Virtualization Licensing for OpenVMS guests

FAQ

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Restricted (Partners OK)

Definitions

Processor: The component that plugs into a processor socket – it may contain more than one processor core.

Core: The actual data-processing core within a Processor – there may be multiple cores within a single processor

Per Core Licensing (PCL) – the licensing metric for OpenVMS software that enables customers to license software based upon the number of cores in the server or hard partition. This licensing model is available in previous generation of Integrity servers.

Per Socket Licensing (PSL) – a licensing model used to allow customers to license OpenVMS software based upon the number of sockets in the hard partition or server regardless of the number of cores. This is referred to as per-socket licensing. This licensing is exclusive to the new Integrity Servers introduced in April 2010 (BL8x0c i2, rx2800 i2).

New Integrity servers: A new generation of Integrity servers introduced in April 2010. It includes the BL860c i2, BL870c i2, BL890c i2, rx2800 i2. The New Integrity servers are licensed on the per socket basis.

Hard partitions (nPartitions or nPars) a partitioning technology from HP on cell based servers that offers electrical isolation and cell board granularity, allowing you to service one partition while others are online.

HP Integrity Virtual Machines (Integrity VM) is a software partitioning product which provides virtualization of resources, shared CPU with sub-CPU granularity, shared I/O, and resourcing based on demand and entitlement for HP Integrity servers running HP-UX 11i v2 or higher (OpenVMS guests will be supported only on HP-UX 11iv3 or higher). HP Integrity VM provides the ability to allocate CPU and I/O to an application at a granularity less than that of the physical hardware, yet keeps applications separate from one another in their own operating system instance. Integrity VM virtualizes the processing cores and software for the guest operating systems running on “virtual CPUs” in the virtual machine. A virtual CPU represents no more than one core.

CPU: Central Processing Unit. For software purposes, a CPU is a schedule-able entity which could be a processor (single core) or a core.

Virtual CPU (vCPU): A CPU that has been virtualized by Integrity VM. A virtual CPU represents no more than one core.

Overview

What is Virtualization licensing for OpenVMS and how is it different from what HP offers today?

Virtualization licensing caps licenses required at the number of cores or sockets (for new Integrity server) in the nPar or server to allow customers to run as many instances of software as they need on a server with Integrity VM without needing to pay for additional licenses. It also allows customers to purchase layered software licenses for less than the full capacity of a server or hard partition (nPar) when the software will be run in Integrity Virtual Machines (Integrity VM). Virtualization licensing applies to software from HP for HP Integrity servers that are licensed on a Per Core Licensing or a Per Socket Licensing basis. Virtualization licensing is not applicable for software licensed on a per-user or per-server basis.

How is Integrity VM licensed?

Integrity VM is licensed across the full nPartition or server. Consequently, it needs to be licensed for all of the active cores or sockets (for New Integrity servers) in the nPartition or server.

How does virtualization licensing work for OpenVMS Operating Environments in a homogeneous environment i.e. all the guests running on Integrity Virtual Machine are OpenVMS guests?

In case of a homogeneous environment, Operating Environments need to be licensed for all the active cores or sockets(for New Integrity servers) in the nPartition or server. This allows the customer to run as many instances of the Operating System as virtual machines as desired without requiring additional licenses. At any point of time, the number of licenses for the Operating System (across all Operating Environment) should be equal to the number of active physical cores or sockets in the nPartition or server.

For a more detailed description of the various licensing options in homogeneous environments, see the Virtualization Quick Reference Guide.

How can customers license OpenVMS Application software, for use in HP Integrity Virtual Machines?

HP offers virtualization licensing for OpenVMS Application software offered on a per core licensing or a per socket licensing basis. The licensing rules for the layered software are explained below.

Virtualization licensing allows the following 2 choices for licensing the software:

1. Software may be licensed for all of the active cores/sockets in the nPartition or server. This allows you to run as many instances of the software in the virtual machines as you desire without requiring additional licenses. It is beneficial if you intend to run the same software across all or most virtual machines or if you intend to change the configuration often and don't want to worry about compliance.

2. Software may be licensed for the maximum virtual CPUs that the software will be run on within virtual machines. Of course, if the customer adds more virtual CPUs to the virtual machine at a later date, the customer is responsible for licensing the appropriate software licensing fees. For example, if you are running OpenVMS application software in a virtual machine with 1 virtual CPU on a server with 4 cores, you could pay for just one per core license. This method will be most beneficial when you intend to run the software on only a small portion of the nPartition or server. This licensing option can significantly reduce licensing costs for customers versus previous licensing options.

(Note: The above Virtualization Licensing choices are only available for products which are offered on a per core/per socket Licensing basis. For software products licensed on a per-user or per-server basis, Virtualization Licensing is not applicable.)

When should a customer license application software based upon cores/sockets in the server and when, based upon the virtual CPUs in the virtual machines?

Most customers will still license based upon the cores/sockets in the nPartition or server. This is generally the best method for licensing if the customer plans to:

- Run the same software across all virtual machines in the nPartition or server. In this case, customers may run as many instances of the software in the virtual machines as desired without requiring additional licenses.
- Change the configuration often and want to make sure they are in compliance.
- Don't know how they want to configure the virtual machines at the time they place the order.

Licensing software for just the virtual CPUs in virtual machines can reduce costs in cases where:

- Customer will run a software product on only a small portion of the nPartition or server. Examples:
    - Database & applications
    - Testing & development

Why would customers want to license software for only the virtual CPUs or cores/sockets that the software is running on within an nPartition or server?

There are two key reasons: reducing costs and optimizing the solution for consolidation. Customers may reduce costs by licensing software only for the virtual CPUs or cores/sockets that it will run on particularly when it runs on a small subset of the cores/sockets in the nPartition or server. Customers will be able to architect their systems based upon the best technical solution rather than being hindered by software licensing issues. This enables more effective consolidation.

Terms and Conditions

What software may be licensed under virtualization licensing?

All HP software for HP Integrity servers that is currently licensed using per core/socket licensing are covered under virtualization licensing

Primary products include OpenVMS Operating Environments, and OpenVMS Application software. Virtualization Licensing is not applicable for software products that are licensed on a per-server or per-user basis.

Can you be more specific about products that are NOT included?

OpenView products sold on a standalone basis are not included in this program at this time.

For OpenVMS layered software, any software that is not licensed on a per core/per socket licensing basis is not applicable for the program. Some of the most common non-PCL products include:

- Tier based licenses
- Per Cluster licenses
- User based licenses

Can I use my existing OpenVMS Operating Environment and OpenVMS Application software licenses in HP Integrity VM virtual machines under the new Virtualization Licensing program?

Yes. You may use existing licenses under the new Virtualization Licensing program, as long as the version is supported on HP Integrity Virtual Machines. Please note that only OpenVMS v8.4 or later versions will be supported on HP Integrity Virtual Machines. If you have an earlier version of OpenVMS and you are under standard support policy that has software upgrade services, you may upgrade your existing OpenVMS license to OpenVMS v8.4 (as per applicable trade-in/upgrade policies). You may then transfer the license from your existing server to a new server running Integrity VM. Please make sure you notify HP Services if you are transferring your license from one server to another.

Do I have to purchase an HP-UX Operating Environment for the HP Integrity VM Host?

No. Customers do not have to purchase HP-UX Operating Environment license for running HP Integrity VM Host. An operating environment of HP-UX 11iv3 is included in the HP Integrity VM software.

However, please note that the HP-UX 11iv3 operating environment that is included in the HP Integrity VM software is for interacting with the hardware only. Customers must purchase appropriate HP-UX license if they wish to run HP-UX environments as guests on HP Integrity VM (alongside OpenVMS guests or standalone).

So if I buy a 16 core server with Integrity VM and OpenVMS High Availability Operating Environment (HA-OE) for each of the Integrity VM virtual machines, what do I need to license?

You should purchase 16 Per Core Licenses of Integrity VM and 16 Per Core Licenses of OpenVMS High Availability Operating Environment.

For a more detailed description of the various licensing options in all virtualization environments, see the Virtualization Quick Reference Guide.

What if the customer purchases licenses for less than the full capacity of the server, but later increases the number of vCPUs allocated to the virtual machines running the software?

If the customer makes additional active vCPUs available to a virtual machine, they must make sure that they have sufficient software licenses to remain compliant. If the customer has fewer than necessary, the customer is responsible for paying the applicable license fee.

If a customer purchases HP software to run in Integrity VM, are they required to purchase software for only the vCPUs that the software runs on? Or can they simply license the software based upon the cores in the nPartition or server?

Customers can always choose to license based upon the active cores/sockets in an nPartition or server, and many will continue to license in this way. However, HP is providing customers the option to license software based upon only the virtual CPUs that the software runs on, within an Integrity VM.

If a customer purchases a Montvale/Montecito processor based server with 16 cores, but only 8 were activated, is this virtualization licensing?

No, that program is called HP Instant Capacity. Under that program, customers can deploy a server fully loaded with cores, yet pay for only the cores they plan to use on day one, with the exception of a nominal up-front fee or "deposit". When their needs change and they require more processing power, they can instantly activate the additionally needed cores.

How does HP determine if a customer is in compliance with the virtualization licensing terms and conditions?

In HP's terms and conditions, HP reserves the right to audit software license compliance. If the audit reveals underpayment, the customer will then pay HP the appropriate licenses to come into compliance.

ISV Status

Does the Virtualization Licensing program apply to software from other vendors?

The Virtualization Licensing Program specifically addresses licensing of HP software for HP Integrity that is licensed on a Per Core License basis today. HP is working with software vendors that currently license on a Per Core basis to promote adoption of virtualization licensing programs for their software. Several key ISVs have announced licensing program for virtualized environments that are very similar to HP's Virtualization Licensing program.

Support

How do I get support for Integrity VM software as well as the software licensed under virtualization licensing?

Software support is available for Integrity VM and software licensed under virtualization licensing just as it is available for other HP Software. The process of purchasing software support is the same as on standard servers for both HP Integrity VM and for the software that is run in the virtual machines.

What quantity of software support is required under virtualization licensing?

The quantity of software support needs to match the quantity of required licenses. For example, if only 2 Per Core Licenses of OpenVMS are required, then only 2 Per Core Licenses of OpenVMS software support are required.

Ordering Process

How do customers order licenses under the virtualization licensing Program?

There is no special ordering procedure required to purchase software licenses under the Virtualization Licensing Program. The customer simply needs to determine the number of licenses required, and order them. In the ordering process, when application software to be run on Integrity Virtual Machines are ordered, the customer may choose to license across all cores in the nPartition or server, (the default) or they may choose to purchase licenses for the maximum Virtual CPUs in the virtual machines that the customer intends to run the software on.

Are the licenses under the Virtualization Licensing program different than the licenses purchased today for OpenVMS?

No. The software licenses and part numbers are identical. The key difference in this program is the way that the software is ordered. Rather than buying software for the full nPartition or server, customers purchasing Integrity VM can now purchase application software, in increments of one core, for only the virtual CPUs that the software runs on.

Does HP have unique part numbers for software licensed under Virtualization Licensing?

No. All part numbers are the same.

Which Operating System Tier should I choose when I license the guest Operating Environment?

The Operating System Tier would depend upon the hardware platform that you are running your virtualized environment on. The tiers for OpenVMS guests would remain the same as that for OpenVMS standalone systems.

Where can I find examples of Virtualization Licensing?

The Virtualization Quick Reference Guide is the best source for detailed descriptions and examples.