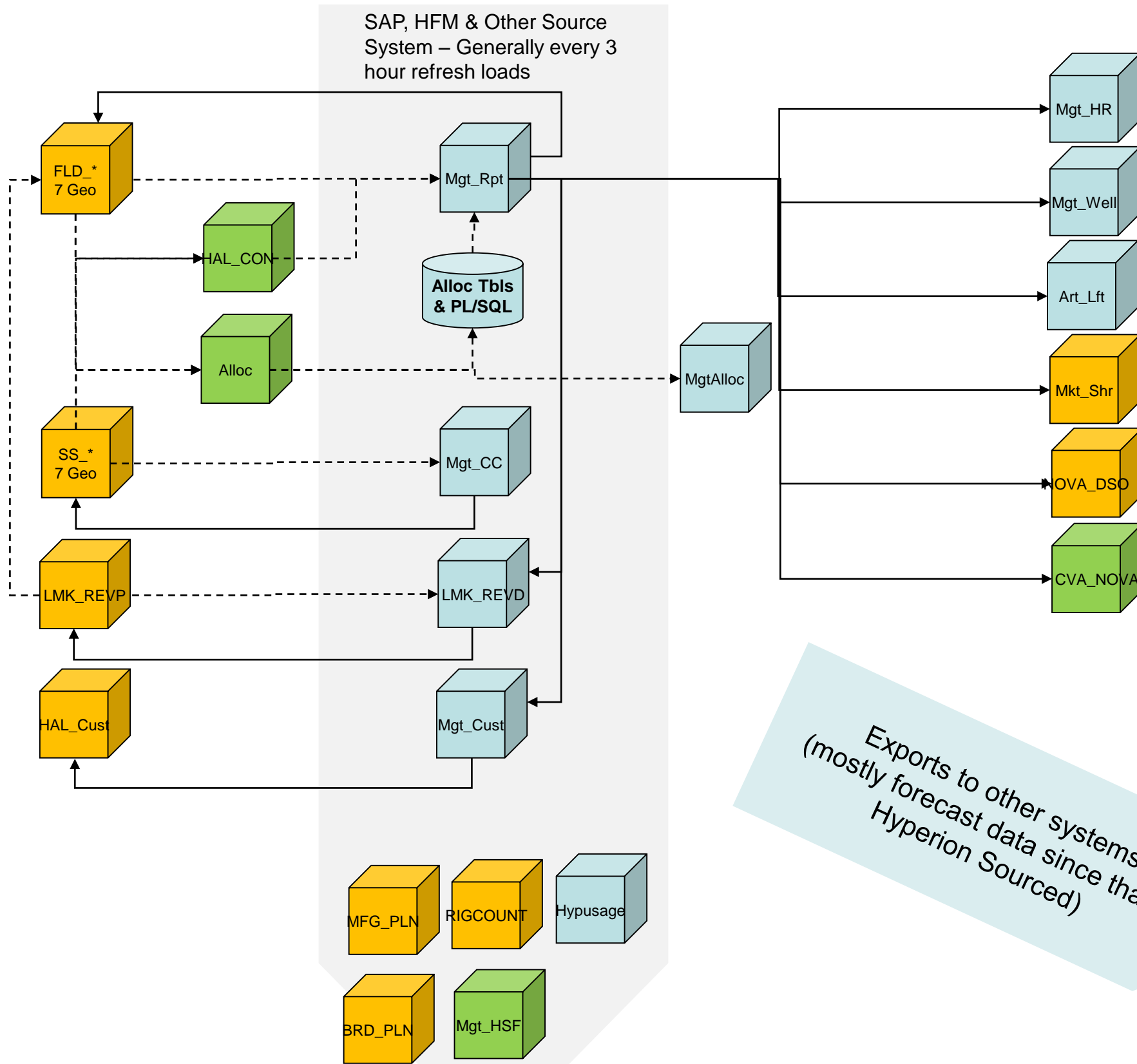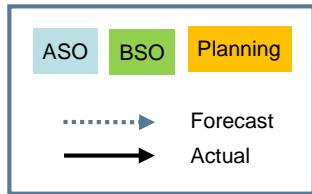
Exports to other systems
(mostly forecast data since that is
Hyperion Sourced)

MFG_PLN RIGCOUNT Hypusage

BRD_PLN Mgt_HSF

One of More Complex Flows – Lots of Integration
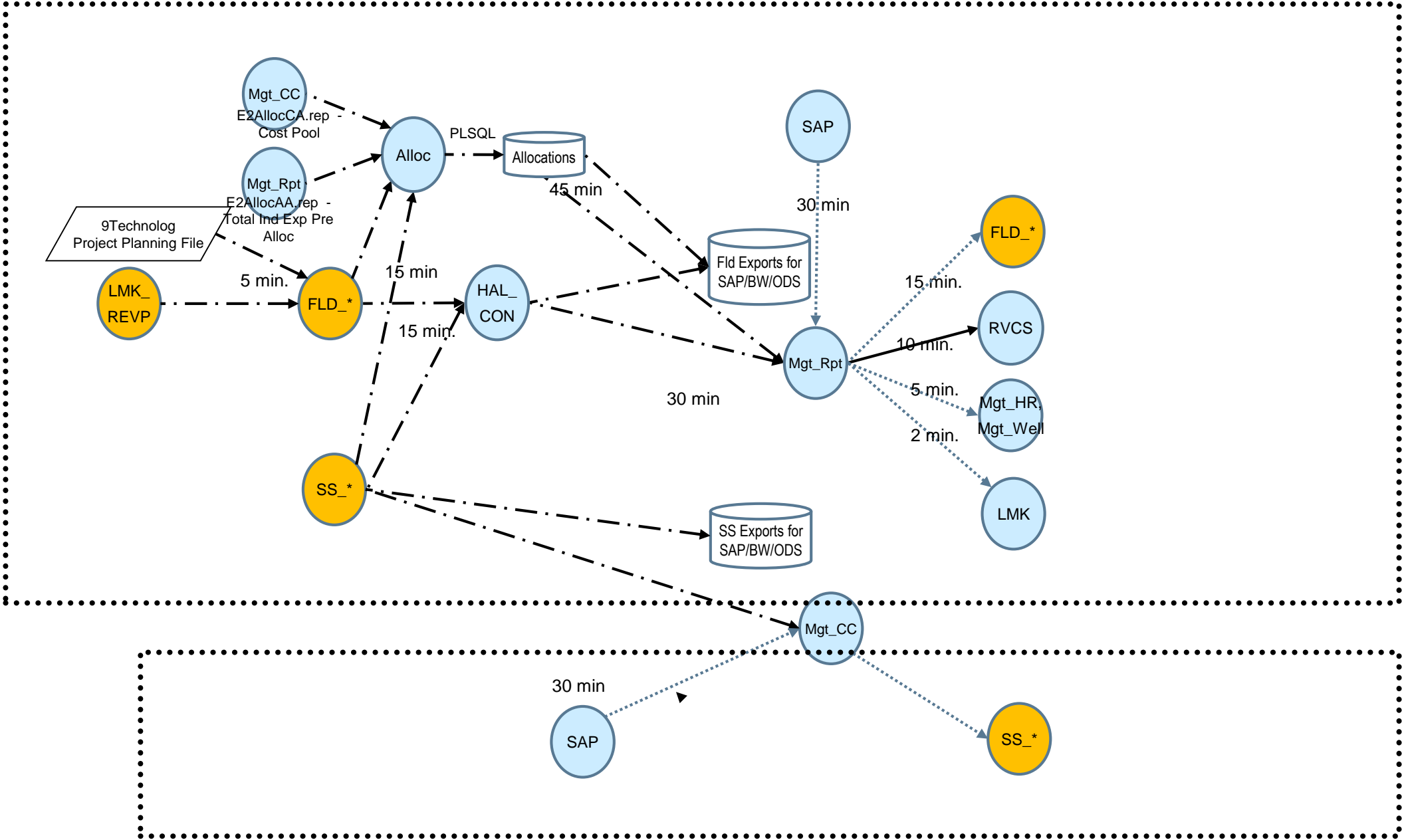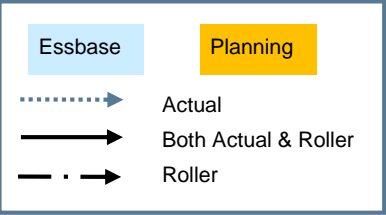
On-Prem to Cloud Mapping

(with our guess approximate dates each came out – harder to find than you'd think.)

	Capital Asset Planning (CAP) – Not Using				
Financial Close Management	Hyperion Strategic Finance (HSF)		Fin Data Quality Mgmt Enterprise (FDMEE)		
HFM	Planning	Custom Solution for Allocations	Data Relationship Management (DRM)	Financial Reporting (FR)	

Legend:
- On premises application we are licensed for
- On premises application we do not have license for
- On premises custom solution
- May 2016 — Cloud release date

Oracle Cloud

Financial Consolidation & Close (FCCS)	Budgeting & Planning (EPBCS or PBCS)	Profitability & Cost Management (PCMCS)	Dimensional Management (DMCS)	Enterprise Performance Reporting (EPRCS)
May 2016	May 2016	Dec 2016	Dec 2016	Mid-2015

Oracle Business Intelligence Cloud (BICS) - PaaS   Late 2014   ← Business Intelligence Enterprise - Not Using

OAC - Essbase Cloud - PaaS   Essbase   Essbase Studio   Apr 2017   ← Essbase & Smartview

Data Management & Integration   Oracle Data Integrator Cloud Service (ODICS)   May 2017   ← Oracle Data Integrator (ODI)

Hybrid On-Prem – Cloud?

- Planning & Essbase – Major re-work of interfaces. Plus already have plenty of capacity for Planning & Essbase on current servers.
  - OAC Essbase Cloud & Planning Cloud
  - OAC & On-Prem Planning (Seems least effort, but if have On Prem Planning, we have the capacity for Essbase.)
  - On-Prem Essbase & Planning Cloud
- New Planning Apps or stand-alone Planning Apps to Cloud
  - Great Proof of Concept. May double pay since same users might need On-Prem license anyway. Plus, have the capacity for a lot more apps.
- DRM to DCMS, HSF to EPBCS Strategic Finance Module
  - Fewer and simple integrations, plus on stand-alone servers
  - New products – Proof of Concept first?

Cloud Concerns

Product Immaturity

Most of the cloud solutions are not cloud versions of existing applications and are rather completely new products. Solutions are still immature – major products were released in the last 18 months or less

Major Redesign Effort

Our Hyperion environment is extremely integrated between components.. Full migration to the cloud would require a major process and solution redesign

Limited Integration

Limited out of the box integration between cloud products
Also, limited integration with On-Prem makes Hybrid Option a bigger effort.

Limited Functionality and Customizations
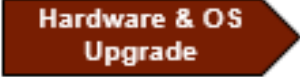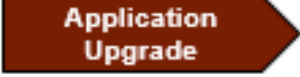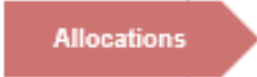
Some cloud products do not cover full on premise functionality. Limited options to customize cloud products to fit the needs of our business processes

Forced Patching

Forced patching will require more frequent and more extensive test cases be developed. Testing must be performed on Oracle's timeline

Possible Cloud Roadmap?

Effort	2018	2019	2020	2021	2022
On Premise Upgrade	Hardware & OS Upgrade Application Upgrade				
Cloud Migration 1 HSF and DRM are fairly stand-alone apps with fairly simple integrations Allocations is complex custom process. Would require a substantial effort to convert to HPCMCS		HSF, DRM, FDMEE Allocations RVCS			
Cloud Migration 2 This is not a cloud version of HFM but a new product. This will be a complex migration			HFM		
Cloud Migration 3 The biggest and most complex migration on the Hyperion cloud roadmap that includes a major redesign effort. About 200 scripts would need to be re-built.				Planning, Essbase, FR	