SAM Monthly Best Practices Webinars

Session 18: SAM Optimization Hub

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PRINCIPAL PRODUCT MANAGER

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Agenda

1. Last session’s pointers and answers to questions
2. News
    1. Updates in the Best Practice Hub
    2. ITAM / FNMS 2022R2.2 / 2022R2.3
3. SAM Optimization Hub
    1. The SAM Optimization Hub positioned in the ITAM evolution
    2. General approach
    3. The “Price Per Unit” is key
    4. Underlying reports

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Last Session: Using allocations and exemptions for optimal license position

- Useful pointers
  - Recording and PowerPoint: here
- Answers to questions:
  - Will the KPI dashboard/SAM optimization hub be available for on prem or just FlexeraOne
    - The SAM Hubs (Optimization (released in 2022R2), Operations (Coming in Q2) and Transparency (Publisher centric)) are available on both on prem and cloud and don't require Cognos to be installed
  - In the KPI dashboard, will we have the possibility to filter on location ? (we use location to differentiate the regions)
    - Yes, an enterprise filter will allow to slice the data (snapshot, history) by location / corporate unit / cost center

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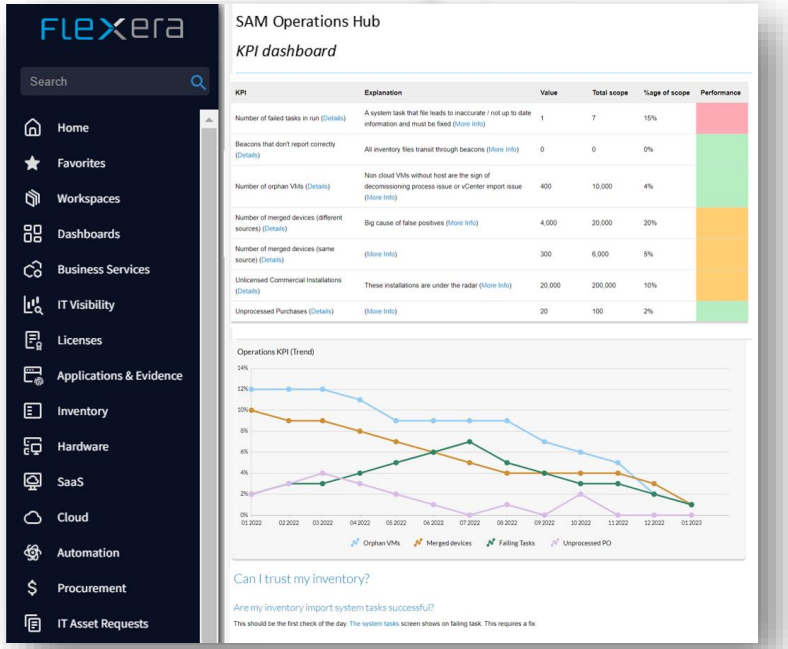
News

- ITAM 2022 R2.2 (March 1st / 5th)
  - Inventory and Licensing for Linux VMs on z/System
  - Trends in the Optimization Hub
  - Screens extensions (containers, IsServer in Inventory screens, Clusters in allocation screen)
  - A new *Merged Devices Inventory Issues* report catches applications possible false positives du to inventoried devices merge (part of the Operation's hub).
- ITAM 2022 R2.3 / ITAM 2022 R2.4
  - End Of March
  - Will include
    - The SAM Operations Hub (snapshot, trend, Enterprise filter)
    - More reports of the Operations Hub (vCenter Inventory issues, Unrecognized Installer Evidence analysis...)
    - Intune Inventory Adaptor
- The "Best practice Hub"
  - Gives many pointers to existing best practice and visibility on the 3 coming Hubs.
  - Information on the new Cloud Migration License Impact Simulation Engine
- Please check if you received the
  - Flexera February ITAM Newsletter



Flexera ITAM Best practice information available in Flexera Community

nrousseau1
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This is all about sharing and applying best practices

You may have seen here and there interesting KB articles, using the powerful customizations possibilities of FNMS to provide extensions to the out of the box value for reporting or automations... The issue is that the articles are spread and unless you know what you look for you may miss some interesting information.

The purpose of this post, that will be extended over the time, is to provide you with a "SAM Best Practices Hub", a single pane of glass to understand and use the published solutions and the coming features: SAM Optimization Hub in 2022 Q3, SAM Operations Transparency Hub in Q4 2022, a SAM Data Transparency Hub in 2023... where these best practices will be progressively incorporated.

The solutions are addressing both ends of the "SAM Maslow Pyramid" (from bottom to top) and are anticipating where Flexera goes with SAM:

- Provide data and KPIs to monitor the health of your SAM Project. The custom reports will gradually be included in the ***SAM Operations Transparency Hub***... Planned for 2023 Q1
- Provide transparency on your SAM data (usage, Oracle instances and options details, overview on SAP inventory...). The ***SAM Data Transparency Hub*** is planned for 2023 Q2
- Provide the high end value that does beyond compliance, with a focus on Optimization. Most of reports have been productized in 2021/2022. The ***SAM Optimization Hub*** delivered in 2022 Q4

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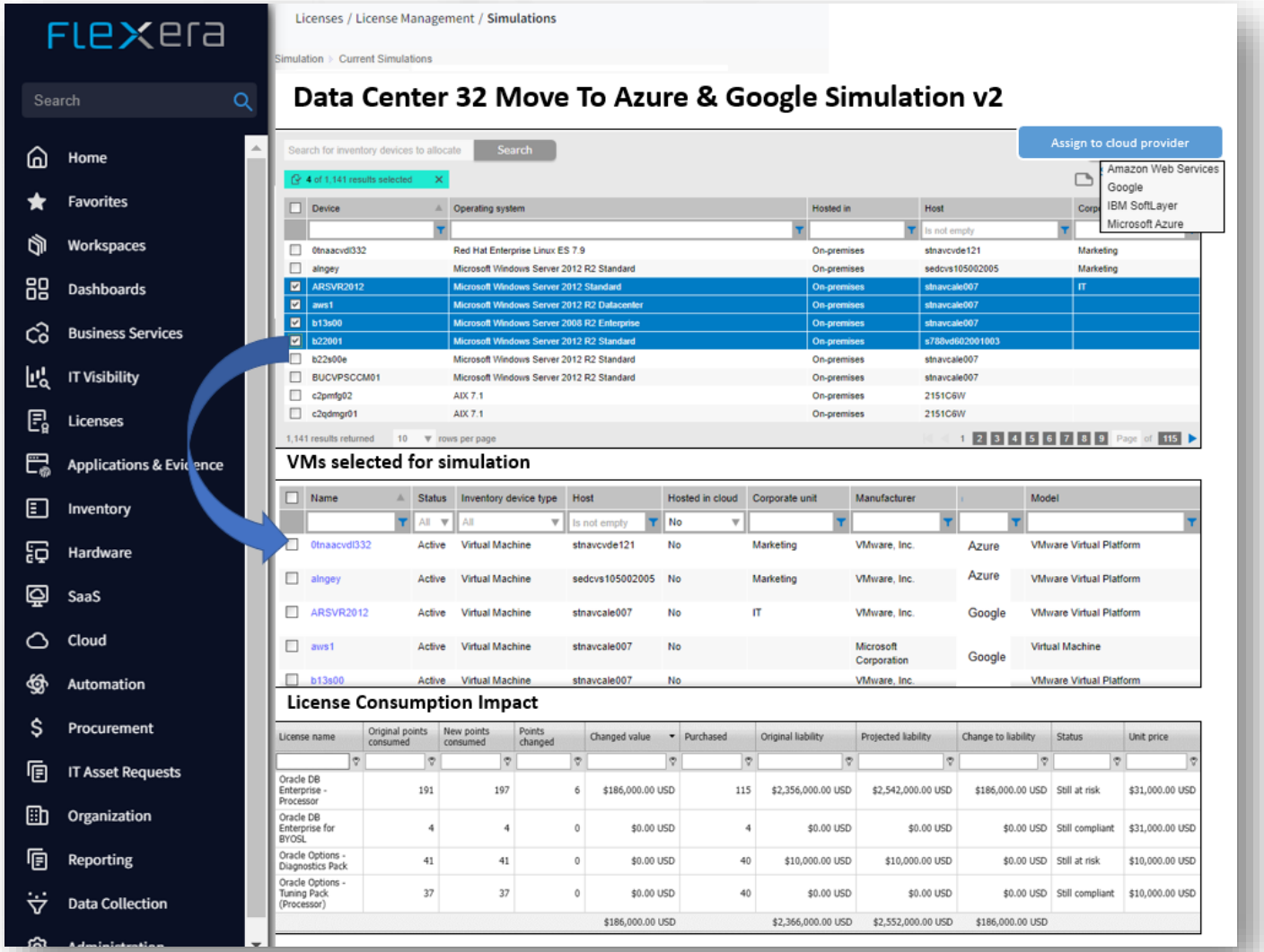
COMING SOON

Cloud Migration License Impact Simulation Engine

- Simulates migrations of VMs to Cloud providers
- Provides license calculations before and after move
- Computes license consumption and cost impact
- Simulations can be saved



SAM Optimization Hub

Agenda

1. The SAM Optimization Hub Positioned in the ITAM evolution
2. General approach
3. The underlying reports

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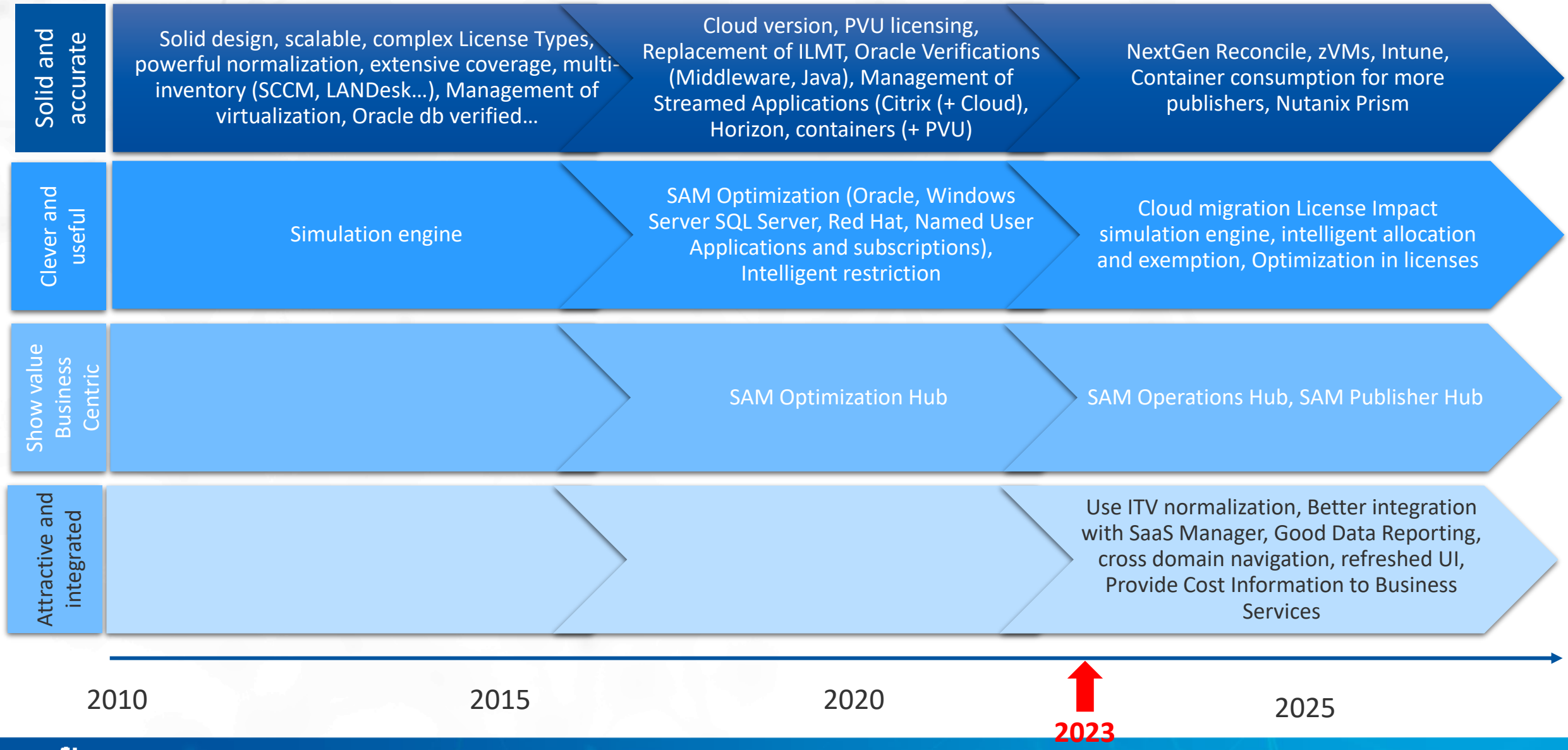
ITAM Phased evolution



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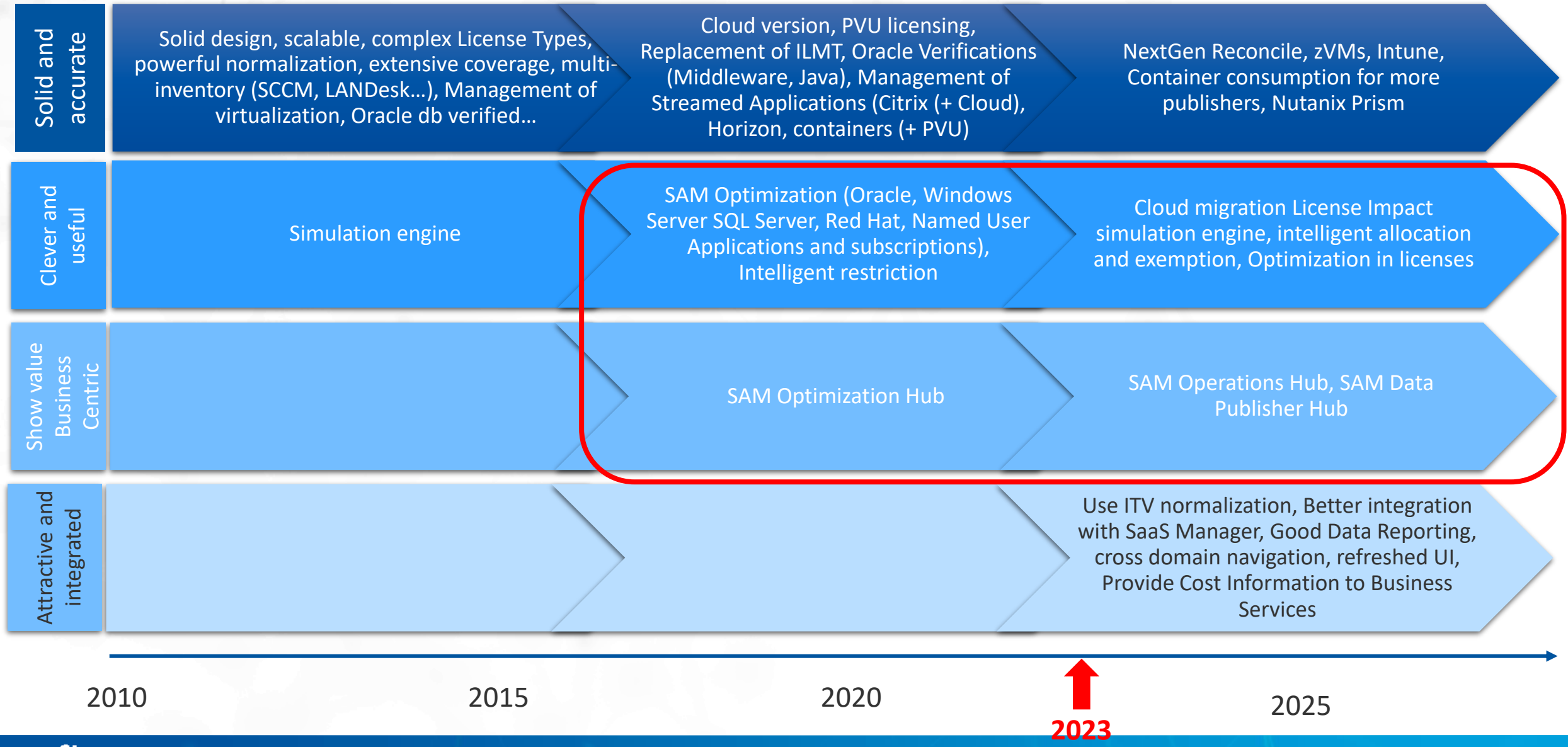
Our focus for this session



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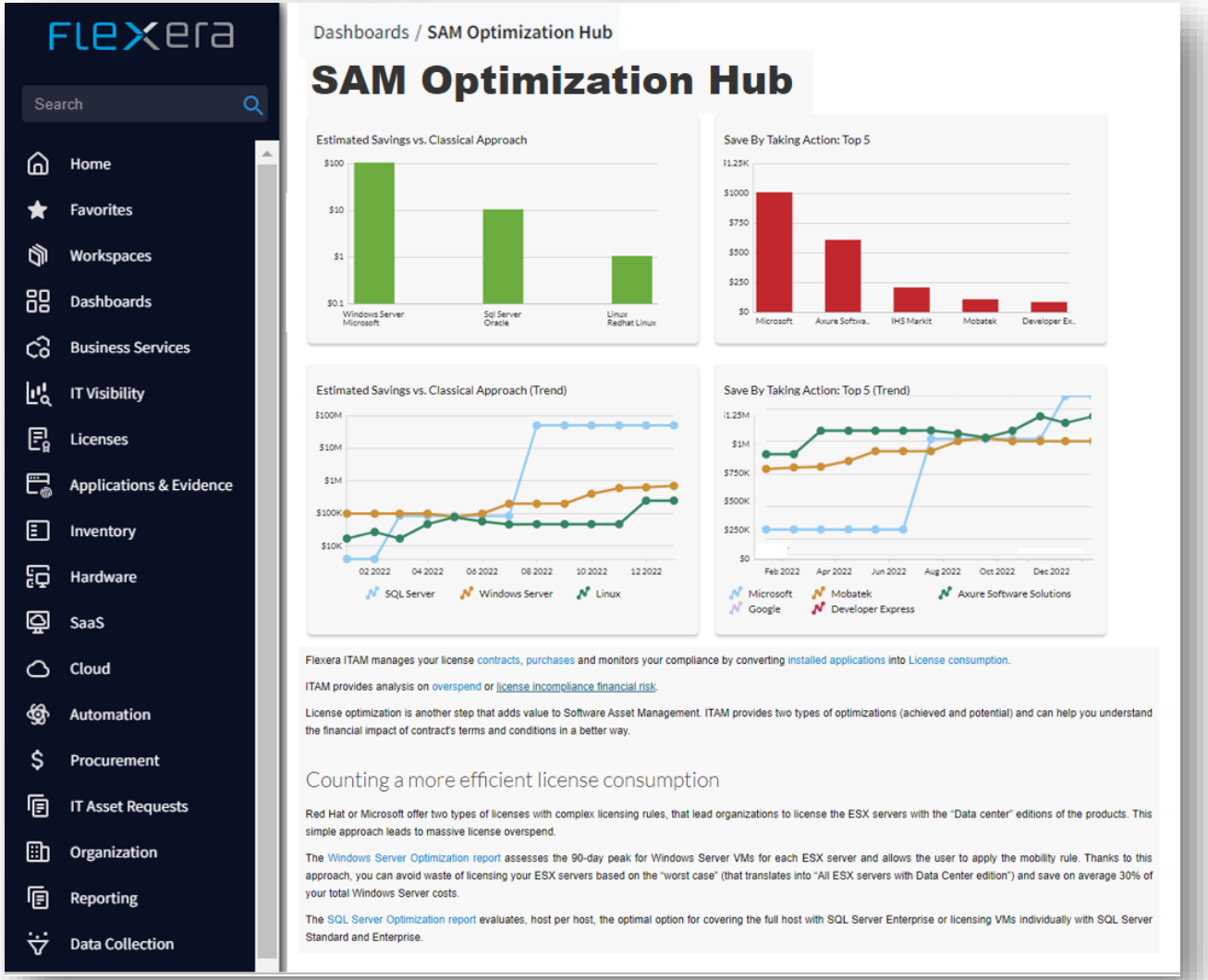
AVAILABLE NOW

SAM Optimization Hub

- Summarize achieved optimization in licenses and subscriptions
- Summarize potential optimization in licenses and subscriptions
- Provide drill down to detailed optimization reports



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General Approach

- First SAM Hub of a series (see next slides)
- Goal: surface the sophisticated and not used enough optimization data
- Attract attention / drill down / fine tune / save or understand savings
- Two types of optimization
  - Realized: the clever way versus the “Classical / easy / conservative / expensive)
  - Potential: Take action and you will save money
- Of course: foundations must be good to work on optimization (SAM Operations Hub will be useful)

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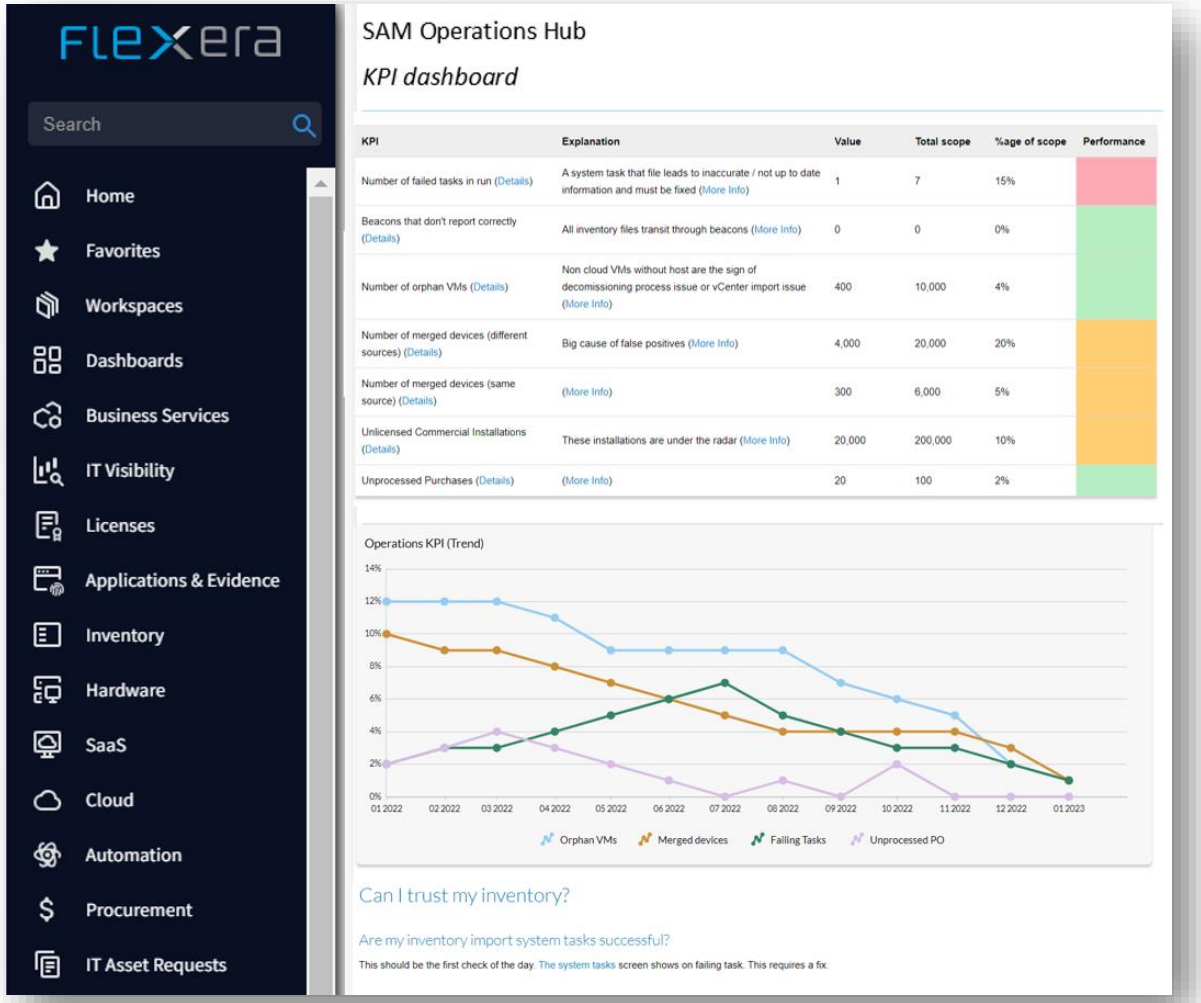
COMING SOON

SAM Operations Hub

- Summarize Key Performance Indicators on key operations topics
  - Data quality
  - SAM technical performance
  - SAM operations performance
- Provides drill down to the reports for additional details
- More information in the Best practice Blog



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COMING LATER

SAM Publisher Hub

- Publisher Centric View (Publisher selector)
- Compliance
- Risk
- Inventory
- Spending
- Contracts / Renewals

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From Compliance to Optimization

- What did I purchase?
- What are my active contracts?
- What did I deploy? (Physical, virtual, Cloud)
- Am I compliant?
- What is my legal risk / needed investment?

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From Compliance to Optimization

- What did I purchase?
- What are my active contracts
- What did I deploy? (Physical, virtual, Cloud)
- Am I compliant?
- What is my legal risk / needed investment?
- What could I change to save money in my architecture?
- Am I really using what I deployed? Should I uninstall? How much could I save?
- What if I was negotiating other terms and conditions with Oracle?

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SAM Optimization value delivered

The bricks: 9 SAM Optimization Reports

Oracle Optimization
(5 reports 2022R1 / 2022R2)

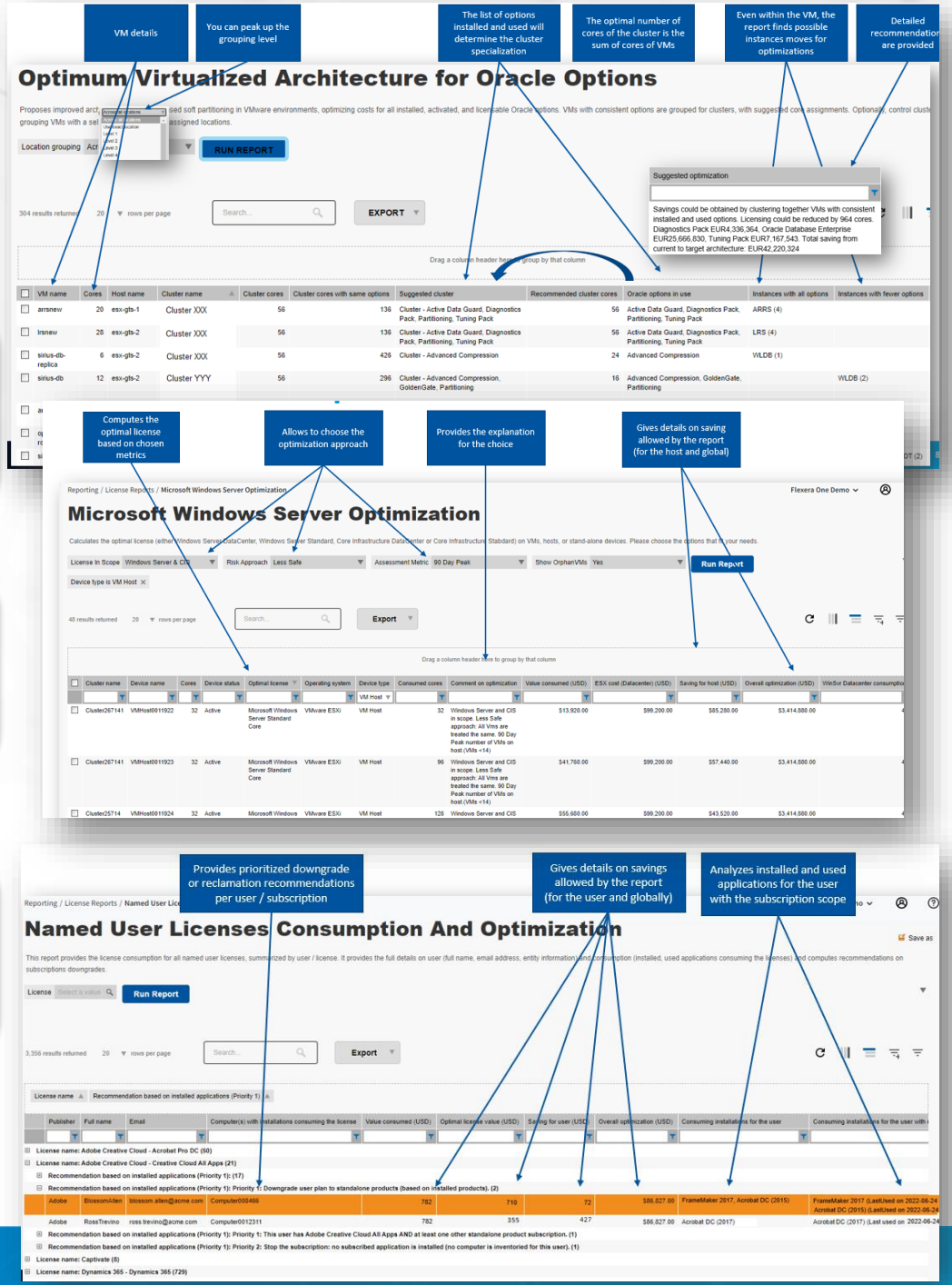
→ Pharmaceutical Company: EUR16 Million in Oracle Cost Avoidance
Large French: EUR 3million in Maintenance decrease

SQL Server Optimization (2022R1.4)
Red Hat Optimization (2022R1.4)
Windows Server Optimization (2022R1)

→ Industrial Company: EUR1.6 Million / year in Datacenter Maintenance reduction
Telecom Company: USD2 million / year in Datacenter maintenance reduction

Named User Optimization (2022R1.4)

→ Mid-size Media Company: EUR50K on Adobe All Apps into stand alone products



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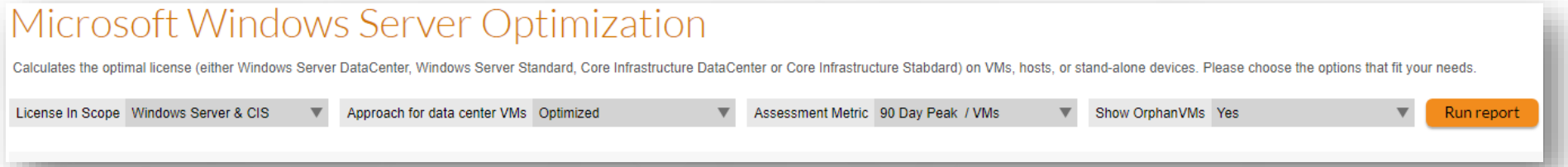
Important information in the Windows Server Optimization Report (check optional columns)

- What inputs did you choose? Recommended:



- What are the reference licenses, exempted roles and price per core? They will influence the full optimization calculation. Default cost in USD. What matters are the Std to Dtctr ratios

Reference license (CIS Dtctr)	Reference license (CIS Std)	Reference license (WinSvr Dtctr)	Reference license (WinSvr Std)	Exempted device roles
Microsoft CIS DataCenter Core with SA		Microsoft Windows Server Datacenter Core with SA		Cold Standby / Disaster Recovery (From Microsoft CIS DataCenter Core with SA)

Cost/core (CIS Dtctr)	Cost/core (CIS Std)	Cost/core (WinSvr Dtctr)	Cost/core (WinSvr Std)
$485.00 USD	$116.00 USD	$385.00 USD	$67.00 USD

- What are the number of VMs per Host, number of VMs with SCCM in clusters, does the host has a VM with SCCM?

System Center on hosted VM	% VMs in cluster with System Center	System Center VMs in cluster
All		3
Yes	16.67	3

Cluster WinSvr VMs to inventory	Host's WinSvr VMs to inventory	VMs running WinSvr (any edition) to inventory
	Is not empty	
32	7	S175ABOBJ201, S175FZDFS200, S175PLEXM200, S175ADDPA200, SCSESPRD0112, S175PSPLC200, S175PTMCT201

- Are there VMs to inventory?

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View Microsoft Windows Server optimization report
IT ASSET MANAGEMENT

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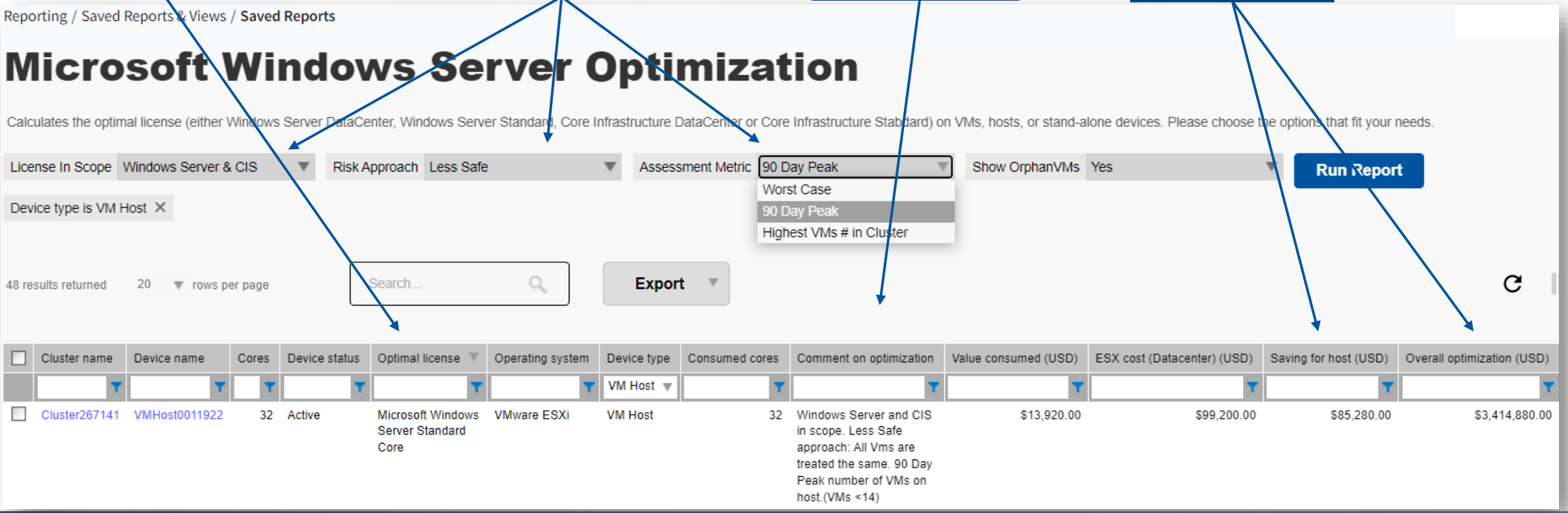
Computes the optimal license based on chosen metrics

Allows selection of the optimization approach

Provides explanation for the choice

Gives details on saving allowed by the report (for the host and global)



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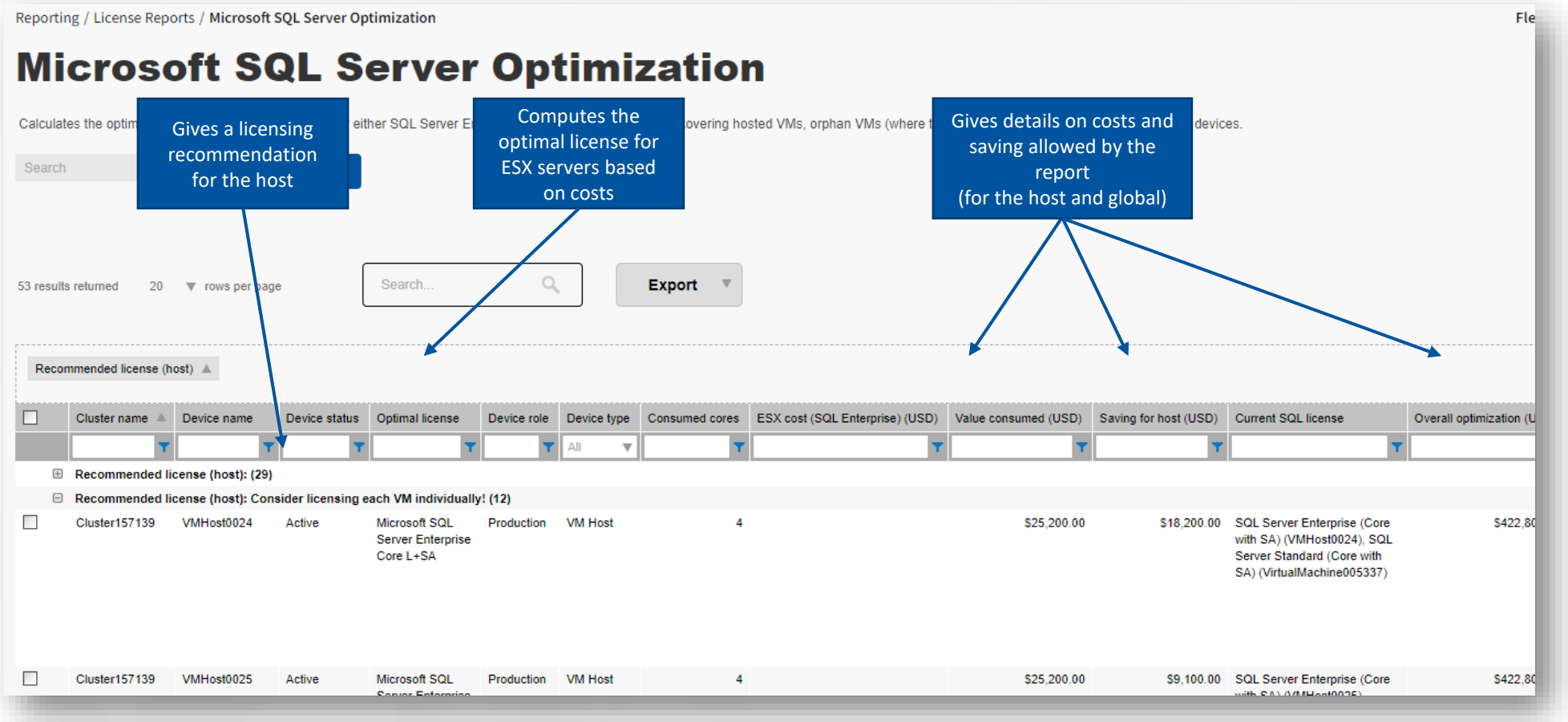
Licensing SQL VMs the optimal way

- The solution chooses and documents the best option:
  - License the full host for all VMs with Enterprise Edition
  - All VMs on a host with Standard edition
  - Each VMs with Standard or Enterprise



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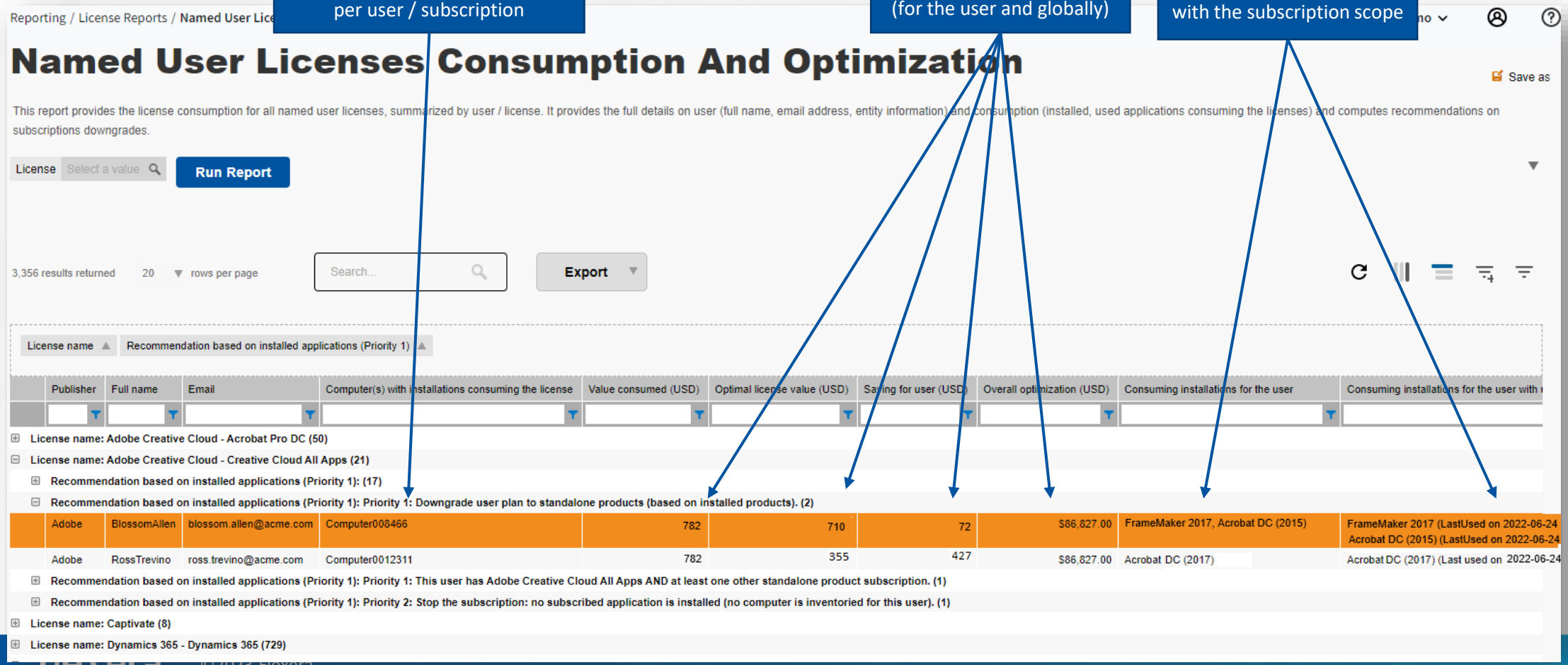
Named user subscription optimization report
IT ASSET MANAGEMENT

AVAILABLE NOW

Provides prioritized downgrade or reclamation recommendations per user / subscription

Gives details on savings allowed by the report (for the user and globally)

Analyzes installed and used applications for the user with the subscription scope



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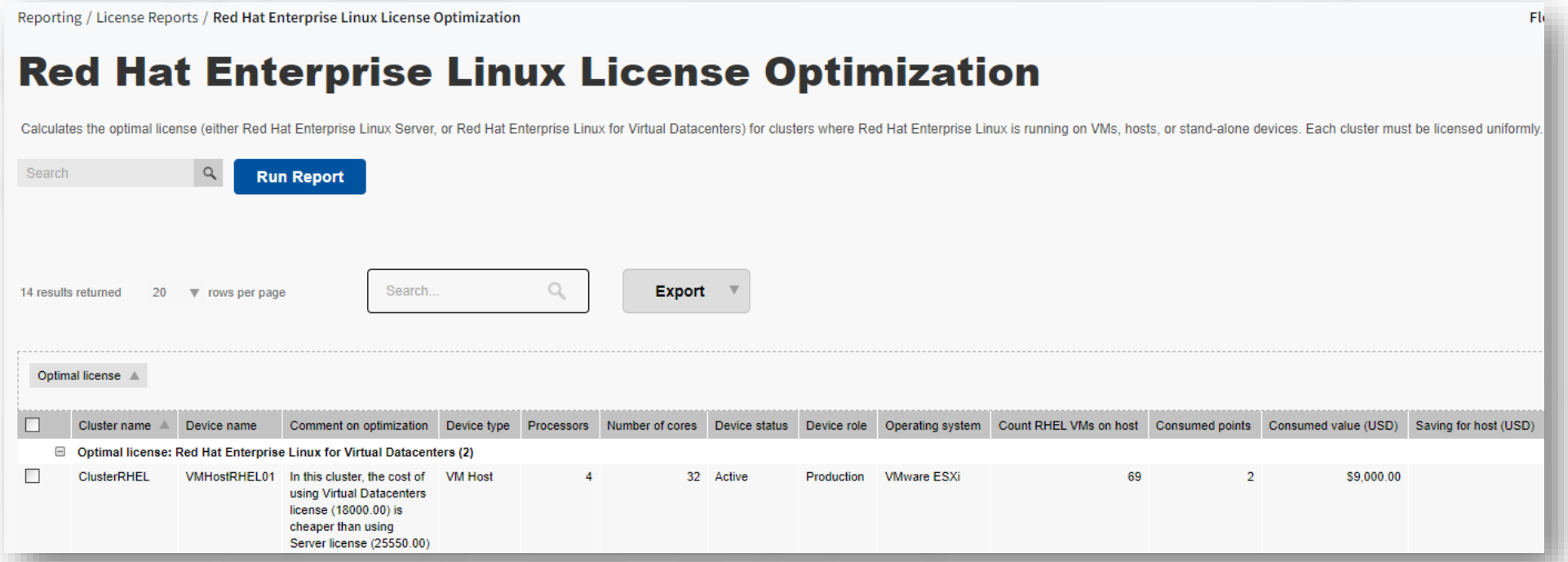
Red Hat Optimization

- Example of high REL density server: recommended to be licensed with DataCenters



Reporting / License Reports / **Red Hat Enterprise Linux License Optimization**

Red Hat Enterprise Linux License Optimization

Calculates the optimal license (either Red Hat Enterprise Linux Server, or Red Hat Enterprise Linux for Virtual Datacenters) for clusters where Red Hat Enterprise Linux is running on VMs, hosts, or stand-alone devices. Each cluster must be licensed uniformly.

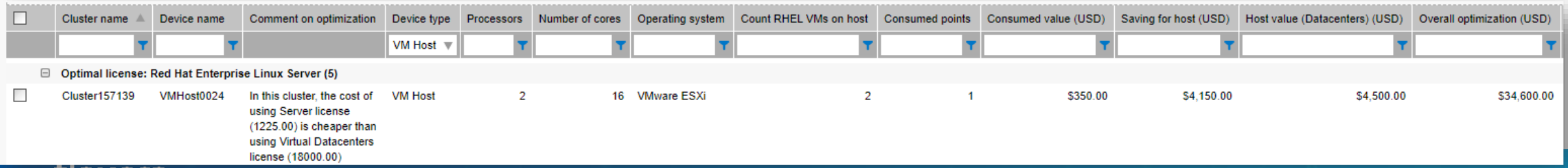
Search | Run Report

14 results returned | 20 rows per page | Search... | Export

Optimal license

Cluster name	Device name	Comment on optimization	Device type	Processors	Number of cores	Device status	Device role	Operating system	Count RHEL VMs on host	Consumed points	Consumed value (USD)	Saving for host (USD)
Optimal license: Red Hat Enterprise Linux for Virtual Datacenters (2)												
ClusterRHEL	VMHostRHEL01	In this cluster, the cost of using Virtual Datacenters license (18000.00) is cheaper than using Server license (25550.00)	VM Host	4	32	Active	Production	VMware ESXi	69	2	$9,000.00	

- Example of low RHEL density: Servers edition is cheaper!



Cluster name	Device name	Comment on optimization	Device type	Processors	Number of cores	Operating system	Count RHEL VMs on host	Consumed points	Consumed value (USD)	Saving for host (USD)	Host value (Datacenters) (USD)	Overall optimization (USD)
			VM Host									
Optimal license: Red Hat Enterprise Linux Server (5)												
Cluster157139	VMHost0024	In this cluster, the cost of using Server license (1225.00) is cheaper than using Virtual Datacenters license (18000.00)	VM Host	2	16	VMware ESXi	2	1	$350.00	$4,150.00	$4,500.00	$34,600.00

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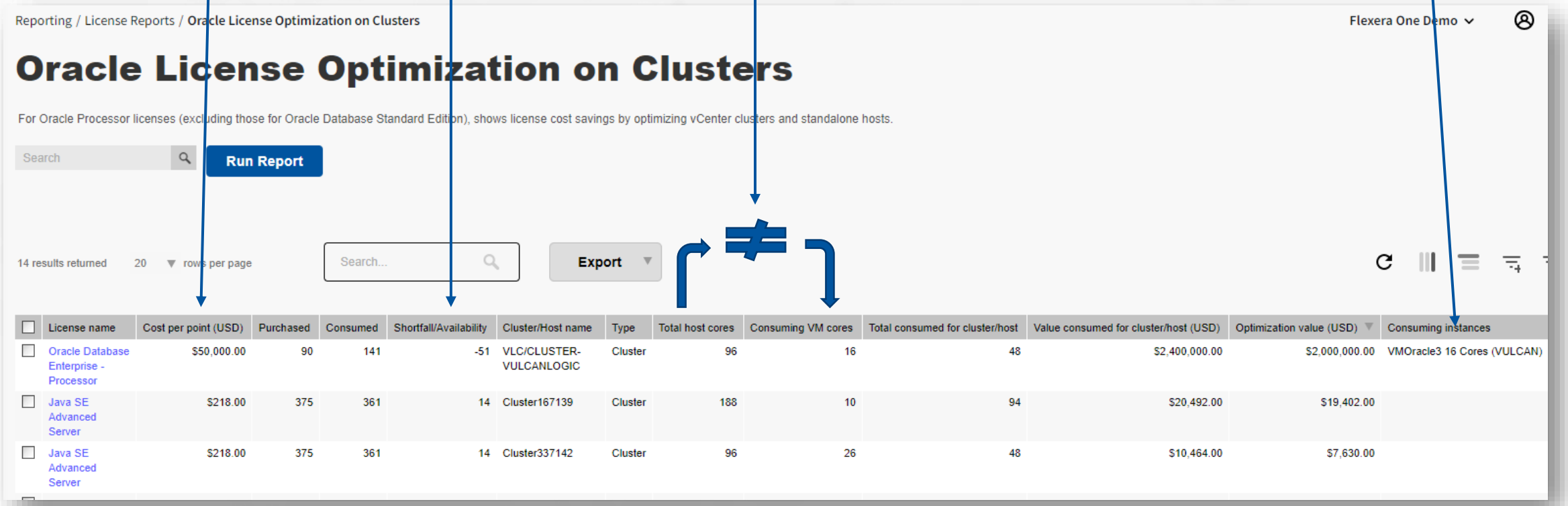
Oracle License Optimization on Clusters is suggested

Price is the actual entitlement price or a default 5000 price

Each row represents a cluster or un-clustered host

Installed Cores are compared to licensed cores to evaluate potential optimization

Consuming instances that can be moved are identified



License name	Cost per point (USD)	Purchased	Consumed	Shortfall/Availability	Cluster/Host name	Type	Total host cores	Consuming VM cores	Total consumed for cluster/host	Value consumed for cluster/host (USD)	Optimization value (USD)	Consuming instances
Oracle Database Enterprise - Processor	$50,000.00	90	141	-51	VLC/CLUSTER-VULCANLOGIC	Cluster	96	16	48	$2,400,000.00	$2,000,000.00	VMOracle3 16 Cores (VULCAN)
Java SE Advanced Server	$218.00	375	361	14	Cluster167139	Cluster	188	10	94	$20,492.00	$19,402.00	
Java SE Advanced Server	$218.00	375	361	14	Cluster337142	Cluster	96	26	48	$10,464.00	$7,630.00	

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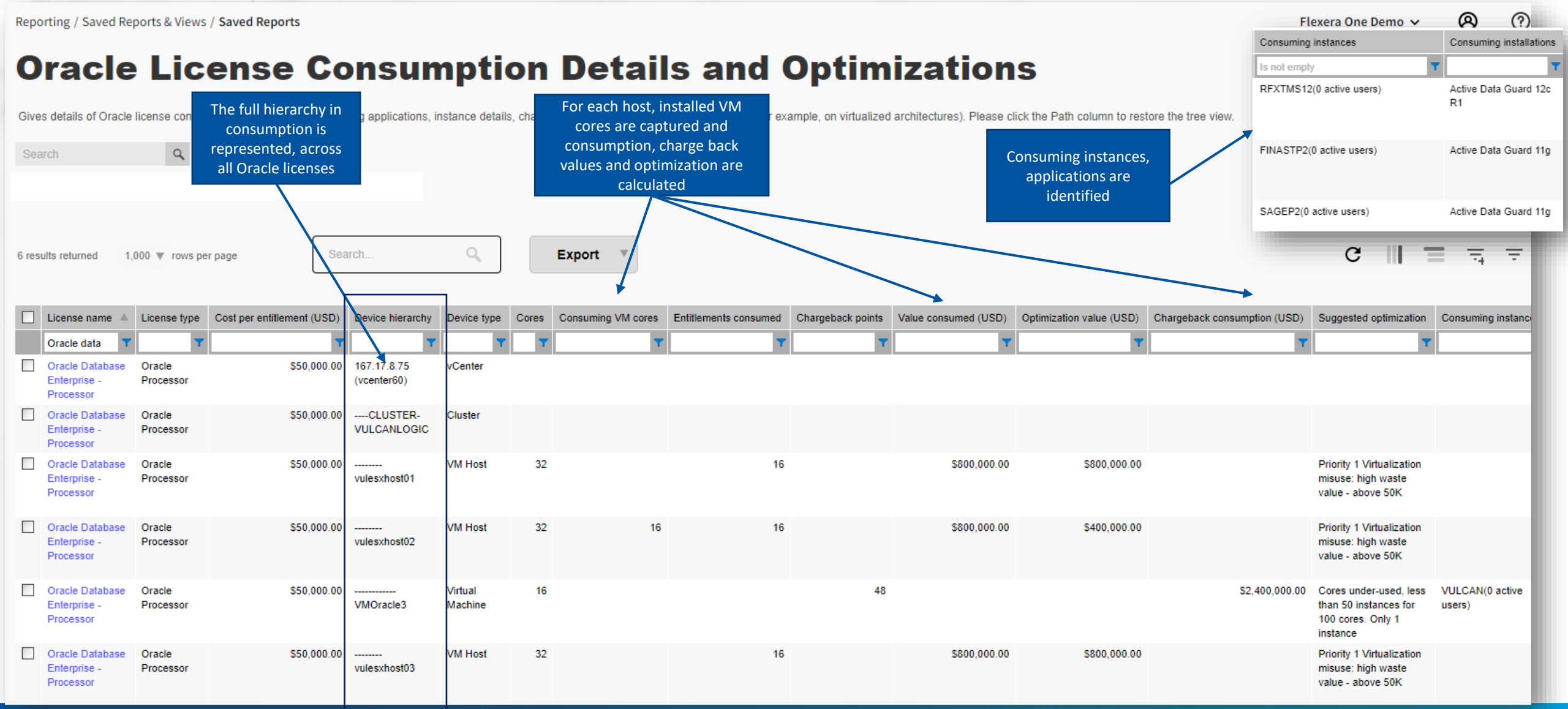
Oracle Licenses Consumption Details and Optimizations



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Financial impact of partitioning rules is computed

What FNMS Licenses calculate

Various simulations depending on soft partitioning applied

Compare incremental cost (or saving) for each partitioning option

Reporting / Saved Reports & Views / Saved Reports

Oracle Consumption Summary by Partitioning Rule

Save as

Evaluates all Oracle Processor licenses for both total points consumed and costs, under the various rules that allow partitioning at the cluster, at the vCenter, or across all vCenters; or creating a hard partition at the ESX virtual host.

Search

RUN REPORT

15 results returned 20 rows per page

Search...

EXPORT

License name	Publisher	License type	Cost per entitlement (EUR)	Purchased	Points (cluster partition)	Points (ESX partition)	Points (vCenter partition)	Points (all vCenters partition)	Increment cluster to vCenter (EUR)	Increment vCenter to all vCenters (EUR)	Increment ESX host to cluster (EUR)
Oracle ULA Business Intelligence Foundation Suite (processor)	Oracle	Oracle Processor	€118,395.00	8,816	1,023	573	2,016	10,781	€117,566,235.00	€1,037,732,175.00	€53,277,750.00
Oracle ULA Database Enterprise (Processor)	Oracle	Oracle Processor	€45,000.00	6,928	4,314	3,192	5,983	12,441	€75,105,000.00	€290,610,000.00	€50,490,000.00
Oracle ULA WebLogic Suite (Processor)	Oracle	Oracle Processor	€14,208.00	2,437	1,160	680	1,761	10,721	€8,539,008.00	€127,303,680.00	€6,819,840.00
Oracle ULA OLAP (Processor)	Oracle	Oracle Processor	€9,077.00	574	288	288	288	10,737		€94,845,573.00	€0.00
Oracle ULA Data Integrator EE - Transformation (Processor)	Oracle	Oracle Processor	€8,169.00	1,924	1,430	847	2,455	11,028	€8,373,225.00	€70,032,837.00	€4,762,527.00
Oracle ULA Advanced Security (Processor)	Oracle	Oracle Processor	€6,000.00	1,111	445	154	924	10,477	€2,874,000.00	€57,318,000.00	€1,746,000.00
Oracle ULA Active Data Guard (Processor)	Oracle	Oracle Processor	€5,000.00	1,562	1,225	661	2,040	10,805	€4,075,000.00	€43,825,000.00	€2,820,000.00
Oracle ULA Real Application Clusters (Processor)	Oracle	Oracle Processor	€3,947.00	752	294	280	640	10,715	€1,365,662.00	€39,766,025.00	€55,258.00
Oracle ULA Tuning Pack (Processor)	Oracle	Oracle Processor	€1,974.00	3,652	1,941	1,131	2,652	11,067	€1,403,514.00	€16,611,210.00	€1,598,940.00

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Oracle Partitioning Rules Impact are provided

The full hierarchy in consumption is represented, across all Oracle licenses

Various simulations depending on soft partitioning applied

Consuming instances, applications are identified

Reporting / License Reports / Oracle Partitioning Rule Impacts

Oracle Partitioning Rule Impacts

For Oracle Processor licenses, compares the consumption impact of different soft (and hard) partitioning rules: soft partitioning at the cluster, at each vCenter, for all vCenters; or hard partitioning for each VMware ESX host.

vCenter name ▲ Cluster name ▲

License name	Cost per entitlement (EUR)	Device hierarchy	Device type	Device status	Allocated	Exemption reason	Operating system	Cores	Capped cores	Points (cluster partition)	Points (vCenter partition)	Points (all vCenters partition)
Oracle ULA Database Enterp					All							
vCenter name: 172.17.199.220 (i08199220) (4)												
Cluster name: Cluster_consolidacion_5 (3)												
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------conso5server1	VM Host	Active	No		VMware ESXi 5.5.0	8	0			4
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------conso5server2	VM Host	Active	No		VMware ESXi 5.5.0	8	0			4
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------conso5server3	VM Host	Active	No		VMware ESXi 5.5.0	8	0			4
vCenter name: 172.20.148.100 (orajy001) (34)												
Cluster name: CL-PROD-CENTRAL-BI (5)												
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------esxjy015	VM Host	Active	No		VMware ESXi 5.5.0	32		16		
Oracle ULA Database Enterprise (Processor)	€45,000.00	----------lnxjy275	Virtual Machine	Active	No		Red Hat Enterprise Linux ES 5.11	4				
Oracle ULA Database Enterprise (Processor)	€45,000.00	----------lnxjy302	Virtual Machine	Active	No		Red Hat Enterprise Linux ES 5.11	32				
Oracle ULA Database Enterprise (Processor)	€45,000.00	----------lnxjy303	Virtual Machine	Active	No		Red Hat Enterprise Linux ES 5.11	16				
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------esxjy016	VM Host	Active	No		VMware ESXi 5.5.0	32		16		
Cluster name: CL-PROD-ESSBASE (2)												
Oracle ULA Database Enterprise (Processor)	€45,000.00	--------esxjy037	VM Host	Active	No		VMware ESXi 5.5.0	16				8

Consuming instances	Consuming installations
Is not empty	
RFXTMS12(0 active users)	Active Data Guard 12c R1
FINASTP2(0 active users)	Active Data Guard 11g
SAGEP2(0 active users)	Active Data Guard 11g

Optimum target architecture recommendation

VM details

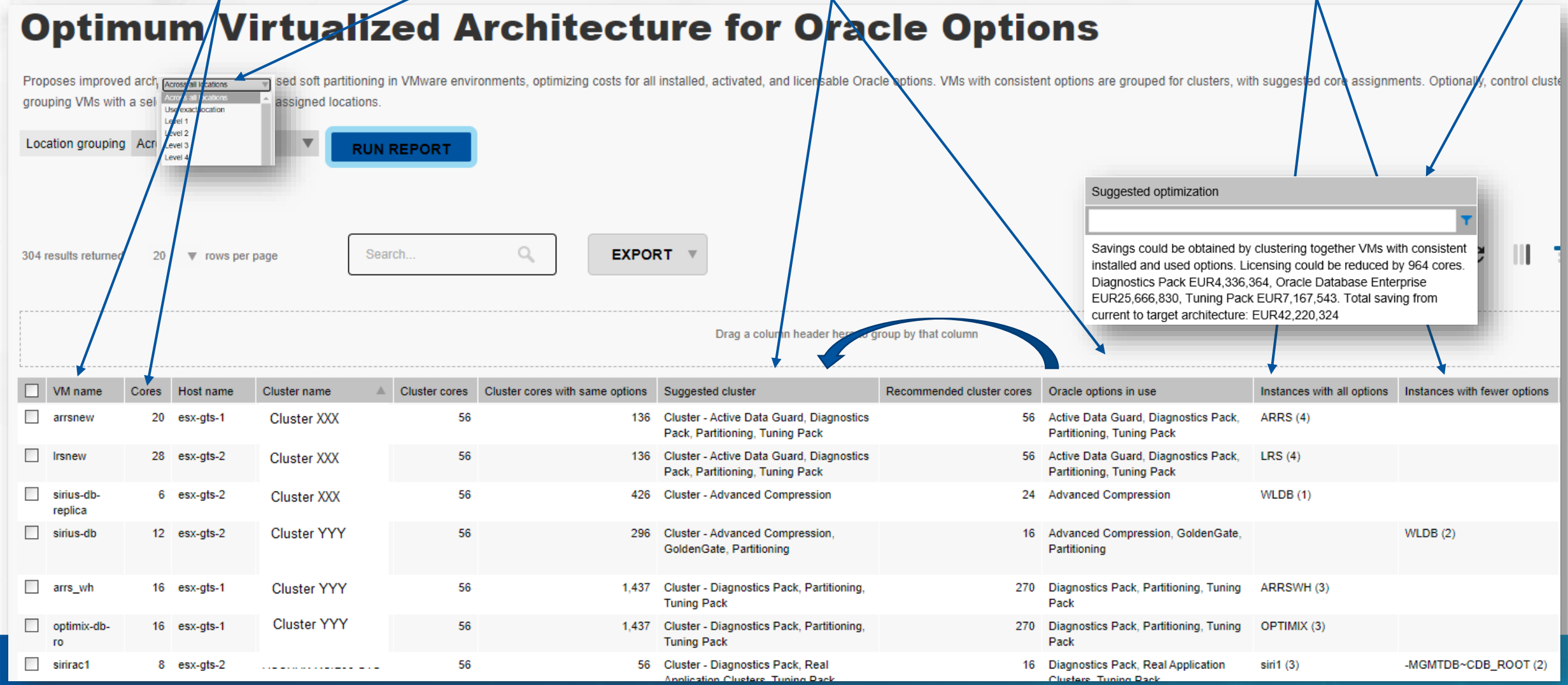
You can peak up the grouping level

The list of options installed and used will determine the cluster specialization

The optimal number of cores of the cluster is the sum of cores of VMs

Even within the VM, the report finds possible instances moves for optimizations

Detailed recommendations are provided



VM name	Cores	Host name	Cluster name	Cluster cores	Cluster cores with same options	Suggested cluster	Recommended cluster cores	Oracle options in use	Instances with all options	Instances with fewer options
arrsnew	20	esx-gts-1	Cluster XXX	56	136	Cluster - Active Data Guard, Diagnostics Pack, Partitioning, Tuning Pack	56	Active Data Guard, Diagnostics Pack, Partitioning, Tuning Pack	ARRS (4)	
lrsnew	28	esx-gts-2	Cluster XXX	56	136	Cluster - Active Data Guard, Diagnostics Pack, Partitioning, Tuning Pack	56	Active Data Guard, Diagnostics Pack, Partitioning, Tuning Pack	LRS (4)	
sirius-db-replica	6	esx-gts-2	Cluster XXX	56	426	Cluster - Advanced Compression	24	Advanced Compression	WLDB (1)	
sirius-db	12	esx-gts-2	Cluster YYY	56	296	Cluster - Advanced Compression, GoldenGate, Partitioning	16	Advanced Compression, GoldenGate, Partitioning		WLDB (2)
arrs_wh	16	esx-gts-1	Cluster YYY	56	1,437	Cluster - Diagnostics Pack, Partitioning, Tuning Pack	270	Diagnostics Pack, Partitioning, Tuning Pack	ARRSWH (3)	
optimix-db-ro	16	esx-gts-1	Cluster YYY	56	1,437	Cluster - Diagnostics Pack, Partitioning, Tuning Pack	270	Diagnostics Pack, Partitioning, Tuning Pack	OPTIMIX (3)	
siririac1	8	esx-gts-2		56	56	Cluster - Diagnostics Pack, Real	16	Diagnostics Pack, Real Application	siri1 (3)	-MGMTDB~CDB_ROOT (2)

Thank you!

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