SAM Monthly Best Practices Webinars

Session 16: Optimal License Position For Windows Server – CIS In One Hour!

Nicolas Rousseau
nrousseau@flexera.com
Principal Product Manager

January 12th, 2023

Flexera
Inform IT. Transform IT.

Agenda

- Last session’s pointers and answers to questions
- News
  - Updates in the Best Practice Hub
  - ITAM / FNMS 2022R2.1
- Windows Server / CIS Optimal License Position
  - Context
  - Demo

©2022 Flexera / Company Confidential

Last Session: Management Of IBM PVU & VPC Licensing

- Useful pointers
  - Recording and PowerPoint: here
- Answers to questions:
  - Are regions required for compliance? For calculating peaks?
    - It depends on your IBM contract. A mono-region company will not need it. A worldwide company often must report per region. The sum of regions peak is more than the overall peak. This is to avoid the follow the sun usage issue.
  - Historical ILMT data must still be retained.
    - If ITAM is used, no. You still need keep your ILMT last data for two years
  - How do we manage & report pvu licensing for vendors other than IBM?
    - So far, the PVU calculation is not Vendor related but license type related. You can save the PVU Consumption report with a filter on HCL and a filter on IBM for instance
  - How often is the Flexera information updated for the IBM catalog?
    - Bundle / signature catalogs are provided quarterly and gradually included in the SKU (monthly update) and ARL (weekly) libraries
  - Is the download audit reports a custom link you created?
    - No, this is a an out of the box link in the “PVU license consumption” out of the box report (From 2022R2 on prem)
  - Will the slides be available after the session?
    - As always! in the recording post

©2022 Flexera / Company Confidential

Last Session: Management Of IBM PVU & VPC Licensing

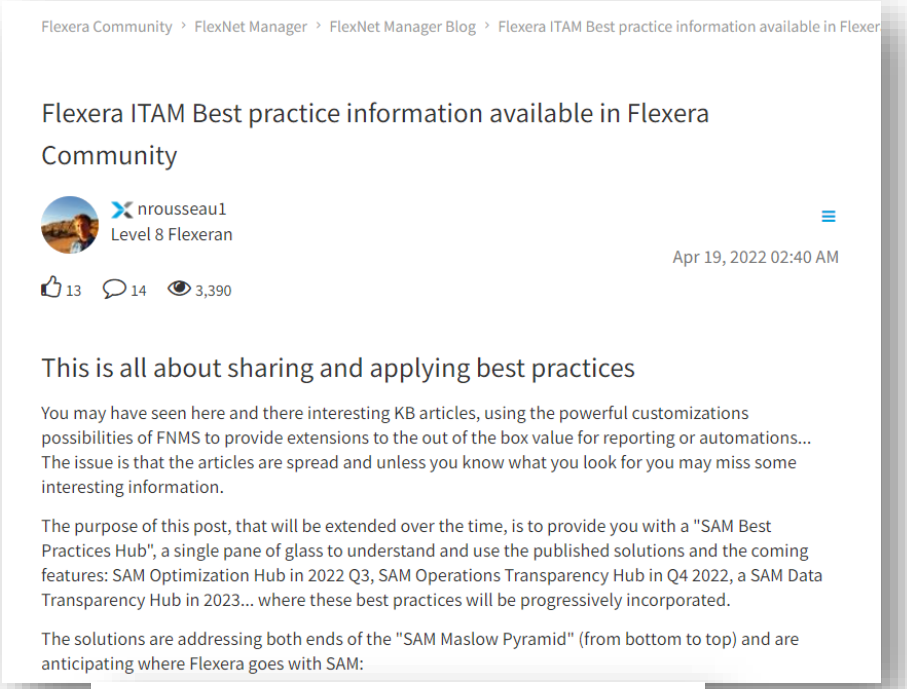
- Answers to questions:
  - Can we see unrecognized applications in Flexera UI with inventory device Name? We are using FNMS 2021 R1 Premise based solution
    - The evidence screen has the “device” tab since 2019R2. The Raw Evidence on Devices and the Application Transparency Report (Productized in 2022R1, but focused on recognized applications) bring more information across evidences / devices / applications
  - Can you show how to use intelligent license restrictions
    - Today!
  - What will be impact if we increase days to 2 years. Will it not clog database for big customers
    - Probably in the hundreds of thousands of records. Probably acceptable impact.
  - Hey Nicolas, I was working on configuring the new Citrix Cloud adapter and I could not find any documentation on this new capability included in the latest release. I did find documentation on other new
    - https://docs.flexera.com/fnms/EN/features/index.html#FeatureList/2022R2/RN-new-CitrixAdapter.html
  - If IBM does share its Bundle Library: How does Flexera reflect the changes in the library which are contradicting to a downgrade/upgrade right ?
    - The products in a bundle may vary across versions. All versions of the products are included in the bundle.

©2022 Flexera / Company Confidential

News

- ITAM 2022 R2.1 Planned For Jan 25th / Feb 1st
  - Creation of a new “allocation reason”
  - Enhancement of the VMs Inventory Gaps From vCenter report (last known state, VM type, device name columns)
- The “Best practice Hub” gives many pointers to existing best practice and visibility on the 3 coming Hubs. New link to SAM Best practices calls, new Flat List Of License Restrictions report
- Please check if you received the

  Flexera November ITAM Newsletter


Flexera Community › FlexNet Manager › FlexNet Manager Blog › Flexera ITAM Best practice information available in Flexer

Flexera ITAM Best practice information available in Flexera Community

nrousseau1
Level 8 Flexeran

Apr 19, 2022 02:40 AM

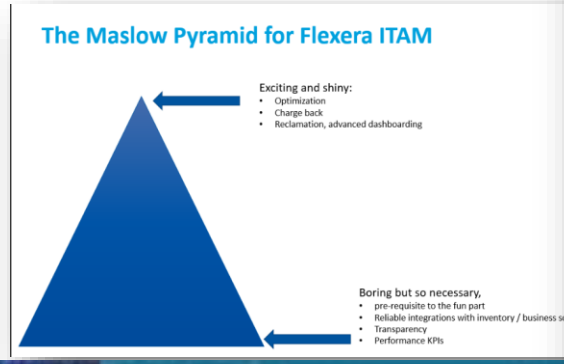
13 14 3,390

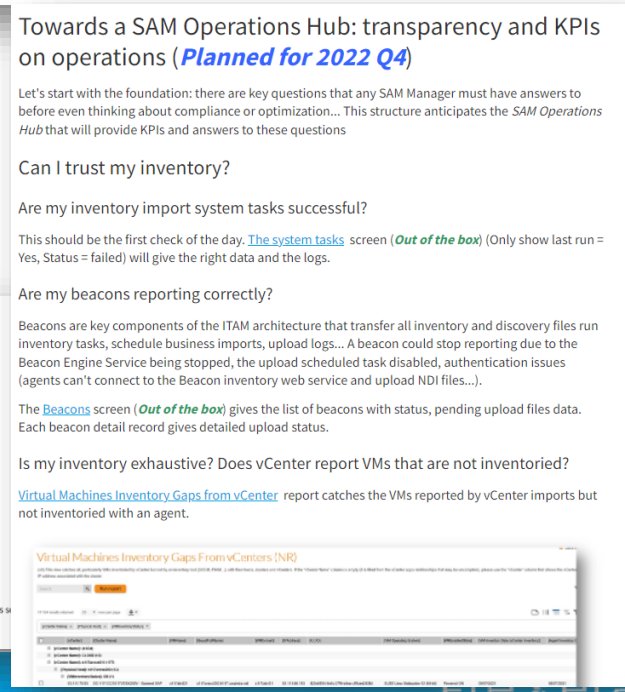
This is all about sharing and applying best practices

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:




Towards a SAM Operations Hub: transparency and KPIs on operations (***Planned for 2022 Q4***)

Let's start with the foundation: there are key questions that any SAM Manager must have answers to before even thinking about compliance or optimization... This structure anticipates the *SAM Operations Hub* that will provide KPIs and answers to these questions

Can I trust my inventory?

Are my inventory import system tasks successful?

This should be the first check of the day. The system tasks screen (***Out of the box***) (Only show last run = Yes, Status = failed) will give the right data and the logs.

Are my beacons reporting correctly?

Beacons are key components of the ITAM architecture that transfer all inventory and discovery files run inventory tasks, schedule business imports, upload logs... A beacon could stop reporting due to the Beacon Engine Service being stopped, the upload scheduled task disabled, authentication issues (agents can't connect to the Beacon inventory web service and upload NDI files...).

The Beacons screen (***Out of the box***) gives the list of beacons with status, pending upload files data. Each beacon detail record gives detailed upload status.

Is my inventory exhaustive? Does vCenter report VMs that are not inventoried?

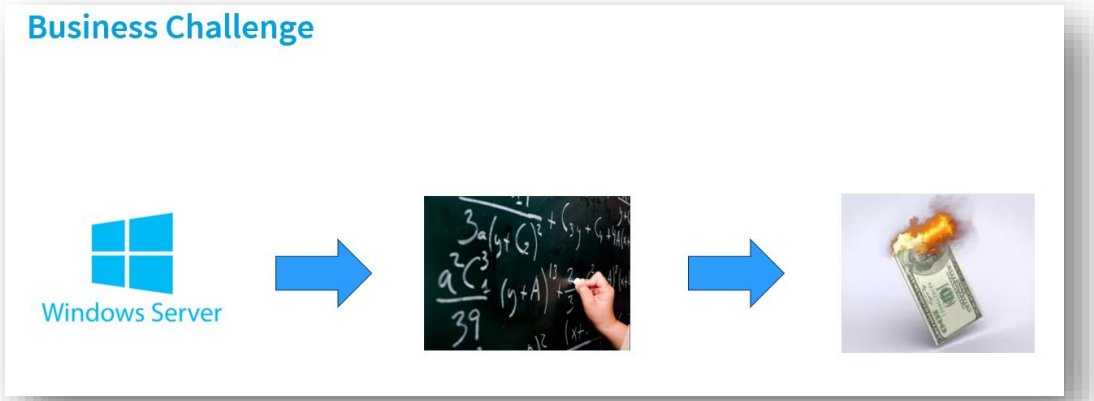
Virtual Machines Inventory Gaps from vCenter report catches the VMs reported by vCenter imports but not inventoried with an agent.

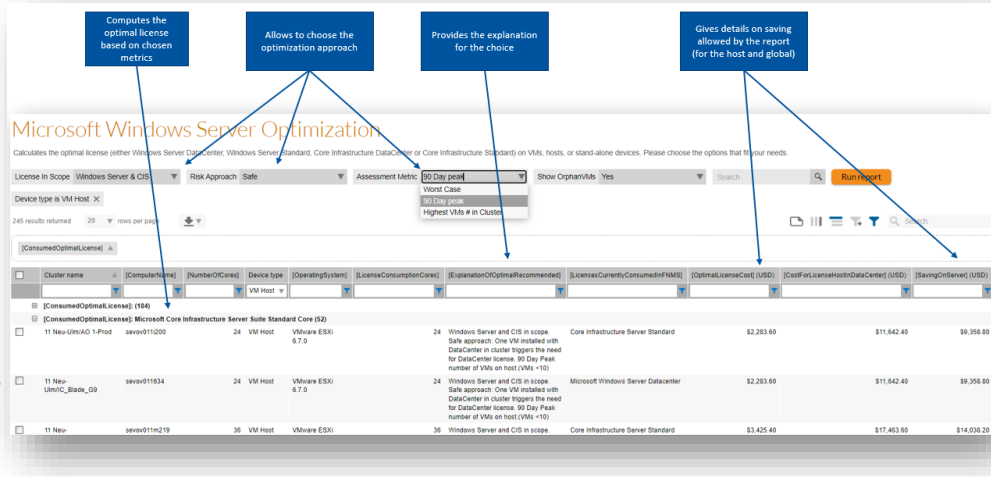
©2022 Flexera / Company Confidential

Windows Server and CIS Optimal Position in One Hour!

The Windows Server licensing challenges

- Poisonous choices!
  - 2 editions (Standard / Data Center)
  - Standalone (Windows Server) or 1 bundle (Core Infrastructure Server Suite)
- Licensing challenges:
  - Complex calculations
  - License assignment rule (mobility) for the standard edition
  - **New since October 2022**: For customers **with SA**, licenses can be transferred between VMs (of the same server farm) <=> VMs can be licensed individually with Std with minimum of 8 cores per VM.
  - See: https://www.microsoft.com/en-us/licensing/news/options-for-hosted-cloud or https://www.microsoft.com/en-us/licensing/product-licensing/windows-server?rtc=1, see FAQ: “How are core licenses sold?”
- There are licensing choices to make
  - Is a Windows Server VMs to be considered differently if Std or Dtctr? (Classical or Optimal).
  - Are you licensed with Windows Server only or Windows Server AND CIS?
  - What is the metric you want to use to assess the best license? (Worst case, 90 day peak, per VM?)





©2022 Flexera / Company Confidential

The tools you have for an Optimal license position

- Until the out of the box license includes all the inputs and optimization logic of the report…
- Windows Server Optimization Report
  - Summarized for analysis and understanding
  - Flat for automation (can be queried by the SOAP API)
- Intelligent License Restriction (2022R2)
- Business Adapter Studio for batch allocations
- Licenses that can perform calculations or host allocated devices with “overridden consumption”

©2022 Flexera / Company Confidential

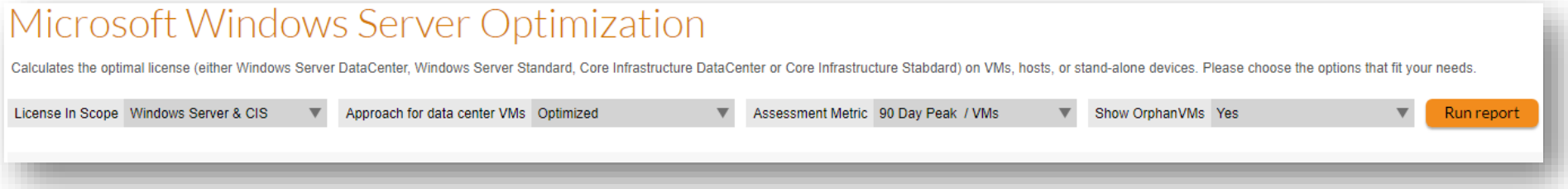
Three levels in this demo

- Easy and expensive way:
  - All ESX servers in CIS DataCenter
  - Computers in CIS standard
- Optimal Consumption based on current situation
  - Optimization at Host level
  - Obtained from allocations (Business Adapter Studio)
  - Perfect for a true up
  - But irrelevant the next day
- Optimal license consumption based on Clusters' situation
  - Based on Windows Server VMs "density" and presence of SCCM in clusters
  - Is less aggressive / optimal
  - Is more "static": VMs movements will not impact the clusters' situation
  - Need some regular check (monthly)

©2022 Flexera / Company Confidential

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

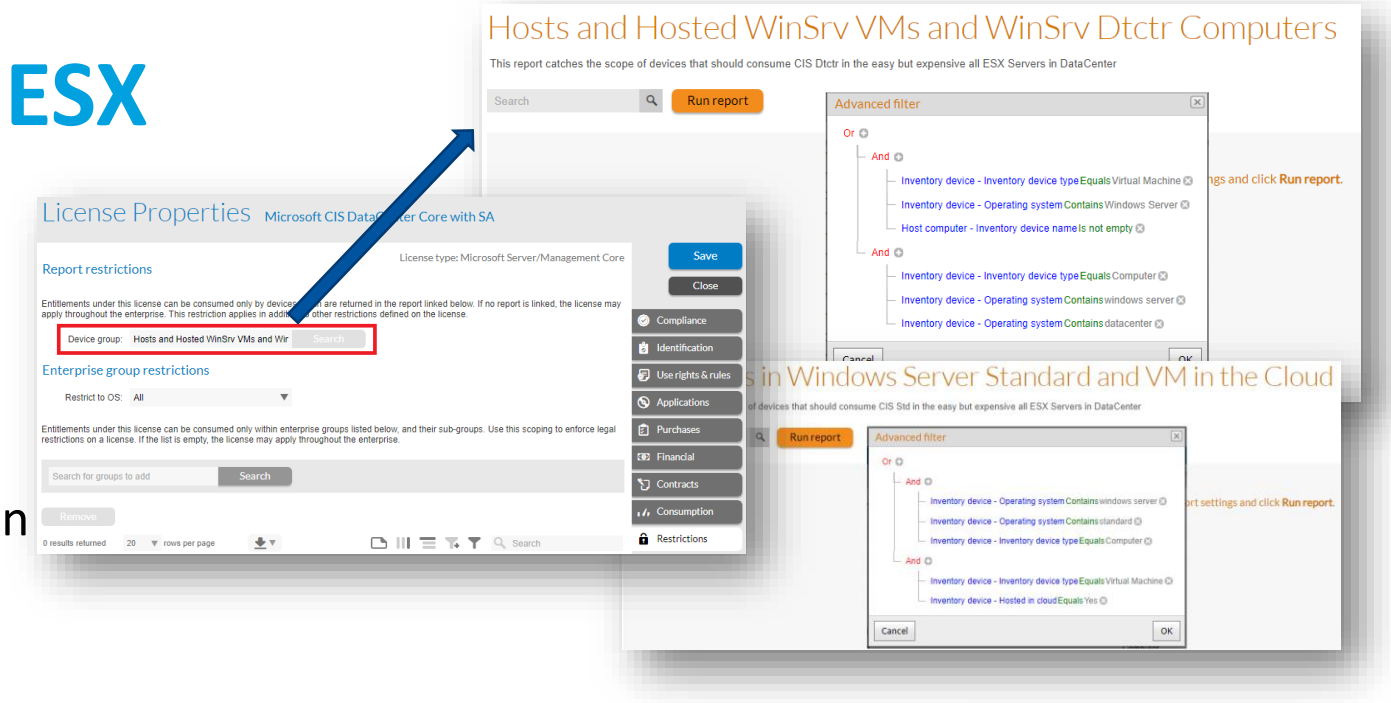
Cluster WinSvr VMs to inventory	Host's WinSvr VMs to inventory	VMs running WinSvr (any edition) to inventory
	Is not empty	
32	7	S175ABOBJ201, S175FZDFS200, S175PLEXM200, S175ADDPA200, SCSESPRD0112, S175PSPLC200, S175PTMCT201

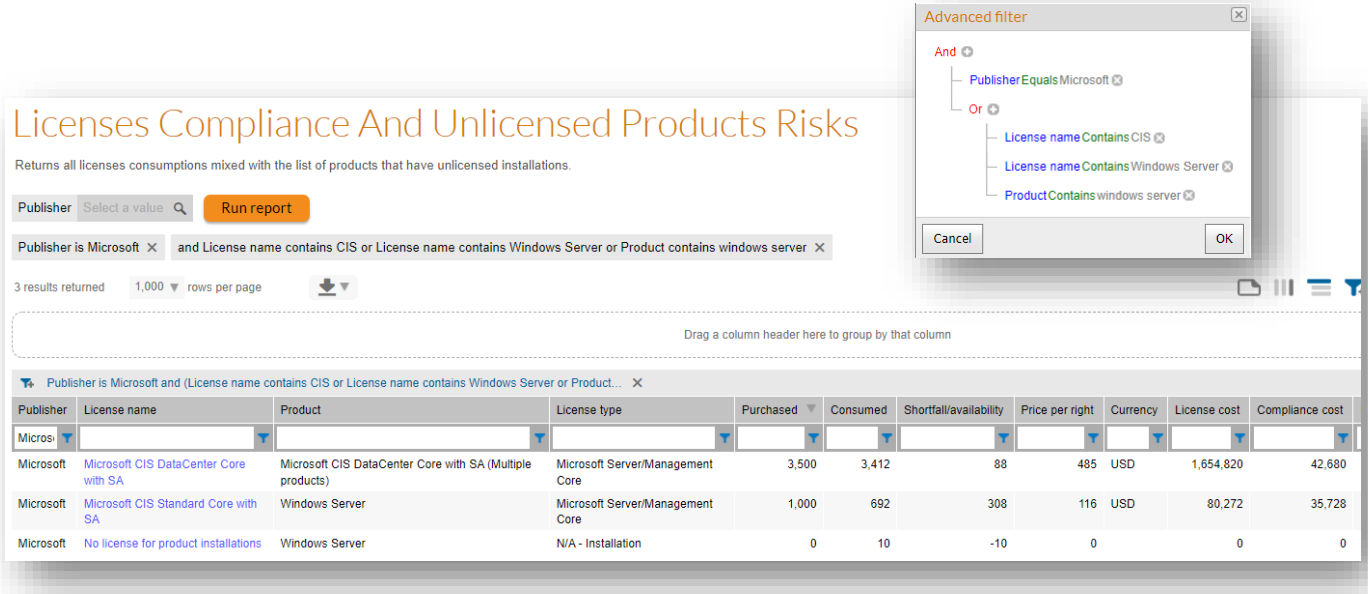
- Are there VMs to inventory?

©2022 Flexera / Company Confidential

Details: first position – All ESX with DataCenter

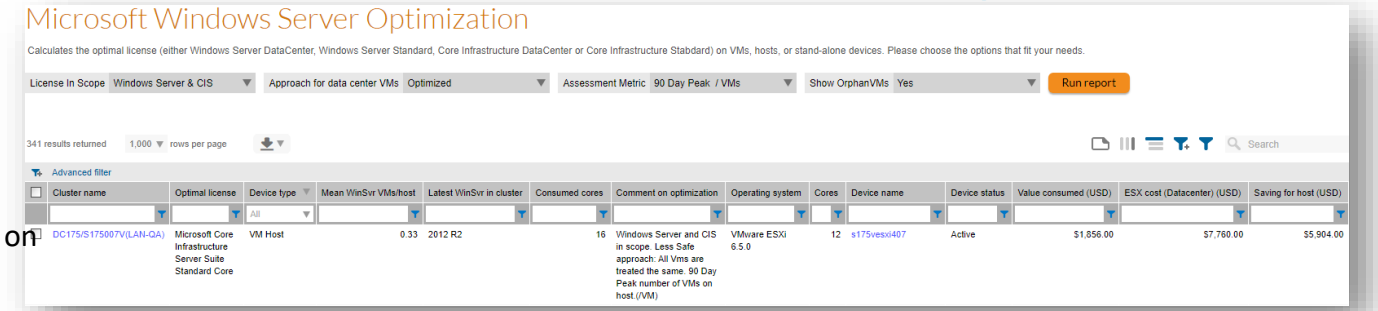
- Remark
  - Demo data has many ESX server with low number of VMs. “under optimal architecture” leading to more optimization potential
- Worst case / worst cost!
- 2 licenses: Core Infrastructure Server Standard and Datacenter
- CIS Standard license restricted on following report
- Check cost with this new OOTB report!
  - **Total License cost: USD1.73 million**
  - 10 unlicensed Windows Server installations

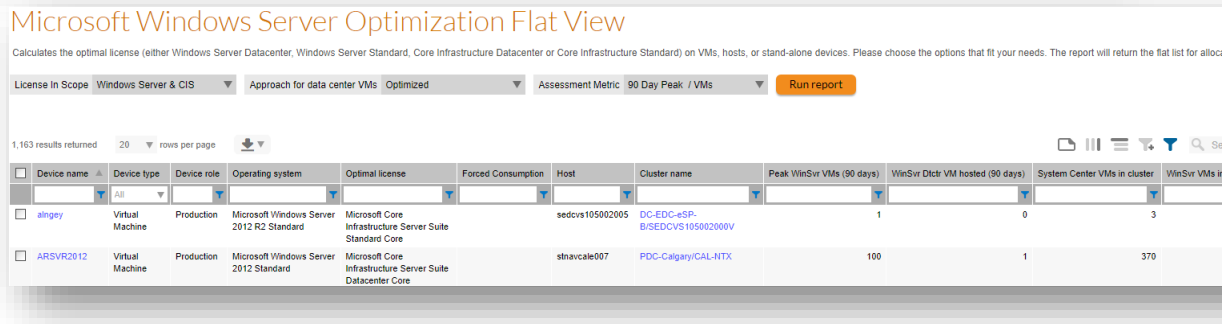


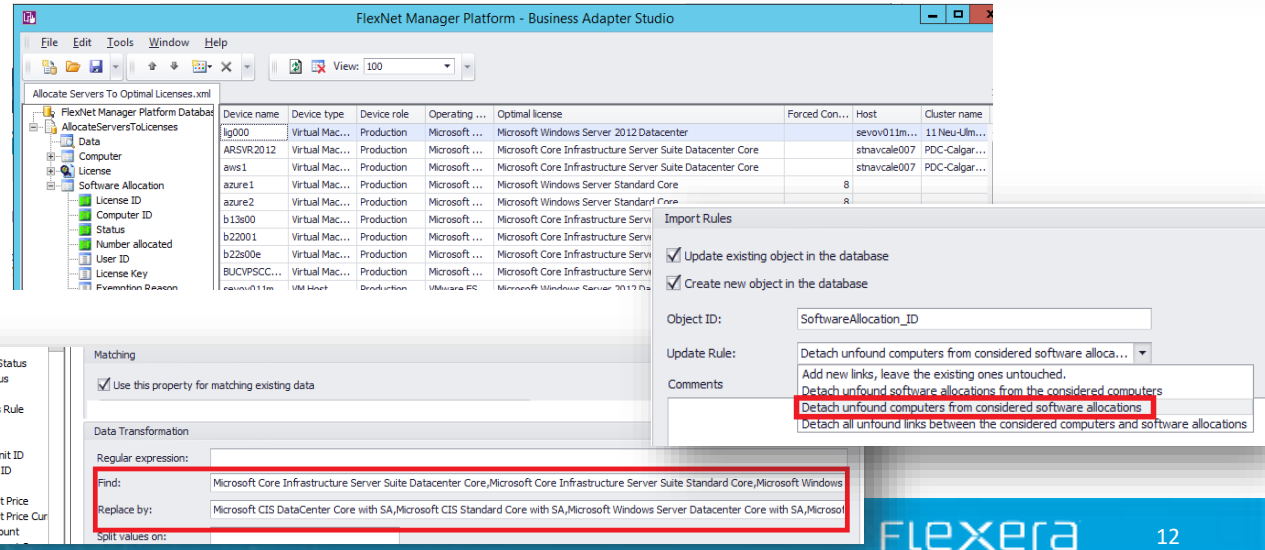


Details: Second position – Full Allocation From Report

- Uses the allocation from the Optimization report.
  - Pick up according to your situation and choice
    - For instance: “Windows Server & CIS, Optimized approach on VMs in DataCenter, 90 Day Peak / VMs”
  - Relevant for True Up
  - But movements require re-allocations
- The Windows Server Optimization Flat report is used
  - Could be used by SOAP API
  - Excel extract
  - With fine tuning (allocate VMs in cluster with highest version <= 2012 R2 to unmaintained legacy license)
- A Business Adapter is created
  - Works for both on premise and cloud
  - Using the license name transformation
  - 4th insert option for allocations insertion behavior
  - Permanent allocation status
  - The “forced consumption” column is mapped to quantity allocated



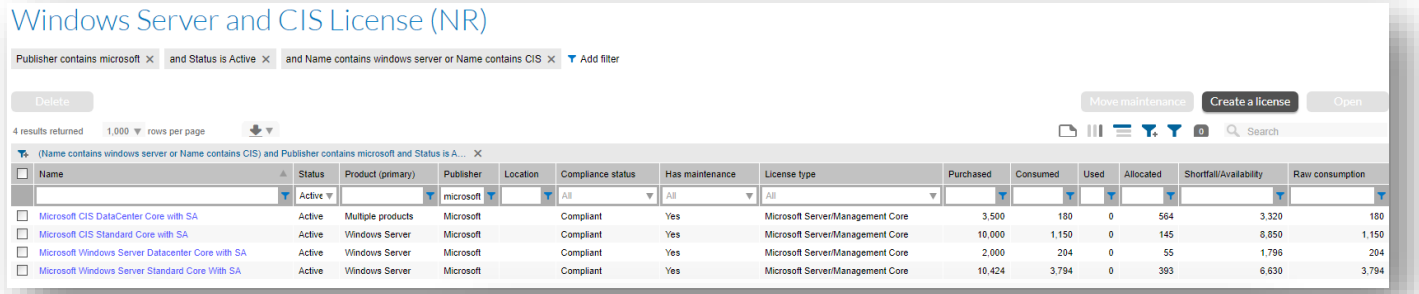


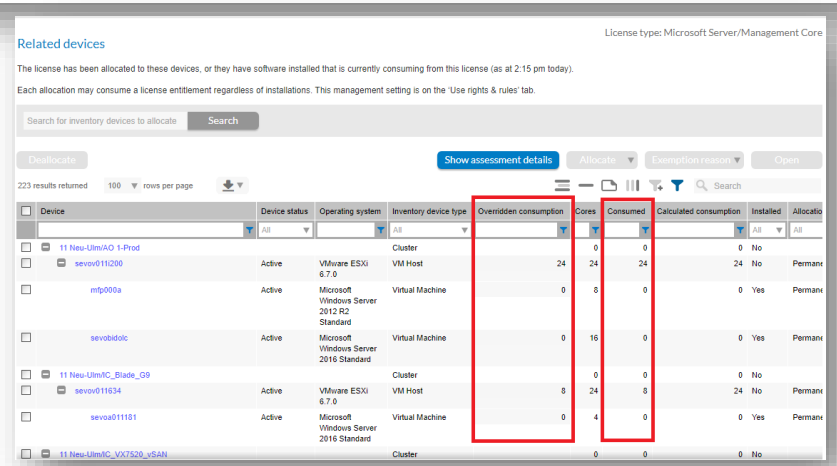


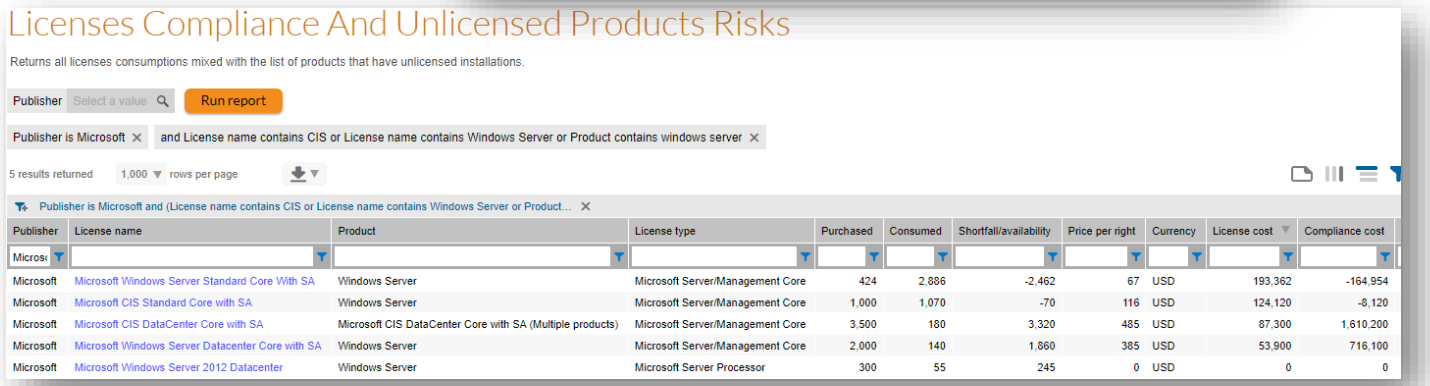
©2022 Flexera / Company Confidential

Details (2): Second position – Full Allocation From Report

- 4 licenses are created
  - Windows Server Standard & DataCenter
  - CIS Standard & DataCenter
  - Use the classical settings (Microsoft Server Management Core etc.)
  - However, consumptions will be forced by the Business Adapter, particularly for Standard Edition: **you need to check carefully that after reconciliation, consumed = overridden consumption (in some versions, there are issue)**
  - If you use the “Optimal” approach for VMs (A Windows Server Standard license can covers a DataCenter VM, you need to have both Standard and DataCenter edition on Windows Server even for the Standard licenses
- Check cost with this new OOTB report!
  - **Total License cost: USD553 K**
  - No unlicensed Windows Server installations

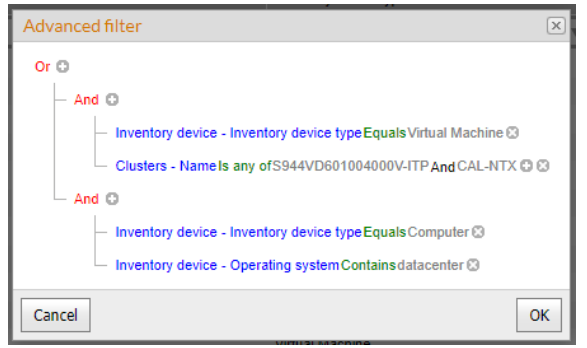


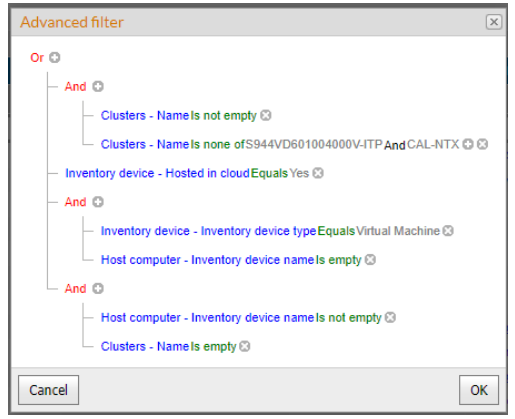




Details: third option - static clusters restrictions

- Analysis of the Windows Server Optimization Report
  - Identification of high-density Clusters
    - 100% of optimal recommendations = Windows Server DataCenter (No SCCM) Or CIS DataCenter (SCCM)
  - Creation of Restriction Groups
    - These Groups must be disjoined but cover all Windows Server devices
    - VMs and Computers requiring DataCenter licenses
      - Computers with DataCenter edition OS
      - VMs belonging to high density clusters
      - Note that you could create two datacenter reports that have no overlap. One for CIS (High density cluster, some SCCM), one for DataCenter (High density, no SCCM)
    - VMs requiring standard edition licenses
      - No Host / Or Host but no Cluster / Or With Cluster but not in a high-density cluster
    - Physical computers with Windows Server Standard OS
  - Creation of licenses
    - DataCenter (Classic way: Microsoft Management Core)
      - Restricted to the VMs and Computers requiring DataCenter licenses report
      - Using a unique restriction report will let reconciliation chose the best options (based on primary / supplementary)
      - Using two restriction reports will allow to fine tune (because thresholds are not the same)
      - Windows Server DataCenter (Covers Windows Server DataCenter and Standard (primary))
      - CIS DataCenter (Covers the two editions of Windows Server + agents (EndPoint Management…) (supplementary)

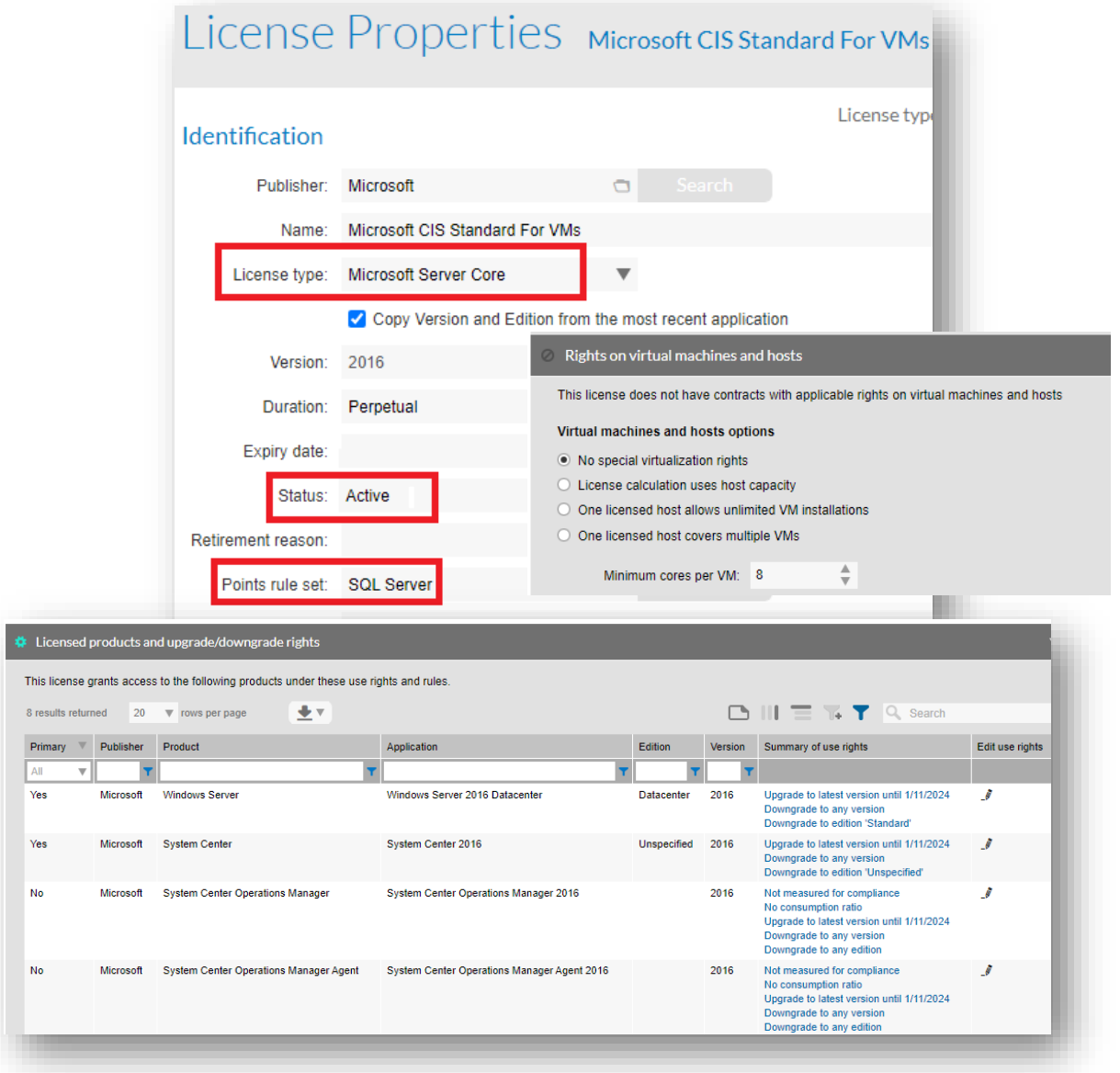




©2022 Flexera / Company Confidential

Details (2): third option - static clusters restrictions

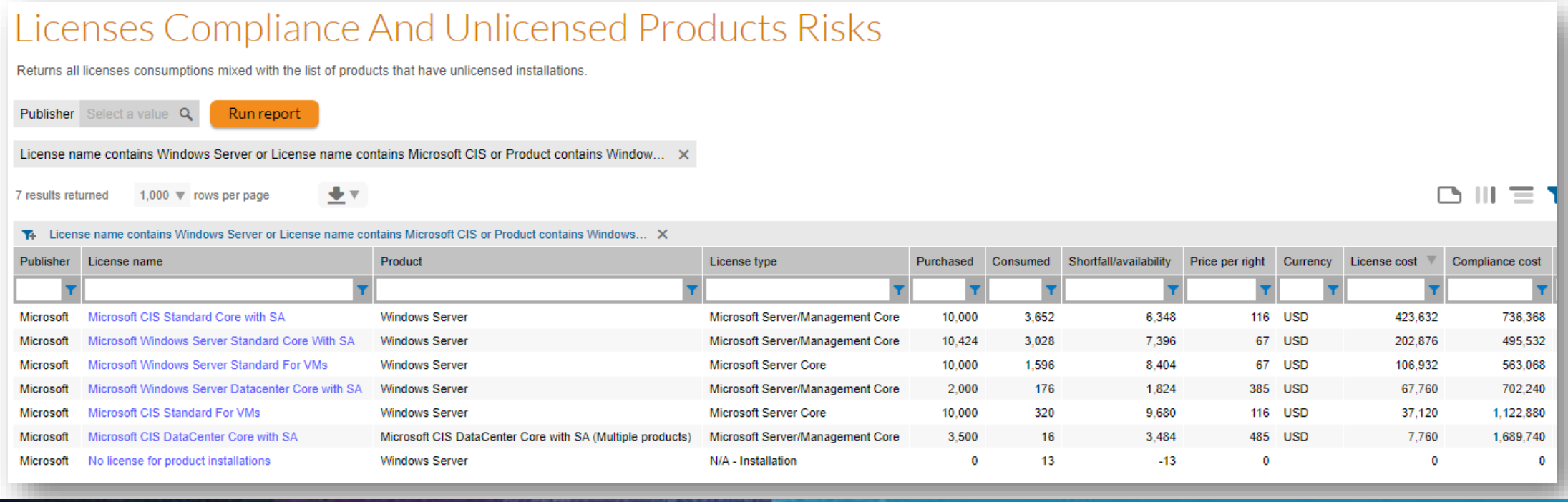
- Licenses for computers
  - Restricted to the “Physical computers with Windows Server Standard OS” report
  - Reconciliation will choose based on bundling
  - CIS Standard For Computers
    - Windows Server Standard only
    - System Center agents
  - Windows Server Standard For Computers
    - Windows Server Standard only
- Licenses For VMs (new with the new October 2022 “per VM” licensing with SA)
  - Restricted to the “VMs requiring standard edition licenses” report
  - Again, reconciliation will choose based on bundling priority
  - Use the Microsoft Core Licensing with a minimum of 8



©2022 Flexera / Company Confidential

Details (3): third option - static clusters restrictions

- Resulting consumption
  - USD 846K. This amount stands between the optimal license position obtained by license allocation that applied a host level optimization) and the cluster level optimization obtained by intelligent license restriction.



Licenses Compliance And Unlicensed Products Risks

Returns all licenses consumptions mixed with the list of products that have unlicensed installations.

Publisher Select a value Run report

License name contains Windows Server or License name contains Microsoft CIS or Product contains Window... ×

7 results returned 1,000 rows per page

License name contains Windows Server or License name contains Microsoft CIS or Product contains Windows... ×

Publisher	License name	Product	License type	Purchased	Consumed	Shortfall/availability	Price per right	Currency	License cost	Compliance cost
Microsoft	Microsoft CIS Standard Core with SA	Windows Server	Microsoft Server/Management Core	10,000	3,652	6,348	116	USD	423,632	736,368
Microsoft	Microsoft Windows Server Standard Core With SA	Windows Server	Microsoft Server/Management Core	10,424	3,028	7,396	67	USD	202,876	495,532
Microsoft	Microsoft Windows Server Standard For VMs	Windows Server	Microsoft Server Core	10,000	1,596	8,404	67	USD	106,932	563,068
Microsoft	Microsoft Windows Server Datacenter Core with SA	Windows Server	Microsoft Server/Management Core	2,000	176	1,824	385	USD	67,760	702,240
Microsoft	Microsoft CIS Standard For VMs	Windows Server	Microsoft Server Core	10,000	320	9,680	116	USD	37,120	1,122,880
Microsoft	Microsoft CIS DataCenter Core with SA	Microsoft CIS DataCenter Core with SA (Multiple products)	Microsoft Server/Management Core	3,500	16	3,484	485	USD	7,760	1,689,740
Microsoft	No license for product installations	Windows Server	N/A - Installation	0	13	-13	0		0	0

THANK YOU

Flexera

Inform IT. Transform IT.