SAM Monthly Best Practices Webinars

Session 5: FNMS 2021R1.4: Windows Server Optimization & Java embedded instances management

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Agenda

- Last session pointers and answers to questions

- News: FNMS 2021R1.4 (Windows Server Optimization)

- Management Of Java in FNMS
  - Recognition of Java Restricted versus Public
  - Ability to set up exemption by path: the new feature
  - End to end demo: Managing Java in FNMS

Last Session: Metering in FNMS

- **Useful pointers**
  - Recording and PowerPoint:
    - https://community.flexera.com/t5/Events-and-Webinars/Recording-and-Presentation-of-the-November-Monthly-SAM-Best/ba-p/214533/jump-to/first-unread-message
  - Answers to questions:
    - (on file usage) the slide says "installed through WMI packages only". What are these packages? Does he mean MSI packages?
      - Yes, MSI package, sorry for the typo. Fixes in the slide.
    - The number of unrecognized file evidences usually is huge and it's difficult and time consuming to go through them when trying to find out unmapped files that could be used for metering. Is it possible to create a report that would search unrecognized evidences based on the pattern of already processed evidences (i.e. same name, but different version or edition) and the output would be a recommendation to which application evidences should be linked? Something similar to "Recommended License Changes" functionality.
      - That's a good one: I have created a "Priority 1 Installer evidences" custom report that analyzes and prioritizes unrecognized installer evidences based on similar recognized ones… working on the file evidences versions (more performances challenges) and will publish both in February

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News

- **Flexera One 2021 R1.4 planned for Mid March 2022**
  - Windows Server Optimization
  - Automated Management of Java instances
  - Charge back new REST API

- **Recent features / changes**
  - Auto cleanup for Flexera Inventory data
  - Ability to replicate files on beacons (and not just the application server)
  - SQL Server
  - Adobe: no longer a Suite. OUI evidences no longer used for recognizing options and rarely for Oracle db (unspecified)

- **FNMS on Premise: next release: 2022 R1 in April 2022**

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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
- There are licensing choices to make
  - Is a Windows Server VMs to be considered differently if Std or Dtctr? ("Safe" or "Less Safe" approaches).
  - 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?

Windows Server Optimization Report

Computes the optimal license based on chosen metrics

Allows to choose the optimization approach

Provides the explanation for the choice

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

Microsoft Windows Server Optimization

Calculates the optimal license (either Windows Server DataCenter, Windows Server Standard, Core Infrastructure DataCenter or Core Infrastructure Stabdard) on VMs, hosts, or stand-alone devices. Please choose the options that fit your needs.

| License In Scope | Windows Server & CIS ▼ | Risk Approach | Safe ▼ | Assessment Metric | 90 Day peak ▼ | Show OrphanVMs | Yes ▼ | Search 🔍 | Run report |

Worst Case
90 Day peak
Highest VMs # in Cluster

Device type is VM Host ✕

245 results returned   20 ▼ rows per page   📥▼

[ConsumedOptimalLicense] ▲

| ☐	Cluster name	[ComputerName]	[NumberOfCores]	Device type	[OperatingSystem]	[LicenseConsumptionCores]	[ExplanationOfOptimalRecommended]	[LicensesCurrentlyConsumedInFNMS]	[OptimalLicenseCost] (USD)	[CostForLicenseHostInDataCenter] (USD)	[SavingOnServer] (USD)
				VM Host ▼							
⊞	[ConsumedOptimalLicense]: (184)										
⊟	[ConsumedOptimalLicense]: Microsoft Core Infrastructure Server Suite Standard Core (52)										
☐	11 Neu-Ulm/AO 1-Prod	sevov011i200	24	VM Host	VMware ESXi 6.7.0	24	Windows Server and CIS in scope. Safe approach: One VM installed with DataCenter in cluster triggers the need for DataCenter license. 90 Day Peak number of VMs on host.(VMs <10)	Core Infrastructure Server Standard	$2,283.60	$11,642.40	$9,358.80
☐	11 Neu-Ulm/IC_Blade_G9	sevov011634	24	VM Host	VMware ESXi 6.7.0	24	Windows Server and CIS in scope. Safe approach: One VM installed with DataCenter in cluster triggers the need for DataCenter license. 90 Day Peak number of VMs on host.(VMs <10)	Microsoft Windows Server Datacenter	$2,283.60	$11,642.40	$9,358.80
☐	11 Neu-	sevov011m219	36	VM Host	VMware ESXi	36	Windows Server and CIS in scope.	Core Infrastructure Server Standard	$3,425.40	$17,463.60	$14,038.20

Agenda

- The Java challenges…
  - Inventory
  - Host versus desktops
  - Embedded instances
- The Flexera One ITAM / FlexNet Manager answer
  - Normalization
  - New Embedded Path feature
  - Demo

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Context
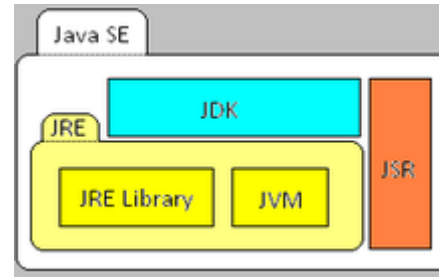
- Oracle has made JDK / JRE licensable for all editions in 2019

- Java JDK 11 (That includes JRE) is licensable...

- JDK / JRE version get licensable for new updates for corporations

- An option is to use OpenJDK, but this is a complex migration project

- Java is however included in some Oracle Licensed applications (see list below): https://www.oracle.com/technetwork/java/javase/terms/oaa.html

Java public and restricted versions: Patterns

https://www.oracle.com/java/technologies/javase/8u-relnotes.html

1. **Java SE 5:**
   1. Java 5 Until (& incl.) update 22 => "PUBLIC"
   2. Java 5 update 23 & up => "RESTRICTED"
   3. Java 5 (all update) where build >30 => "RESTRICTED"
2. **Java SE 6:**
   1. Java 6 Until (& incl.) update 45 => "PUBLIC"
   2. Java 6 update 51 & up => "RESTRICTED"
   3. Java 6 (all update) where build >30 => "RESTRICTED"
3. **Java SE 7:**
   1. Java 7 Until (& incl.) update 79 => "PUBLIC"
   2. Java 7 update 80 & up => "RESTRICTED"
   3. Java 7 (all update) where build >30 => "RESTRICTED"
4. **Java SE 8:**
   1. Java 8 Until (& incl.) update 202 => "PUBLIC"
   2. Java 8 update 211 & up=> "Restricted" (License change – 16/04/2019)
   3. Java 8 (all update) where build >30 => "RESTRICTED"
5. **Java SE 9 / 10**
   1. Java 9 & 10 => Public
   2. Java 9 & 10 (all update) where build >30 => "RESTRICTED"
6. **Java 11**
   1. Java 11 Until (&incl.) update 2 => Public
   2. Java 11 update 3 => "RESTRICTED"
7. **Java 12 and more => "Restricted" (Licensing modification – 16/04/2019)**
8. **Java 17: Public**

How this is reflected in the ARL

Application Properties Oracle Java Platform 8 Standard

Source:
Suite containing appl

Evidence

Installer	File	WMI	Access	Suite and member

File evidence

Search for file evidence to add	Search

Remove   Op

1 of 40 results selected   ✕   100 ▼ rows per page   ↓▼   🔍 Search

Drag a column header here to group by that column

	Name	Version	Description	Company	Recognition rule	Product version	Size (bytes)	Product name	Language
					All ▼				All ▼
☐	java.exe	8.0.%.61	Java(TM) Platform SE binary	Oracle%	At least one			Java(TM) Platform SE	All
☐	java.exe	8.0.212%	Java(TM) Platform SE binary	Oracle%	At least one			Java(TM) Platform SE 8	All
☐	java.exe	8.0.241%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.241%		Java(TM) Platform SE 8	All
☐	java.exe	8.0.251%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.251%			All
☐	java.exe	8.0.211%	Java(TM) Platform SE binary	Oracle%	At least one				All
☐	java.exe	8.0.231%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.231%			
☐	java.exe	8.0.2210.%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.2210.%		**Updates**	
☐	java.exe	8.0.2910.%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.2910.%			
☐	java.exe	8.0.2610.%	Java(TM) Platform SE binary	Oracle%	At least one	8.0.2610.12			
☐	java.exe	8.0.2710.%	Java(TM) Platform SE binary	Oracle%	At least one				
☐	java.exe	8.0.%.41	Java(TM) Platform SE binary	Oracle%	At least one				
☐	java.exe	8.0.%.48	Java(TM) Platform SE binary	Oracle%	At least one			**Builds**	
☐	java.exe	8.0.%.54	Java(TM) Platform SE binary	Oracle%	At least one			Java(TM) Platform SE 8	All
☐	java.exe	8.0.%.31	Java(TM) Platform SE binary	Oracle%	At least one			Java(TM) Platform SE 8	All
☐	java.exe	8.0.%.37	Java(TM) Platform SE binary	Oracle%	At least one			Java(TM) Platform SE 8	All

	Name	Description	Recognition rule	Version	Path	Proc
			All ▼			
☐	%/bin/java	Java(TM)%	At least one	1.8.0_%-b31		
☐	%/bin/java	Java(TM)%	At least one	1.8.0_%-b32	**Unix**	
☐	%/bin/java	Java(TM)%	At least one	1.8.0_%-b33		

Automated exemption of embedded Java instances

Application Recognition transparency Report

Ability to define the "embedded path"

Automated exclusion from license consumption

Application Transparency Report

Displays a list of installations with details about evidences used for recognition and whether the evidence matches a file path exemption.

Search | Run report

▼ Add filter

results returned | 20 ▼ rows per page | Search

Drag a column header here to group by that column

Evidence

	Evidence type	Raw installer evidence type	Inventory date	Raw evidence name	Raw evidence version	Raw file path	Raw evidence publisher	Raw description	Raw file size	Path exemption reason	Connection name
	All										
☐	File		7/8/2021	java.exe	8.0.2710.9	C:\Program Files\Java\jdk1.8.0_271\bin\	Oracle Corporation	Java(TM) Platform SE binary	276,608		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2710.9	C:\Program Files\Java\jdk1.8.0_271\jre\bin\	Oracle Corporation	Java(TM) Platform SE binary	276,608		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2910.10	C:\Program Files (x86)\Common Files\Oracle\Java\javapath_target_2864041375\	Oracle Corporation	Java(TM) Platform SE binary	276,256		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2910.10	C:\Program Files (x86)\Java\jre1.8.0_291\bin\	Oracle Corporation	Java(TM) Platform SE binary	245,536		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2910.10	C:\Program Files\Java\jre1.8.0_291\bin\	Oracle Corporation	Java(TM) Platform SE binary	276,256		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2510.8	C:\Program Files (x86)\Common Files\Oracle\Java\javapath_target_2721846218\	Oracle Corporation	Java(TM) Platform SE binary	208,040		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2510.8	C:\Program Files (x86)\Java\jre1.8.0_251\bin\	Oracle Corporation	Java(TM) Platform SE binary	192,680		FlexNet Manager
☐	File		7/8/2021	java.exe	8.0.2510.8	C:\Program Files\Java\jre1.8.0_251\bin\	Oracle Corporation	Java(TM) Platform SE binary	208,040		FlexNet Manager
☐	File		7/8/2021	java.exe	6.0.210.51	E:\Siebel\15.0.0.0\eappweb\jdk\bin\	Sun Microsystems, Inc.	Java(TM) Platform SE binary	139,264	Part of a Siebel install	FlexNet Manager
☐	File		7/8/2021	java.exe	6.0.210.51	E:\Siebel\15.0.0.0\eappweb\jdk\jre\bin\	Sun Microsystems, Inc.	Java(TM) Platform SE binary	139,264	Part of a Siebel install	FlexNet Manager
☐	File		7/8/2021	java.exe	6.0.210.51	E:\Siebel\15.0.0.0\ses\jdk\bin\	Sun Microsystems, Inc.	Java(TM) Platform SE binary	139,264	Part of a Siebel install	FlexNet Manager
☐	File		7/8/2021	java.exe	6.0.210.51	E:\Siebel\15.0.0.0\ses\jdk\jre\bin\	Sun Microsystems, Inc.	Java(TM) Platform SE binary	139,264	Part of a Siebel install	FlexNet Manager
				java.exe	6.0.750.13	C:\Users\eglc_006_a_kubicza\AppData\Local\Temp\deinstall2018-05-17_01-47-05PM\jdk\bin\	Sun Microsystems, Inc.	Java(TM) Platform SE binary	172,944		FlexNet Manager

Exemption by file path

Installations with the following file paths do not contribute to license consumption:

3 results returned | 20 ▼ rows per page | Search

Path	Exemption Reason	Version	Actions
⊟ Paths			+
C:\Users\EGLC_006_a_schiseb\%	schiseb User exemption (dummy)		🗑 ✎
E:\Siebel%	Part of a Siebel install	%	🗑 ✎

License Properties Oracle Java Platform All Versions

Related devices

License type: Oracle Processor

Save | Close

...cated to these devices, or they have software installed that is consuming from this license (as at 7:03 pm 1/5/2022).

Search

Show assessment details | Allocate ▼ | Exemption reason ▼ | Open

rows per page | Search

	...ce name	Consumed points	Licensable	Installed	Used	Allocation type	Exemption reason
	s122...	0	Yes	No	Unallocated	Exempted by file path
☐	s1220001307a	1	Yes	No	Unallocated	
☐	sedcmfcos001	2	Yes	No	Unallocated	
☐	sgagawvuni01	1	Yes	No	Unallocated	
☐	tgicbgwv0004	1	Yes	No	Unallocated	
		5		5	0	0	

- Compliance
- Identification
- Use rights & rules
- Applications
- Purchases
- Financial
- Contracts
- Consumption

End to end process in FNMS

- Create two licenses (one for Servers, One for Desktops)
- Allocate servers to the server license and desktop to the desktop licenses
- Observe raw file evidences in the "Application transparency" report and their path to identify "embedded paths"
- Tweak the "Exemption by path" of the two licenses
- Wait for next import, observe, tweak again…
- Maintain the allocations of new Java devices, delete the useless allocations

Saved screens to maintain

Servers with Java to allocate to the Java Server License (NR)

Installations and allocations of | Oracle Java Platform ✎ | and Installed/Allocated is Installed ✕ | and Operating system contains Windows Server or Operating system does not contain Windows or (Operating… ✕ | ▼ Add filter

| Deallocate | Remove exemption | | | Allocate | Exempt | Open ▾ |

9 results returned | 50 ▼ rows per page | ⬇▾ | 🗎 ⦀ ☰ ▼₊ ▼ | 🔍 Search

Drag a column header here to group by that column

▼₊ License - Installed/Allocated is Installed and (Inventory device - Operating system contains Windows… ✕

	License			Inventory device		Application	Inventory device		User	Inventory device	License	
☐	Installed/Allocated	License type	License name	Operating system	Role	Application name	Device name	Host	User name	Cores	Consumed	Allocated
	Installed ▼	All ▼	▼	▼	▼	▼	▼	▼	▼	▼	All ▼	All ▼
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2012 R2 Standard	Production	Java Platform 6 Standard	d1220001062a			2	Yes	No
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2016 Standard	Production	Java Platform 8 Standard	d137i001			2	Yes	No
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2012 R2 Standard	Production	Java Platform 6 Standard	d1220001006a			2	Yes	No
☐	Installed			Microsoft Windows Server 2016 Standard	Production	Java Platform 5 Standard	i050awbde004			2		
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2012 R2 Standard	Production	Java Platform 8 Standard	d1220001062a			2	Yes	No
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2016 Standard	Production	Java Platform 8 Standard	d1220001038a			4	Yes	No
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2012 R2 Standard	Production	Java Platform 8 Standard						
☐	Installed	Oracle Processor	Oracle Java Platform Servers	Microsoft Windows Server 2016 Standard	Production	Java Platform 12 Standard						

Advanced filter ✕

And ⊕
   ├─ License - Installed/Allocated **Equals** Installed ⊗
   ├─ Inventory device - Operating system **Contains** Windows ⊗
   └─ Inventory device - Operating system **Does not contain** server ⊗

| Cancel | | OK |

Advanced filter ✕

And ⊕
   ├─ License - Installed/Allocated **Equals** Installed ⊗
   └─ Or ⊕
       ├─ Inventory device - Operating system **Contains** Windows Server ⊗
       ├─ Inventory device - Operating system **Does not contain** Windows ⊗
       └─ And ⊕
           ├─ Inventory device - Operating system **Does not contain** Windows ⊗
           └─ Inventory device - Operating system **Does not contain** MacOS ⊗

| Cancel | | OK |

THANK YOU