

Hyperion Focus 2015

Sanitizing Crazy EPM Environments

Kieron Cassidy – Consulting Lead - Infratects b.v.



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The Presenters

- Kieron Cassidy – Infrastructure Consulting Practice Lead in the NL, Started in 2001 with Hyperion Enterprise at Hyperion, started working with HFM in 2002. With Infratects since 2008.

Agenda

- ❑ ISS's experience through the project
- ❑ Can 1 server perform better than 16 servers?
- ❑ Why and where we see the benefits



ISS in a nutshell

A leading global provider of self-delivered facility services with a Single, Multi and Integrated Facility Services offering

Large and diversified portfolio of B2B clients across the globe, industry segments and client sizes

Focus on on-site services that are people oriented, capex light and suitable for integration and performance based contracts

Portfolio business (~80% of Group revenue)
– high level of recurring revenues

A more than DKK 78bn revenue business with



ISS in a nutshell – Facts



30
million km²

of cleaning contracts served every year -
equivalent to the entire
land area of Belgium.



We clean 27

McLaren

racing cars every day



14
million m²

of critical environments served
- anywhere from regional hospitals to the
Large Hadron Collider at CERN.



ISS generates
approximately
3.5 million work orders
every year

- that's nearly 7
per minute.



1.2
million meals

prepared every day - enough to serve the
population of Iceland breakfast, lunch,
and dinner.



If all ISS employees
held hands in a long line,
they would reach from

Copenhagen
to Stockholm

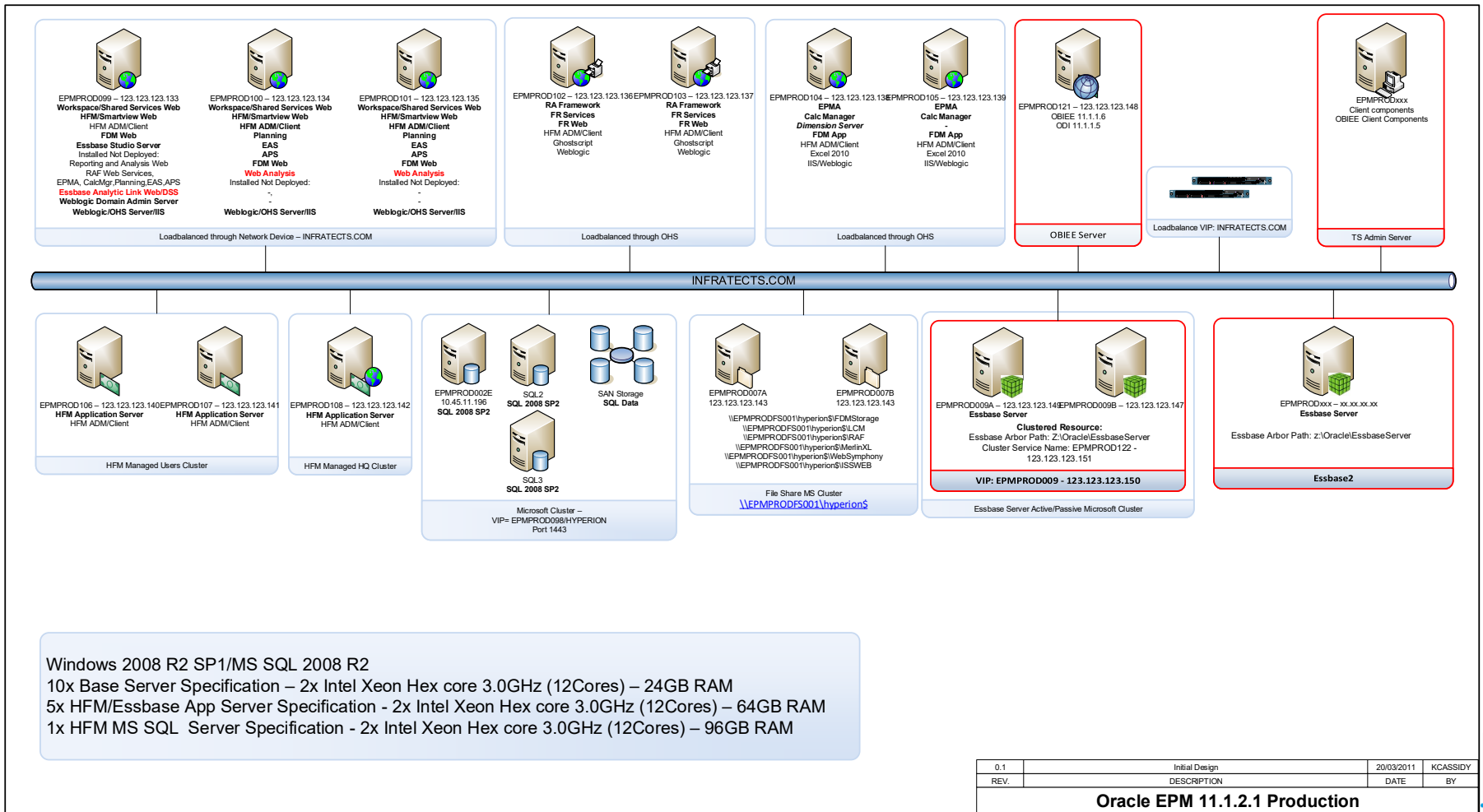
ISS's EPM History

- ✓ HFM - 3.5 > System 9 > EPM 11.1.2.1 > 11.1.2.3
- ✓ 16 physical servers in Production
- ✓ 8 virtual servers in Test
- ✓ 6 HFM Apps with 500+ users
- ✓ 6+ Planning apps with approx 200 users

EPM 11.1.2.1 products used by ISS

- ✓ Hyperion Financial Management
- ✓ Financial Reports/Web Analysis/OBIEE
- ✓ Hyperion Planning/Essbase
- ✓ Financial Data Quality Management

Where did we come from - EPM 11.1.2.1



Upgrading to EPM 11.1.2.3 ...

Aims and Motivation

- ✓ Hardware end-of-life
- ✓ Simplify the environment

Why less servers?

- ✓ Lower OPEX
- ✓ Simplify patch/upgrade process
- ✓ Get a affordable SOX compliant DR solution

ISS EPM 11.1.2.3 Timeline

- ✓ Install Test environment (Production size) and loadtest (Aug 2014)
- ✓ Install Production environment (Sep 2014)
- ✓ Parallel reporting on old/new system (Nov 2014)
- ✓ Go-live with all Essbase/Planning/FR on 11.1.2.3 (Nov 2014)
- ✓ Data reconciliation in HFM (Nov 2014-Jan 2015)
- ✓ Implement and test DR solution (DoubleTake) (Jan 2015)
- ✓ Go-live production (HFM/FDM) (Feb 2015)

The Single Server...

Can this server do it?

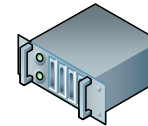
- In 2014 - EPM 11.1.2.3
- ~\$40,000 – Xeon 40 Core, 512GB RAM,
- 1.4TB SSD (RAID10), 1.6TB HHD (RAID 5)



Server:

Intel Xeon 40 Core 2.4GHz, 512GB RAM,
1.4TB SSD (RAID10), 1.6TB HDD (RAID 5)

Test



EPM Stack Server
Windows 2008 R2 IE9
EPM Weblogic Domain
Foundation (HSS/WS)
RAF Web
RAF Agent
HFM Web Apps
HFM App Services
HFM Client/Utils
Essbase Server (ISS DK)
Essbase Admin Server
Provider Service Web
Planning Web
EPMA App/Web
Calc Manager Web
FDM App/Web
FDM Workbench
FDMEE Web (ODI Agent + ODI Console)
Standalone ODI Agent
ODI Studio
Essbase Studio Web
Essbase Studio
Essbase Analytic Link

ODI Weblogic Domain
OBIEE/ODI Web/App

ODI Weblogic Domain
ODI Web Console
ODI Agent

3rd Party
EPM Maestro
Essbase Outline Extractor
Accelatis
7-Zip
Notepad++
Double Take

Database
MS SQL 2008
File Shares

EPM Test

[URL: http://hyptest.epm.com](http://hyptest.epm.com)

❑ Load Test 233 Users –HFM, Financial Reports, Smart View, FDM Classic + Planning

Scenario13	FDM >HFM	FDM >HFM	FR > HFM	SV > HFM	SV > Essbase	HP	FM	HP	FM	FM	FR > HFM	
Script	S01	S02	S03	S04	S05	S06	S07	S08	S09	S10	S11	Total Peak Users
Max vUsers #	2	6	70	40	20	17	45	1	6	6	30	~233
RampUp time Min	30	30	30	30	30	30	30	30	30	30	30	
Run Time Min	120	120	120	120	120	120	120	120	120	120	120	
RampDown time Min	5	5	5	5	5	5	5	5	5	5	5	
SleepTimes sec	4 to 8	4 to 8	10 to 15	10 to 30	10 to 30	4 to 8	4 to 8	4 to 8	4 to 8	4 to 8	10 to 15	

❑ Response times even were better then EPM 11.1.2.1, it flies...

Under load ... ~233 vUsers

	Average None HFM Web (Sec)	Average HFM Web (Sec)
EPM 11.1.2.1 Page Times	0.85	0.8
EPM 11.1.2.3 Page Times	0.61	1.6

	Consolidation Time 1 Year (Minutes)
EPM 11.1.2.1 Consolidation Time	45
EPM 11.1.2.3 Consolidation Time	39

	Average Time Taken to run Book (Sec)	Best/Worst (Sec)
EPM 11.1.2.1 FR Book	456	336/557
EPM 11.1.2.3 FR Book	375	304/500

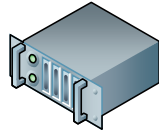
*Results based on equivalent activities/Web Pages/FR Books

Performance Wins

- ❑ Server lower CPU speed yet higher performance
- ❑ SSD disks fantastic
- ❑ HFM Web is noticeably fast!?
- ❑ Lots of RAM - Caching

Production Environment

Server:
Intel Xeon 40 Core 2.4GHz, 512GB RAM, 2TB SSD (RAID10), 2.7TB HDD (RAID 5)



PRODUCTION
EPM Weblogic Domain
Windows 2008 R2
 Foundation (HSS/WS)
 RAF Web
 RAF Agent
 HFM Web Apps
 HFM App Services
 HFM Client/Utils
 Essbase Server
 Essbase Admin Server
 Provider Service Web
 Planning Web
 EPMA App/Web
 Calc Manager Web
 FDM App/Web
 FDM Workbench
 FDMEE Web (ODI Agent + ODI Console)
 Standalone ODI Agent
 ODI Studio
 Essbase Studio Web
 Essbase Studio

ODI Weblogic Domain
 ODI Web Console
 ODI Agent

3rd Party
 EPM Maestro
 Essbase Outline Extractor
 Accelatis

Other
 MS SQL 2008
 File Shares
 Environment Backups
 OHS - SSL/Compression

Production
<https://oracle.epm.com/>

Server:
Intel Xeon 12 Core 3.0GHz, 24-64GB RAM



Server2
 OBI Weblogic Domain
 OBIEE/OBI Web/App

OBIEE 11.1.1.7



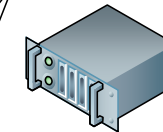
Server3
 Essbase Server
 ODI Agent

Essbase Server 2

Datacenter1

Bit Level Backup/
 Replication
 Software

DR – Datacenter2



EPM Standby Server

Production – Hot Standby

Server:
Intel Xeon 20 Core 2.4GHz, 256GB RAM,
1TB HDD (RAID 5), 1TB HDD (RAID 5)

What was the outcome...

What was the outcome

- Successes:
 - ✓ Go-live was a success
 - ✓ Improved performance across the board
 - ✓ OPEX lowered by approx 80%
 - ✓ Patching time fast (both on OS and EPM level)
 - ✓ Fully functioning SOX compliant DR solution
 - ✓ Super quick reboots in 15 mins & Restarts in 2 minutes.

Status Today

- ✓ 16 Production and 8 Test servers -> 4 Production and 1 Test server
- ✓ Parallel reporting on new prod, 2 full reporting cycles
- ✓ Live with Planning/Essbase
- ✓ Finished rebuild of main new reporting app on new platform
- ✓ DR solution tested (DoubleTake)
- ✓ Live on HFM/FDM
- ✓ Norway Live with OBIEE and Essbase

Risks

- ❑ Potential to swamp the server due to lack of sandboxing of processes.
- ❑ Reboot flexibility, if a reboot is needed everything gets restarted.
- ❑ Redundancy, only the DR solution is available.

The One Server Future

- ❑ More CPUs? Intel 15,16 & 18 Core Chips available – That's, 72 Cores.
- ❑ HFM Scaling in 11.1.2.4?
- ❑ Linux?

Thank you!

