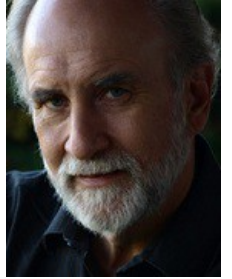




SQL Server 2012 Licensing Strategies

Presented by
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Dec. 19, 2013

Software Licensing Advisors Senior Consultant: Paul DeGroot



- **Consulting and analysis of Microsoft licensing issues for more than a decade.**
 - Author of Microsoft Licensing Concepts
 - Guest speaker at industry and Microsoft events
 - World-renowned expert on Microsoft product licensing and volume licensing strategies.
 - Quoted in Wall St. Journal, TechTarget, CNET, Network World, Infoworld, The Register, and many others
- **Developer of the Microsoft Licensing and Negotiations Workshop, the most complete training program on Microsoft licensing**
- **Enterprise Agreement Advisor who has saved customers more than \$65 million (over the last three years)**

Who Are Software Licensing Advisors?

- **Mission: “The Customer’s Advocate”**

- Too many customers must rely only on Microsoft or resellers who focus on maximizing revenue

- **SLA focuses on value and fit**

- Most customers pay Microsoft for software they haven’t deployed, such as Vista or the latest Office version
 - While, projects or investments with demonstrable ROI beg for funds
- SLA helps customers define what their real business needs, freeing up misallocated funds and enabling new initiatives

- **Areas of focus**

- Enterprise Agreement negotiations
 - Determining and costing real requirements to create negotiating leverage
 - Guiding the negotiation process

- **Audit defense**

- Turn back unfounded claims
- Pro-active audits to reduce compliance exposure

- **Training**

- Product licensing, volume purchasing, negotiation strategies

“We’re smart about licensing and figured out we could save 50%. SLA showed us how to save another 25%”

“We knocked 70% off our EA, giving us an extra \$5 million for other priorities over the next three years, thanks to their advice.”

“Microsoft told us we owed them \$450,000 on a contract. SLA reviewed the contract, found the error, and sent them packing.”

“As a result of SLA's strategy, we're spending less for the same software than we did in our last agreement even though prices went up.”

Experience with Microsoft Savings

Some of the firms our consultants have worked with:



Powering Business Worldwide



TARGET.



IT COST CONTAINMENT SPECIALISTS



Agenda for Today's Webinar

- **Changes to the SQL Server product line-up**
 - Some added, some retired
- **Changes to licensing**
 - From processors to cores
- **The impact on customers**
 - If your renewal costs don't jump, then something's wrong
- **Forward-looking strategies**
 - Accurate core conversions to avoid non-compliance
 - Maximizing your core conversions
 - Being smart about virtual servers
 - Avoiding the vMotion tax
 - Assessing the value of Software Assurance

What Has Changed with SQL Server 2012

- **Licensing models**

- Per-processor to per core

- **Edition line-up**

- Datacenter Edition eliminated
- Enterprise Edition Server/CAL deprecated
 - Existing licenses can be renewed for SQL 2012, but new licenses are no longer available
- Business Intelligence Edition added

- **Pricing**

- Higher prices for CALs
- Potential for skyrocketing renewal prices related to changes in licensing model

- **Software Assurance**

- A new requirement to have Software Assurance for vMotion/Live Migration
 - Increases costs 75% over three years, which Microsoft positions as a “new SA benefit”

Dangers and Opportunities

- **Dangers**

- Renewal sticker shock: 2-4x increases in SA costs
- Insufficient core conversions leading to non-compliance
- Invisible (to Microsoft) core entitlements
- Enrollments like Enrollment for Application Platform (EAP) or Server & Cloud Enrollment (SCE)
 - Require SA on ALL installed SQL Server, with minimal discount

- **Opportunities**

- True-up additional SQL 2008 R2 licenses for additional core entitlements at favorable pricing
- Use excess cores to eliminate SA requirement for vMotion/Live Migration
- With imminent SQL 2014 release, avoid high SQL renewal costs by not renewing SA

SQL Server Edition and Pricing Changes

- **Core licenses always sold in packs of two, with a two-license (four core) minimum per physical or virtual machine**
 - The cost of two 2-core 2012 licenses equals the cost of one 2008 R2 processor license
 - Per server licenses require users or their devices to have Client Access Licenses (CALs)

2008R2	Price
Datacenter (per processor)	\$49,474
Enterprise (per processor)	\$22,487
Enterprise (per server)	\$7,026
Standard (per processor)	\$5,865
Standard (per server)	\$734
SQL CAL (per device)	\$134
SQL CAL (per user)	\$134

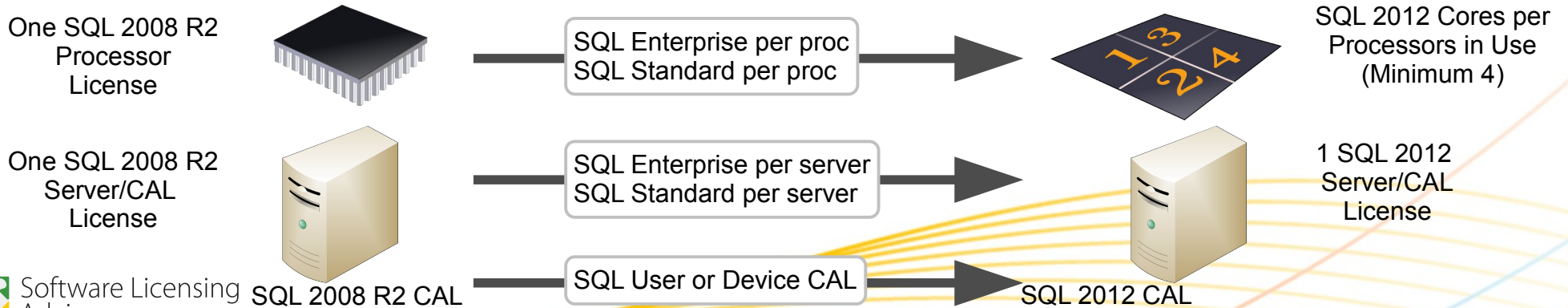
2012	Price	Minimum
Datacenter not available		
Enterprise (per 2 cores)	\$11,244	\$22,488
Enterprise (per server) SA only	\$1,757	
Business Intelligence (per server)	\$7,026	\$7,026
Standard (per 2 cores)	\$2,932	\$5,864
Standard (per server)	\$734	\$734
SQL CAL (per device)	\$171	
SQL CAL (per user)	\$171	

Licensing Model Changes

- **Three editions, three licensing models:**
 - Enterprise: per core only
 - Business Intelligence: per server only
 - Standard: per core or per server
- **Multiple licensing models makes clean step-ups impossible**
 - Step-up from Standard per core to BI and must add CALs
 - Step up from BI to Enterprise and ditch CALs

SQL 2008 R2 Conversions (Require SA)

- **SQL Server Enterprise 2008 R2 per processor**
 - Convert to a minimum of four SQL 2012 cores
 - For additional cores, customers document their physical hardware processors and cores, and virtual procs
- **SQL Server 2008 R2 Enterprise Server/CAL**
 - Converts to SQL 2012 Enterprise Server/CAL. This product may be end-of-life—SA can be added to current licenses but no new licenses are available
- **SQL Server 2008 R2 Standard Server/CAL**
 - Converts to SQL Server Standard 2012 Server/CAL or to SQL Server Standard 2012 core licenses. SQL Server 2012 CAL remains available for purchase



Impact of Changes

- **Renewal costs skyrocket on systems with high core count**
 - Systems with four or fewer cores per processor see no significant change but most customers have systems with 6-12 cores per processor in use
- **On a system with 6 cores per proc SQL renewal costs rise 50%, 8 cores translates into a 100% increase, and 10 cores generates an additional 150%**

2008 R2		2012	Software Assurance		
Processor Licenses	Cores/ Processor	Cores Licensed	2008 R2 (Enterprise)	2012	Increase
1	1	4	\$5,622	\$5,622	0%
1	2	4	\$5,622	\$5,622	0%
1	4	4	\$5,622	\$5,622	0%
2	2	8	\$11,244	\$11,244	0%
2	4	8	\$11,244	\$11,244	0%
2	6	12	\$11,244	\$16,865	50%
4	8	32	\$22,487	\$44,974	50%
4	10	40	\$22,487	\$56,218	150%

Customers at Serious Risk from Errant Assumptions

- **In every engagement we have seen in 2013, Microsoft and the reseller have not applied correct core conversions**
 - Assuming 4 cores per licensed processor when actual counts are higher
 - Not understanding conversion rules
- **Customers who sign a proposal based on these assumptions may not see a price increase, but they are non-compliant on Day 1 of their renewal**
 - Wide open for an audit that will discover a shortage of core licenses
- **Example:**
 - Eight SQL Server Enterprise per proc instances on four 2x10 servers
 - Reseller assumed four cores/proc, leaving customer underlicensed by 60%, with true-up exposure of \$290,00
 - A customer with a subscription agreement covering more than 4,500 SQL Standard Server/CAL instances
 - Microsoft proposed conversion to cores but underestimated required cores by 75% (confusing processors and cores). This left the customer with a \$12 million/year exposure
- **Do NOT assume that Microsoft or your reseller will get SQL core conversions right!**

Key SQL Server Strategies

- **Use true-ups of SQL 2008 R2 products to gain additional core licenses at a significant discount from the full cost**
- **Overlicense SQL servers to bypass Software Assurance requirement for vMotion/Live Migration**
- **Cancel Software Assurance on most/all SQL Server**
 - Customers who gain rights to SQL 2014 are unlikely to receive any significant additional value for five or more years

What Are True-Ups?

- **In an Enterprise Agreement, customers are not required to pay immediately for additional copies of software they have already purchased**
 - The customer can run the software without paying for it until the next anniversary of their agreement
- **At the next anniversary**
 - The customer counts how many copies of the software are in use
 - The customer “trues up” additional copies they have put into production since the last anniversary
- **The true-up fee is**
 - The cost of a license for the software, plus
 - A portion of the Software Assurance (SA) costs for the previous year, and
 - SA costs for the remaining years in the agreement
- **What is Software Assurance?**
 - Software Assurance provides upgrade rights and various other benefits. All software purchased in an Enterprise Agreement must be purchased with SA
 - Software Assurance on server licenses is an annual payment of 25% of the license price

Using True-Ups to Gain Additional Cores

- **How do true-ups plan a role in SQL server core conversions?**

- True-ups are usually for products that customers purchased in their **existing** agreement
- In the case of SQL Server, the cost of trued-up SQL 2008 R2 per processor or per server licenses may be much less than the value of the core licenses to which they convert.
- Customers can purchase relatively inexpensive licenses via true-up and convert them into more costly core licenses, in some cases for half (or less) the cost of purchasing cores directly

- **SQL conversion rules say (using SQL Server Standard as the example):**

“SQL Server 2008 R2 will be the last version of SQL Server licensed under the per processor licensing model. **As an exception, Volume Licensing customers with active Software Assurance for SQL Server 2008 R2** Standard processor licenses on April 1, 2012 (“qualifying licenses”) are given the following options [to convert processor licenses to core licenses].

SQL Server 2008 R2 Standard processor **licenses subsequently acquired under the same enrollment term but prior to April 1, 2015 as part of an Enterprise, Enterprise Subscription, Open Value Subscription or Enrollment for Education Solutions customer’s scheduled true-up process are also qualifying licenses for purposes of these options.**

Licenses acquired after April 1, 2015 or under a subsequent enrollment term, a separate agreement or any enrollment with an effective date after April 1, 2012 are not qualifying licenses.”

Using True-ups

- **True-ups are at their cheapest in the last year of an EA**

- In the last (3rd) year, only 6 months of SA is added to the license price
- Most important, you can purchase 2008 R2 processor licenses at old prices and immediately convert them to cores

Product	Procs	Cores	True-Up Price (EA A Net)	Value of Converted Cores
SQL Standard per proc	2	4	\$13,195	\$11,729
		6		\$17,594
SQL Enterprise per proc	2	4	\$50,596	\$44,974
		6		\$67,461
		8		\$89,948

- **The flip side: If cores are not counted properly, any value in excess of that granted for four cores becomes a licensing deficit**

- Example: on a 2x6 machine Microsoft grants four cores per processor with a value of \$44,974
- The customer should be getting cores worth \$67,461, so now has a deficit of \$22,487

Engineering the True-Up Strategy

- **Microsoft requires evidence that SQL is actually running on a server before it will provide you with more than 4 cores on conversion**
 - By default, true-ups will get four core licenses each
- **The Customer must install the desired SQL Server true-up on a server in order to get additional cores.**
- **Example:**
 - To get 20 SQL Enterprise 2012 core licenses for the price of 8
 - 1) Install SQL Enterprise 2008 R2 licensed per proc on a server with two processors, with 10 cores each
 - 2) Run the Microsoft Assessment and Planning (MAP) Toolkit or an equivalent product on your network to confirm that the product is running on a server with 2 procs with 10 cores each
 - It does not need to have an actual workload, but it does need to be running on the server

Sample Documentation for True-Up Strategy

- This spreadsheet is based on data collected by MAP. It covers virtual and physical servers running SQL Server
- SQL versions, editions, and physical and virtual hardware are displayed
- The status column at the right indicates the presence of test or development servers that do not need to be counted.

	yHost	ComputerName	SQLVersion	SqlEdition	vCPU	Procs	Cores	State	
50	ptk-vmware1.na.anycorp.com						2	12	
51		AH-DEV100.NA.anycorp.com	Microsoft SQL Server 2000	Enterprise		2		DEV	
52		AH-DEV300.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		2		DEV	
53		fh-sql1.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		4		DEV	
54									
55	bu-vmware4.na.anycorp.com						2	8	
56		SA-App4.NA.anycorp.com	Microsoft SQL Server 2005	Standard		2			
57		sa-kronos.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		2			
58									
59	bu-vmware5.na.anycorp.com						2	8	
60		sa-sql2.NA.anycorp.com	Microsoft SQL Server 2000	Standard		2		Test	
61									
62	sb-vmware1.na.anycorp.com						2	12	
63		SB-factySQL1.NA.anycorp.com	Microsoft SQL Server 2008 R2	Enterprise		1			
64		SB-ProdApp1.NA.anycorp.com	Microsoft SQL Server 2008 R2	Enterprise		1			
65									
66	sb-vmware2.na.anycorp.com						2	12	
67		SB-ProdSQL1.NA.anycorp.com	Microsoft SQL Server 2008 R2	Enterprise		1			
68									
69	tn-vmware2.na.anycorp.com						2	12	
70		tn-sql1.NA.anycorp.com	Microsoft SQL Server 2000	Enterprise		2			
71									
72									
73	PHYSICAL REVIEW								
74		ComputerName	SQLVersion	SqlEdition	Processor		Cores		
75		AC-APP1.NA.anycorp.com	Microsoft SQL Server 2008 R2	Enterprise		2	12	DEV	
76		AC-factyTEMP.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		2	2		
77		ACTS-Giro1.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		2	4		
78		acts-factysql1.NA.anycorp.com	Microsoft SQL Server 2005	Enterprise		2	2		

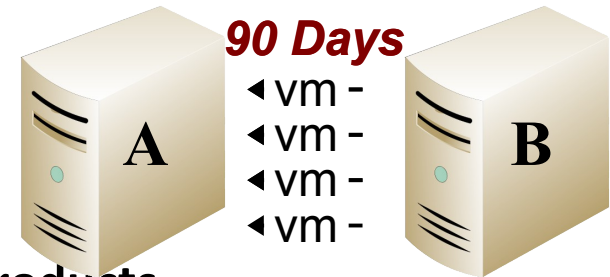
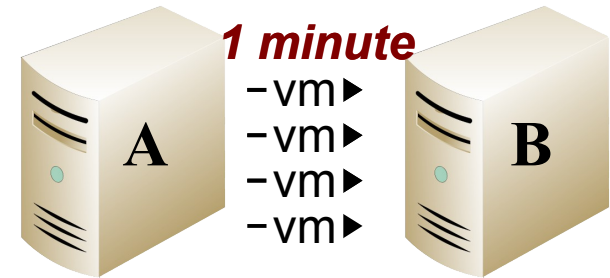
Ledger created by AssetLabs. Server names have been modified by SLA to conceal the customer's identity

Avoiding the vMotion Tax

- **By default, Microsoft licenses are assigned to physical devices, even in VMs**
- **Licenses may not be moved from one device to another in less than 90 days.**

Example:

- Move four VMs from Host A to Host B to repair Host A power supply
- Return four VMs from Host B to Host A after repair
- **The 90-day limit was waived for most 2008-2011 products**
 - They have “License Mobility”
- **But 2012-2013 products like SQL Server 2012 now require SA for License Mobility**
 - Adds 75% to server costs over three years



Licensing SQL 2012 for vMotion with SA

- **Software Assurance provides two benefits for virtualization with SQL Server**

- 1) If all cores are licensed for SQL Enterprise with SA, the customer can put unlimited SQL Enterprise VMs on a server
- 2) Organization can freely move VMs from server to server, because SA offers Licensing Mobility

Example:

- Six 2x6 servers in a cluster, each capable of handling 16 SQL Enterprise VMs (96 VMs total)
- Organization puts 80 VMs on the farm, SA permits VMs to be moved to distribute workloads
 - ~13 VMs per server on average

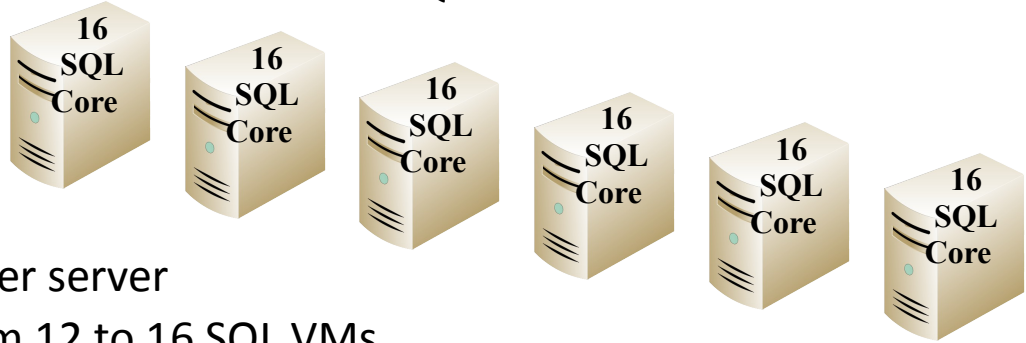
vMotion via Software Assurance (EA A Net pricing)	
Annual SA per 2 Enterprise cores	\$2,811
Annual SA per server	\$16,865
Annual cost per all servers	\$101,192
Three-year cost all servers	\$303,575



Licensing for Mobility Without SA

- **Unlimited virtualization and License Mobility are not available without SA**

- But for each core licensed for SQL, the customer can run one SQL VM
- A server with 12 licensed SQL cores can run 12 SQL VMs without SA



- **To achieve same capabilities as SA (as modeled on previous slide):**

- License 24 additional cores, assigning 4 per server
- This brings the maximum server load from 12 to 16 SQL VMs
- Because each server with 12 VMs has “spare” core licenses, VMs can be moved without SA
 - No license ever “moves.” When a VM is moved to a different server, its old license remains on the source server and it gets a replacement license from the target server.

vMotion via Overlicensing	Per Proc
SQL'08 R2 Enterprise True-up	\$25,298
Total for 6 servers	\$151,788
Savings Over SA	\$151,787

Other Conversions and Rules

- SQL 2008 R2 Enterprise Server/CAL can be converted to SQL Server Business Intelligence, 1:1
- In an Enrollment for Application Platform, SQL 2008 R2 Enterprise Server/CAL can continue to be used as-is but the only buy-out option is cores
- Downgrades to SQL Enterprise 2008 R2 from SQL Server Enterprise 2012 must be used under SQL Server Enterprise 2012 license terms
 - E.g., SA is required for vMotion
- Customers with SA on SQL Enterprise 2008 R2 on April 1, 2012 can continue to use it as is without SQL Server 2012 license terms
 - E.g. license mobility without SA

Impact of no SA renewal

- **All those extra cores are nice, but if you cover them all with SA you'll see a big increase in costs in renewal. What happens if you don't renew SA?**
- **Licensing Mobility and unlimited virtualization rights are no longer available**
 - But workarounds can compensate for much of that, at lower cost
- **Core licenses continue as a block**
 - If upgraded to 6 or more cores per processor, the cores cannot be split across servers
 - The processor licenses have a “core equivalency”
- **Microsoft does not recognize core conversions**
 - Since they have no record of the number of cores on which SA is renewed
 - Customer still has the entitlement per the documented rules but should preserve documentation and make sure their MS account rep and their reseller gets a copy of this documentation
 - Can also try to update MLS with the entitlement
 - Transaction records will show true-ups, but not actual core conversions

Upcoming Events

- **Microsoft Licensing and Negotiations Workshops**

- The most complete training on
 - Microsoft licensing concepts, rules
 - Volume licensing programs
 - Negotiations strategies

- **Upcoming Workshops**

- New Orleans, Jan. 28-30
- Toronto , Feb. 25-27
- Seattle, Apr. 8-10

More information at:

<http://msftadvisors.com/workshops.html>.

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