

**flexera**<sup>™</sup>

# RED HAT

## Subscriptions in FNMS

# Background – RHEL Subscription models

**Virtual deployment subscriptions** - Subscription model that allows unlimited RHEL virtual instances, best for high-density virtual environments. Offered on a physical socket-pair basis.

- Red Hat OpenStack® Platform.
- Red Hat Enterprise Linux for Virtual Datacenters.
- Red Hat Enterprise Linux Add-Ons.

**RHEL Server subscription** – Applied to Non-Virtualised environments OR low-density virtual environments OR Cloud deployments. Can be used on any or all of these environments.

- Based on socket-pairs for each physical node OR two virtual nodes.
- Subscription must be assigned and re-assigned between physical (socket-pair) and virtual ( 2 virtual nodes) models

# Context – Physical to Virtual Mapping

Due to the subscription models in use it is crucial to map your Virtual Machines in FNMS with the correct VM Hosts.

Without this mapping in place there are significant challenges if the customer is using any Virtual Deployment Subscriptions (such as RHEL for Virtual Datacenter subscriptions). This is done in different ways for different Hypervisor Technologies. For example:

## Red Hat Virtualisation and Kernel Based Virtualisation

- Based on Kernel Virtual Machines (KVMs).
- The collection of virtualisation relationship data for KVMs is supported from FNMS 2019 R2 and Flexnet Agent 14.0.0
- Requires the agent installed on the VM and remote inventory from the beacon or agent install for each VM Host.

## Vmware vSphere

- Standard inventory from Vcenter connection is required to provide mapping of VM to VM Host (and Cluster)



# Virtual Deployment subscriptions (Eg RHEL for Virtual Datacenters)

License Type in FNMS = Processor Points. Use custom points table as per the below screenshot.

<input type="checkbox"/>	On Prem 3 socket servers	Local	1.3333330	*	*		3	3	On-premises
<input type="checkbox"/>	On-Prem 2 proc servers	Local	1.0000000	*	*		2	2	On-premises
<input type="checkbox"/>	On-Prem 4 socket servers	Local	1.0000000	*	*		4	4	On-premises
<input type="checkbox"/>	On-Prem 5 socket sservers	Local	1.2000000	*	*		5	5	On-premises
<input type="checkbox"/>	On-Prem 6 socket servers	Local	1.000	*	*		6	6	On-premises
<input type="checkbox"/>	On-Prem 7 socket servers	Local	1.1428500	*	*		7	7	On-premises
<input type="checkbox"/>	On-Prem 8 socket servers	Local	1.0000000	*	*		8	8	On-premises
<input type="checkbox"/>	On-Prem single sockets servers	Local	2.0000000	*	*		1	1	On-premises

Unit Quantity should be 2.

Restricted to On-Premise and Private Clouds. Virtualisation Rights set to unlimited VMs per Host.

**Cloud service providers**

License entitlements can be consumed differently per cloud service provider. Use these rules to include or exclude consumption based on where the software is hosted.

This license may consume entitlements when software is hosted in the following places:

- On-premises
- Any cloud service provider
- Selected cloud service providers
  - Amazon Web Services
  - Google
  - IBM SoftLayer
  - Microsoft Azure

**Rights on virtual machines and hosts**

This license does not have contracts with applicable rights on virtual machines and hosts

**Virtual machines and hosts options**

- No special virtualization rights
- License calculation uses host capacity
- One licensed host allows unlimited VM installations
- One licensed host covers multiple VMs

Must be allocated to selected VM Hosts where virtualisation density is such that the use of the 2 Virtual Node licenses is not optimal (Red Hat suggest this license is used wherever there are more than 4 VMs per VM Host. Customer will have allocated these licenses to specific VM Hosts)

# RHEL Server Subscription (Socket-Pair OR 2 Virtual Nodes) - Challenges

Supports two counting methods for different environments (Socket-Pair for Non-Virtual environments and 2 Virtual Nodes per license for Low Density Virtual environments and Public Clouds)

- Should be managed as 2 Licenses in FNMS, with volumes re-assigned between licenses as needed (as per Red Hat practice)
- License 1 = 'RHEL Server subscription | Socket-Pair' - for Standalone Physical Devices (Computers in FNMS)
- License 2 = 'RHEL Server subscription | 2 Virtual nodes' - for Virtual Servers not licensed by Virtual Deployment subscriptions (Eg RHEL for Virtual Datacenters) and for Virtual instances hosted in Public Clouds (Eg AWS).

See following slides for details.

# RHEL Server subscription | Socket-Pairs

Relates to the use of RHEL on Standalone Physical Servers

Purchase Unit Quantity should be set to 2.

License Type = Processor Points, create a points ruleset as follows to ensure the Purchase unit quantity of 2 is consumed correctly.

<input type="checkbox"/>	On Prem 3 socket servers	Local	1.3333330	*	*	3	3	On-premises
<input type="checkbox"/>	On-Prem 2 proc servers	Local	1.0000000	*	*	2	2	On-premises
<input type="checkbox"/>	On-Prem 4 socket servers	Local	1.0000000	*	*	4	4	On-premises
<input type="checkbox"/>	On-Prem 5 socket sservers	Local	1.2000000	*	*	5	5	On-premises
<input type="checkbox"/>	On-Prem 6 socket servers	Local	1.000	*	*	6	6	On-premises
<input type="checkbox"/>	On-Prem 7 socket servers	Local	1.1428500	*	*	7	7	On-premises
<input type="checkbox"/>	On-Prem 8 socket servers	Local	1.0000000	*	*	8	8	On-premises
<input type="checkbox"/>	On-Prem single sockets servers	Local	2.0000000	*	*	1	1	On-premises

Restricted to On-Prem and Private Clouds. No Virtualisation rights.

## Cloud service providers

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- Any cloud service provider ↵
- Selected cloud service providers
  - Amazon Web Services
  - Google
  - IBM SoftLayer
  - Microsoft Azure

## ⊗ Rights on virtual machines and hosts

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### Virtual machines and hosts options

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- License calculation uses host capacity
- One licensed host allows unlimited VM installations
- One licensed host covers multiple VMs

Must be periodically allocated to all 'Computers' in FNMS where RHEL is found

# RHEL Server subscription | 2 Virtual Nodes –

License Type in FNMS = Device License

Purchase Unit Quantity = 2 (defined in the Purchase).

Allocated to all VMs where VM Host is not licensed by Virtual Deployment Subscription (Eg RHEL for Virtual Datacenters socket-Pair subscriptions). Only option for licensing Public Cloud virtual instances

## Cloud service providers

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### Virtual machines and hosts options

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# Allocation

Allocation may be done with Business adapter or using Apply Allocations & Exemptions View (which can be saved as a Management View for repeated use)

Update is suggested to be weekly or Monthly or prior to extracting reports.

Following logic should be applied:

- All VMs hosted on Heavily Virtualised VM Hosts (List supplied by Customer or filtered by Hosted VMs > X, or based on other criteria such as device name) allocated to 'Virtual Deployment subscription | Socket-Pair' License
- All other VMs (Including Public Cloud VMs) allocated to 'RHEL Server subscription | 2 Virtual Node' License
- All Computers allocated to 'RHEL Server subscription | Socket-Pair' License.