



DETROIT
**Water & Sewerage
Department**

Oracle Database Software Licensing Recommendation

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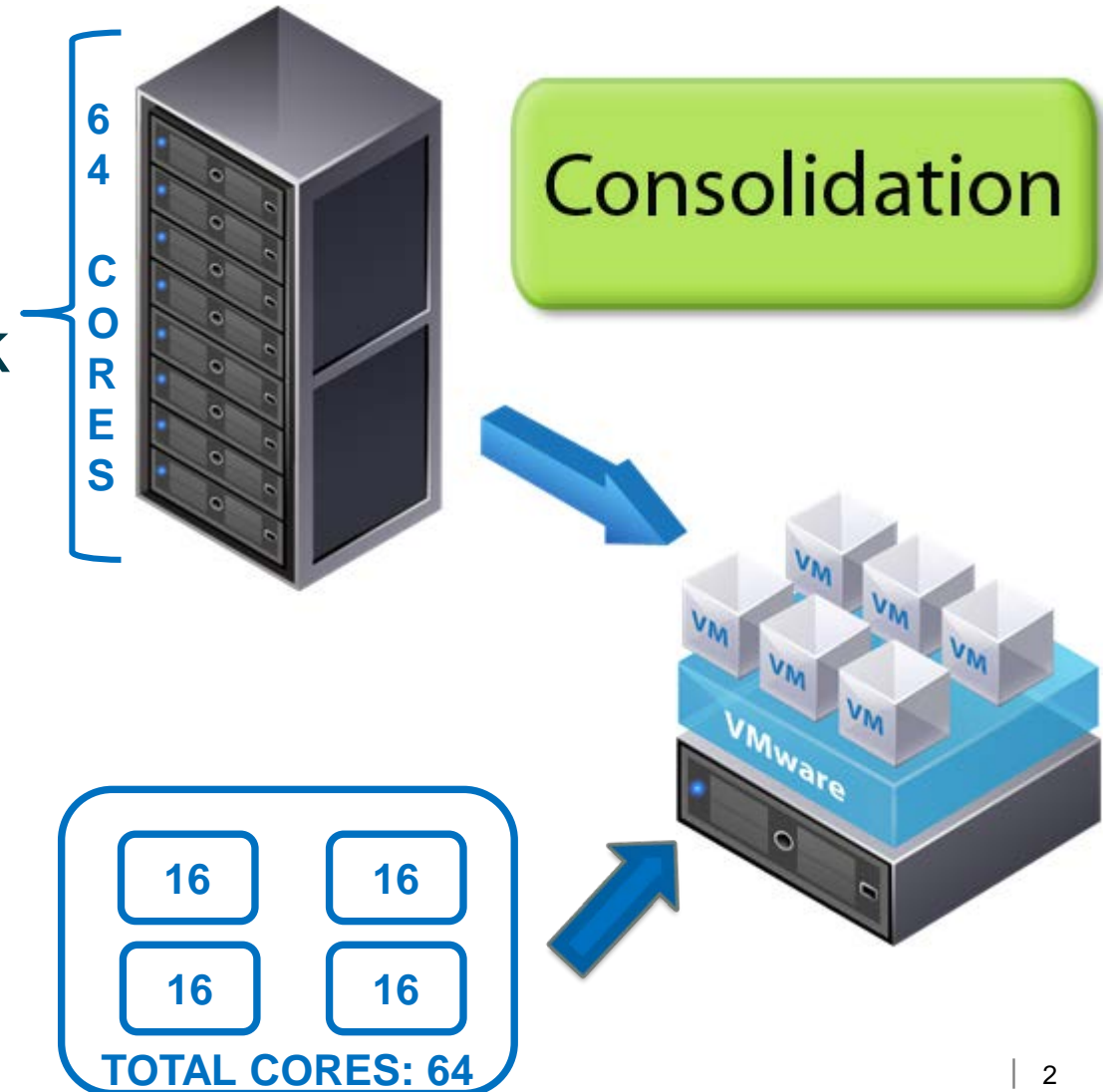
Quick Primer on Server Virtualization

- Server virtualization is technology that allows one physical server to host and operate several logical operating systems.
- Server virtualization has been around for over fifteen years but only recently become mainstream.
- Physical server technology has held true to Moore's Law.
- This tipping point in the technology usage and computing power has caused software vendors to rethink how they license software.

Quick Primer on Server Virtualization

Server Virtualization:

- Saves money
- Is good for the environment
- Reduces system administration work
- Gets more use from hardware
- Makes software installation easier
- Provides higher availability
- **Physical server advances causing unintended consequences.**
- **Introduces complexity into software licensing.**



Situation

- DWSD is separating from GLWA over next four years
- The lease called for DWSD to transfer all assets to GLWA.
- Oracle applications, middleware and database systems were an exception and remained with DWSD
 - *EnQuesta, DWSD's billing system, depends on an Oracle database and DWSD retained EnQuesta.*
 - *Oracle database licensees were procured under City of Detroit master agreement and were not easily transferred.*
- Oracle remains a DWSD owned and operated asset
 - *Several Oracle systems are operated by GLWA and DWSD*

Situation cont.

- Oracle is embedded into DWSD and GLWA's core systems
 - *DWSD: EnQuesta*
 - *GLWA: LIMS, PIMS, WAMR, GDRSS*
 - *Both: WAM, Service Link, DADS, Historian, EMPAC history*
- DWSD's Oracle database licensing is only adequate for DWSD's current EnQuesta implementation
 - *5 processors in Production, 3 processors in Training*
 - *140 users in Production, 33 in Train*
- **The remaining Oracle database services and products do not have any Oracle licensing in place**

Situation cont.

- Oracle database and middleware products are now licensed by cores vs computer processors or sockets.
 - *Today, Oracle products are running on a technology pool with 236 total cores or approximately fourteen servers.*
 - *Additionally, there is a pool of 192 cores (or twelve servers) that can be used as application and web servers.*
- Licensing this size of Oracle footprint by core is not practical
- Two real options are available for addressing this
 - *By engineering a special use technology solution*
 - *By some sort of commercial terms*

Business As Usual – Not An Option

ORACLE STANDARD PRICING CONFIGURATION

Product Needs	Price	Discount	Discounted Price	Cores	Total
Database Enterprise Edition	\$47,500	60%	\$19,000	236	\$4,484,000
ODI	\$30,000	60%	\$12,000	236	\$2,832,000
Partitioning	\$11,500	60%	\$4,600	236	\$1,085,600
Audit Vault/Database Firewall	\$6,000	60%	\$2,400	236	\$566,400
Advanced Security	\$15,000	60%	\$6,000	236	\$1,416,000
Diagnostics Pack	\$7,500	60%	\$3,000	236	\$708,000
Tuning Pack	\$5,000	60%	\$2,000	236	\$472,000
Database Lifecycle Management Pack	\$12,000	60%	\$4,800	236	\$1,132,800
In-Memory	\$23,000	60%	\$9,200	236	\$2,171,200
GoldenGate	\$17,500	60%	\$7,000	236	\$1,652,000
GoldenGate Foundation Suite	\$7,500	60%	\$3,000	236	\$708,000
Weblogic Suite	\$45,000	60%	\$18,000	192	\$3,456,000
SOA Suite	\$57,500	60%	\$23,000	192	\$4,416,000
Total Licensing Costs					\$25,100,000
Annual Support and Maintenance				22%	\$5,522,000
Three Year TCO					<u>\$41,666,000</u>

Option 1

Consolidated Commodity with No Virtualization Software

ORACLE CONSOLIDATED COMMODITY					
Product Needs	Price	Discount	Discounted Price	Cores	Total
Database Enterprise Edition	\$47,500	60%	\$19,000	64	\$1,216,000
ODI	\$30,000	60%	\$12,000	64	\$768,000
Partitioning	\$11,500	60%	\$4,600	64	\$294,400
Audit Vault/Database Firewall	\$6,000	60%	\$2,400	64	\$153,600
Advanced Security	\$15,000	60%	\$6,000	64	\$384,000
Diagnostics Pack	\$7,500	60%	\$3,000	64	\$192,000
Tuning Pack	\$5,000	60%	\$2,000	64	\$128,000
Database Lifecycle Management Pack	\$12,000	60%	\$4,800	64	\$307,200
In-Memory	\$23,000	60%	\$9,200	64	\$588,800
GoldenGate	\$17,500	60%	\$7,000	64	\$448,000
GoldenGate Foundation Suite	\$7,500	60%	\$3,000	64	\$192,000
Weblogic Suite	\$45,000	60%	\$18,000	64	\$1,152,000
SOA Suite	\$57,500	60%	\$23,000	64	\$1,472,000
Total Licensing Costs					\$7,296,000
Support				22%	\$1,605,120
Three Year TCO					<u>\$12,111,360</u>

Option 2

Unlimited License Agreement

ORACLE ULA, CLOUD and CITY OF DETROIT

ULA plus Cloud	Unlimited useage of enclosed product mix	\$4,500,000
Maintenance	Three Years Maintenance	\$990,000
Three Year TCO	ULA Price + Three Years Annual Maintenance	\$5,490,000

- Combines DWSD, City and GLWA Oracle footprints into one, under DWSD
- Provides for one year of Oracle Cloud services
- Includes GLWA and DWSD-GLWA shared Oracle databases

Moving Forward

Recommended Approach: ULA Plus Cloud With City

Oracle Service	Recommended Option -Oracle ULA, Cloud + City of Detroit				
	Three Year Cost	Annual Cost	DWSD	GLWA	City of Detroit
ULA Plus Cloud	4,500,000	1,500,000	592,500	592,500	315,000
Maintenance	990,000	330,000	110,000	110,000	110,000
Total	5,490,000	1,830,000	702,500	702,500	425,000
		ALLOCATION	38.4%	38.4%	23.2%

- GLWA and DWSD dedicated and shared applications included
- City pays their 1/3 share of maintenance costs and have access to greater pool of software and technology resources.

Benefits of Recommended Approach

- Limits long term liability for software maintenance
 - *\$330k is annual limit for Oracle software maintenance.*
- Provides DWSD, City of Detroit and the GLWA with a path forward with known costs for Oracle environments
 - *Bundling in the City shifted \$425k in costs while providing them access to software and services the City can use to improve service delivery.*
- Introduces Cloud as a long term option for IT “as-a-service”
 - *Moving to Oracle Cloud, over time, will lower maintenance dollars and offset existing GLWA shared service costs.*

Next Steps

- Approvals
 - *DWSD Finance Committee* *Feb*
 - *DWSD BOWC* *Feb*
 - *City Council* *Mar*
 - *FRC* *Apr*
- Order Document / Contract Change Order
- Shared Services Changes / Additions
 - *New Oracle Database Purchase and Maintenance Agreements with GLWA and the City*

Questions?



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