Container Licensing

Virtualization Capacity licensing rules for IBM programs deployed in container environments

Licensing Guide

Effective: January 2022

Last update: February 2023

IBM

Version History

Version	Updates
February 2022	– Initial version
April 2022	– Explanation added that not all containers/PODs may require licenses, and that Kubernetes Annotations can be used to mark the licensing status of individual containers or PODs.
	– Update to scenario 2 to explain that IBM License Service now has the capability to adjust for Hyperthreading and Simultaneous Multithreading.
October 2022	– Added an additional scenario and FAQ entry which address Rolling Update capabilities of Kubernetes and how IBM License Service v1.18 prevents accidental over-counting of license requirements during an application update.
February 2023	– Updating document links

Contents

Overview

Container technology is a form of virtualization that is quite different from the 'traditional' virtualization technologies. IBM is one of the first vendors to introduce a Container licensing model for those IBM software products that are capable of running as container images within Kubernetes clusters. This new capacity licensing model has been introduced to align with flexibility provided by Kubernetes platform technologies such as RedHat OpenShift.

As IBM clients modernize their applications and transition to Kubernetes container platforms, they need to be aware of the Container Licensing policy. This licensing guide introduces key concepts for Kubernetes-orchestrated container environments, explores how licenses should be counted, the common metrics used, and the key differences between Container Licensing and Sub-Capacity licensing.

This guide is intended as a general licensing knowledge resource. While it may explore scenarios and discuss the licensing implications of hardware configurations, it is not intended to provide advice for specific client circumstances. Always consult your IBM representative should you have any questions or concerns about Container licensing in your IBM estate.

Note that Container Licensing is a separate licensing policy to Sub-Capacity. Sub-Capacity is used for licensing 'traditional' virtual machines and is discussed in more detail on the Guides page.

Key Terms

The following terms are used throughout this document and are fundamental to understanding its contents. This is not an exhaustive list, and some concepts may be discussed in other licensing guides or rely on assumed knowledge.

Cloud Paks

Suites of IBM programs which provide solutions to solve client needs. Cloud Paks are primarily intended to be deployed on Kubernetes-orchestrated container platforms but can be deployed on traditional virtualization technologies or as a hybrid deployment.

Container

A lightweight and portable executable image that contains software and all its dependencies.

CPU Limit

A setting which constrains the processing capacity consumed by containers in a Kubernetes Namespace.

Kubernetes

A program which manages (or "orchestrates") the running of containerized applications. Kubernetes is a management platform and can manage multiple types of container technology.

Kubernetes cluster

One or more worker nodes working together to run containerized applications

Pod

A set of one or more containers running on Kubernetes

vCPU

Virtual Central Processing Unit. In IBM licensing, a vCPU is also referred to as a Virtual Processor Core (VPC). For those processors where hyperthreading or simultaneous multithreading (SMT) is enabled, a vCPU represents an available thread of the physical processor core.

Worker Node

A machine that provides a containerized environment for running tasks.

Worker Node Capacity

The total capacity available to the worker node, measured by either virtual or physical processor cores.

Introduction

IBM Container Licensing applies to IBM programs deployed in containers (referred to as being "containerized") which run on Kubernetes-orchestrated platforms such as RedHat OpenShift. The containerized software may be an individually packaged IBM program or a Cloud Pak, which is a suite of interconnected programs.

The most common license metrics relating to containerized IBM programs are Processor Value Unit ("PVU") and Virtual Processor Core ("VPC").

To take advantage of IBM's Container Licensing policy you must sign a Passport Advantage Addendum. This Addendum includes an obligation to use IBM License Service to monitor usage and requires you to generate and keep reports on a frequent basis to evidence your usage.

Container Licensing

IBM Container Licensing applies to **IBM Certified Containers** and **IBM Cloud Paks** that run as **Pods**.

– IBM Certified Containers are pre-packaged containers provided by IBM, built with open standards and are integrated into the Kubernetes platform for management.

– IBM Cloud Paks are bundles of containers that are commonly used together. To make things easier for our clients, we provide them as a package.

To learn more about IBM Certified Containers, see this link.

To learn more about IBM Cloud Paks, see this link.

Key Kubernetes Terminology

Kubernetes uses terminology specific to the technology. It is important to understand these terms. This guide only describes the concepts at a basic level. See the 'Further Reading' section for more detailed resources.

The container itself is not considered to be part of Kubernetes architecture. This is because containers are reusable, ready-to-run software packages which can be deployed on a container technology. Kubernetes is a platform for managing container workloads and supports multiple container technologies such as Docker, containerd, CRI-O.

Working from the lowest level up:

– A **Pod** is a group of one or more containers which share storage and network resources. A Pod can either run a single container (most common) or multiple containers (where the Pod acts as a "wrapper" binding the containers together into one package)

– A **Workload** is an application running on Kubernetes. It comprises a set of Pods.

– Pods are hosted by **worker nodes**.

– Worker nodes are organized into **clusters**. A cluster must have at least one worker node. Having multiple worker nodes in a cluster provides fault-tolerance and high availability.

Administration of the worker nodes and Pods is done using the **control plane**.

IBM makes use of **Kubernetes Annotations** to describe the software running within a Pod, helping to identify whether it is a component of a larger solution (such as a Cloud Pak), or a standalone product itself as well as other properties such as its license metric and program name.

Administering Processing Capacity

Each IBM Certified Container within a Pod has two settings relating to the processing capacity that should be assigned to it: the **request** and the **limit**.

–   The container is guaranteed to get the amount of capacity it requests.

–   The limit makes sure that a container can never go above a certain value.

–   If no limit is specified, Kubernetes assumes the container can get up to the maximum available processing capacity in the worker node.

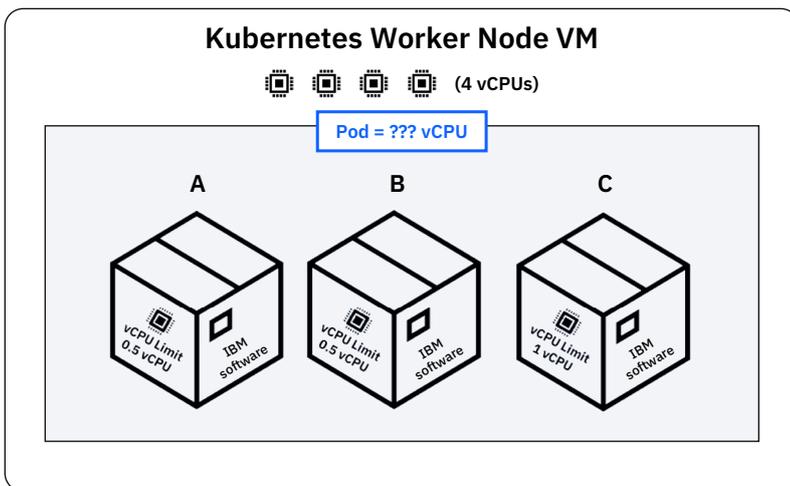## *Passport Advantage License Addendum*

You must sign a Passport Advantage Addendum to take advantage of IBM Container Licensing. The Addendum provides important guidance on the use of IBM License Service and compliance and reporting obligations.

The Addendum is available in full [here](#): four key terms are summarized below:

Eligible Products	An Eligible Product is an IBM Program that has been converted into containerized images that are supported to run in a containerized Kubernetes environment. The Product must have been enabled to be properly discovered and metered by IBM License Service. The section below on Kubernetes Annotations is relevant to enabling this.
IBM License Service	IBM License Service must be implemented within 90 days of the first use of an Eligible Product. IBM License Service is the only authorized license metering tool recognized by IBM for container licensing.
Reporting Requirements	Audit reports must be generated from IBM License Service on a quarterly basis and archived for up to two years. These audit reports must be made available to IBM or its designated auditors upon request.
If IBM License Service is not used	Clients who do not use IBM License Service will be required to license all the vCPUs available across all worker nodes in the Kubernetes cluster. This is because when taking advance of Kubernetes, containers can run on any node within the cluster. There is the potential that a single IBM program could take advantage of the entire capacity of the cluster at once.

Counting the number of licenses required

For each licensable IBM Container within a Pod, the vCPU Limit needs to be licensed. Therefore, the number of licenses required for a Pod is the sum of all the vCPU Limits of the active containers running within the Pod, capped at the vCPU capacity of the worker node(s) on which the Pod is running.
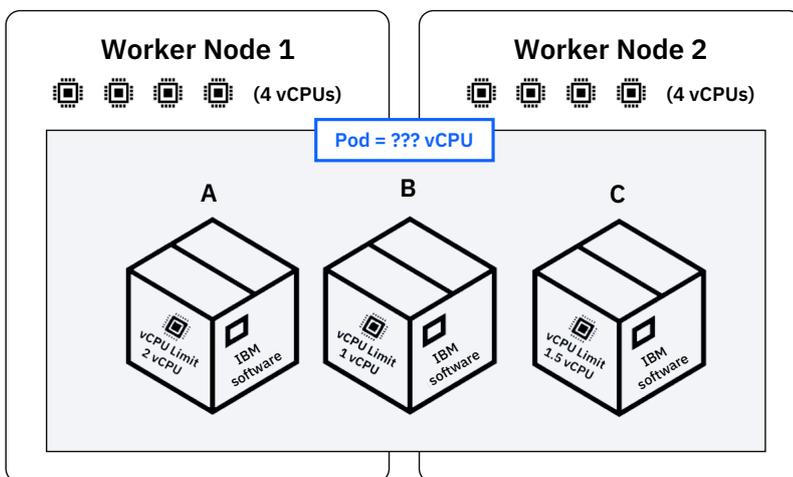
Kubernetes Worker Node VM

(4 vCPUs)

Pod = ??? vCPU

A   B   C

vCPU Limit 0.5 vCPU | IBM software
vCPU Limit 0.5 vCPU | IBM software
vCPU Limit 1 vCPU | IBM software

Licensable vCPUs

With IBM License Service...

Container A	0.5
Container B	0.5
Container C	1.0
Pod requirement	**2.0**

Without IBM License Service...

Container A	4.0
Container B	4.0
Container C	4.0
Pod requirement	**4.0**

Capped at the capacity
of the Worker Node

If IBM License Service is used to monitor the deployment, only the vCPU Limits of the deployed and running containers need to be licensed. This is the benefit of IBM's Container Licensing policy. If IBM License Service is not being used, the combined vCPU capacity of **all** worker nodes in the cluster needs to be counted.

The diagram below illustrates how vCPUs are counted when a Pod spans more than one worker node.

Worker Node 1   ## Worker Node 2

(4 vCPUs)   (4 vCPUs)

Pod = ??? vCPU

A   B   C

vCPU Limit 2 vCPU | IBM software
vCPU Limit 1 vCPU | IBM software
vCPU Limit 1.5 vCPU | IBM software

Licensable vCPUs

With IBM License Service...

Container A	2.0
Container B	1.0
Container C	1.5
Pod requirement	**5.0**

Note: If Pods are running in a cluster, the rounding is performed at the cluster level

Without IBM License Service...

Worker Node 1	4.0
Worker Node 2	4.0
Pod requirement	**8.0**

Capped at the capacity
of the Worker Node

When the vCPU Limit setting is not specified on a particular container, the entire vCPU capacity of the worker node on which the Pod runs needs to be counted. In the diagram above, if any Container did not have a vCPU Limit assigned, then each would need to be licensed for the 4 vCPUs of the Worker Node.

Not all Pods (or containers within Pods) may require licenses. Special Kubernetes Annotations allow IBM License Service to identify those containers or Pods which do or do not require licenses and automatically exclude or include them as appropriate from the license count. IBM Certified Containers and Cloud Paks include these annotations by default when deployed via the Operators provided by IBM.

There are a set of IBM products that also support deployment of IBM Certified Containers via alternative means such as *YAML deployment configuration files or HelmCharts*. In these cases, where IBM operators are not used, you must add the annotations to the Pods of the IBM Certified Containers as necessary. The IBM product annotations for deploying IBM Certified Containers on Kubernetes and Red Hat OpenShift can be found within the related product documentation. If you need help with determining the annotations to apply, please open an IBM support ticket for the product you are deploying.

For more information about Annotations and how IBM License Service discovers IBM products please refer to the [IBM Licensing Tools user guide](#) which has a section dedicated to IBM License Service.

*Differences between Container Licensing and Sub-Capacity*

The following important distinctions apply to Container licensing compared to traditional virtualization:

– Fractional core CPU Limit values (for example, 1.1 or 0.2) of running Pods are counted and rounded up to the nearest whole number at the cluster level. The total is capped at the capacity of the worker node. The resulting capacity of all worker nodes is rounded up at the cluster level.

– For PVU-based software, a fixed rate of 70 PVUs per vCPU is used.

IBM Certified Containers and IBM Cloud Paks have preset vCPU Limits defined by IBM. These recommended settings are the result of IBM's research, and can be modified, although it is not recommended.

The diagram below demonstrates how to count the number of vCPUs for multiple Pods running IBM WebSphere Application Server on a Kubernetes Cluster:

Kubernetes Cluster
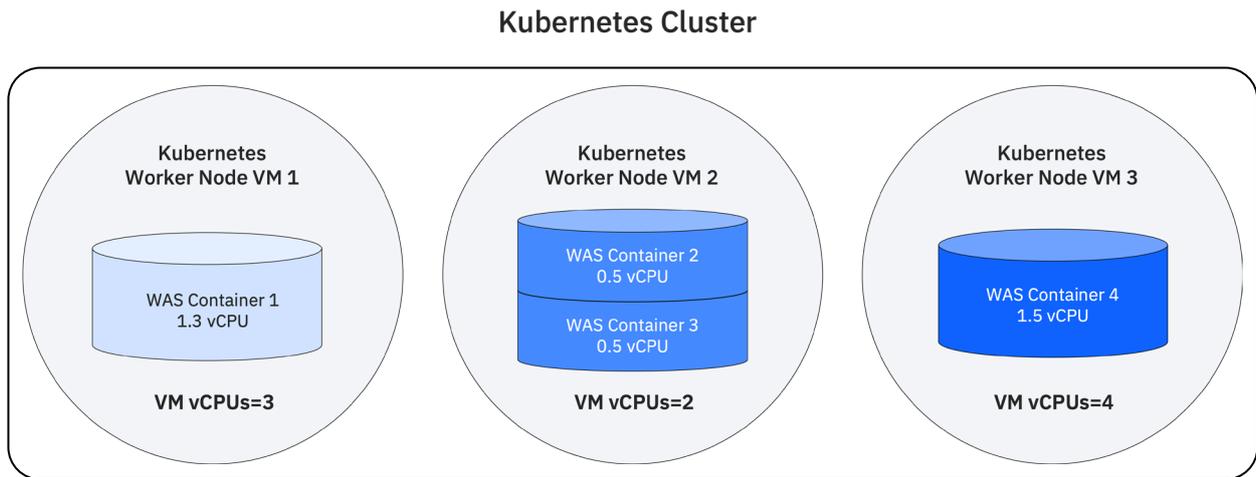
Rounding performed at the Cluster level

| Worker Nodes	Containers / PODs	Point in time capacity per Worker Node	Point in time capacity for WAS Application in the Cluster
Worker Node 1	WAS Container 1	1.3	Sum of point in time capacity per Worker Node
Worker Node 2	WAS Container 2	0.5 +0.5 = 1	
	WAS Container 3		1.3 + 1 + 1.5 = 4 vCPUs
Worker Node 3	WAS Container 4	1.5	(3.8 rounded to 4)

Note: "Point in time capacity" refers to the vCPU Limit as measured by IBM License Service

Scenarios

Scenario 1: Capping at Worker Node capacity

Kubernetes technology allows you to run multiple Pod instances of the same IBM program within a Kubernetes cluster. This is achieved through 'replica settings'. In any instance where the Pod capacity for an IBM program exceeds the actual capacity of the worker node, the license requirement is limited (or capped) at the capacity of the worker node.

Kubernetes Cluster Worker Nodes
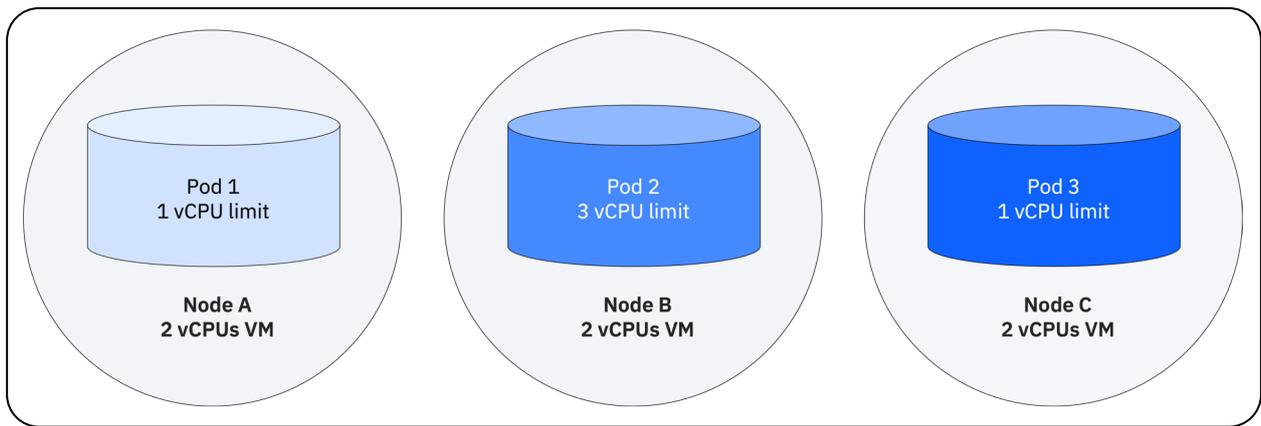
In this simple example where one Pod is running on each worker node, the license requirement is as follows:

| Pod	Number of licensable vCPUs
Pod 1	1
Pod 2	2
Pod 3	1
Total	4

The Pod has a limit of 3 vCPUs which is capped at the worker node capacity of 2 vCPUs

In the diagram above, Pod 2's vCPU limit (3 vCPUs) exceeds Node B's vCPU capacity (2 vCPUs). In this case, the license requirement for IBM programs running on Pod 2 is limited to 2 vCPUs.

In any instance where total capacity of concurrently running Pods of a Program exceeds that of the worker node, the worker node capacity is used.

Multiple Pods Running on a Single Node

Kubernetes Cluster Worker Nodes
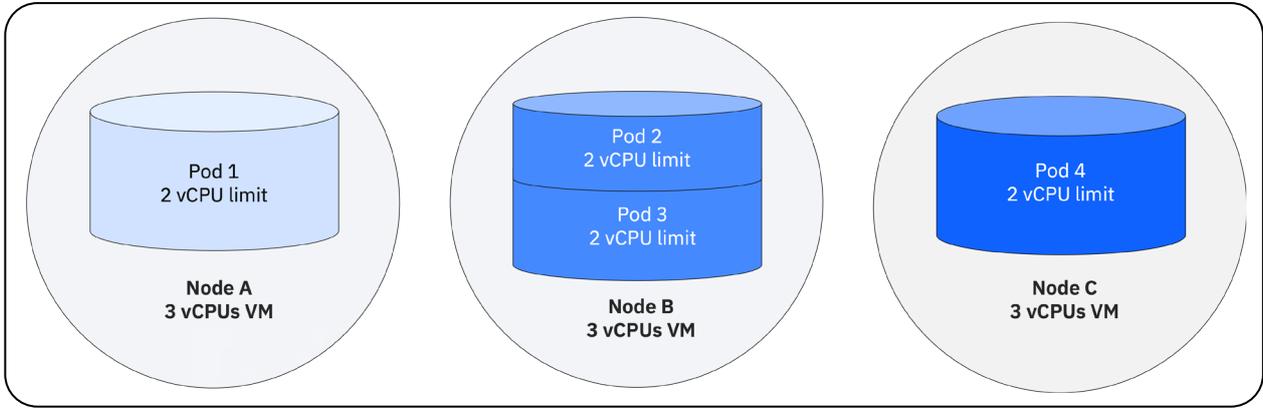
In this modified example, Node B now has 2 Pods running on it. These Pods are running copies of the same IBM Program.

Assuming Pods 1 and 4 are also running the same IBM program as Pods 2 and 3, the number of vCPUs to be licensed is as follows:

Pod	Number of licensable vCPUs
Pod 1	2
Pods 2 and 3	3
Pod 4	2
Total	7

Pods 2 and 3 have a combined vCPU limit of 4 vCPUs however the worker node only has 3 vCPUs.

Scenario 2: Simultaneous multithreading (SMT) and Hyperthreading (HT)

IBM's Container Licensing policy takes into account Simultaneous Multithreading (in IBM Power servers) and Hyperthreading technology (in Intel and AMD processors). In Power servers, the number of threads per core is designated by the number after 'SMT'. For example:

– SMT2 means there are 2 threads per core.

– SMT4 means there are 4 threads per core.

– SMT8 means there are 8 threads per core.

In Intel and AMD chips, hyperthreading means 2 threads per core.

If SMT or hyperthreading is enabled, the vCPU count needs to be divided by the number of threads per core to determine the number of physical cores that need to be licensed. This is because IBM licensing counts physical cores, not individual threads (or 'logical cores').

In a cluster with multiple machines each with different SMT levels, the lowest SMT level is applied for all machines. If some use SMT4 and some use SMT8, the number of vCPUs will be divided by 4, even for those machines with SMT8. It is therefore disadvantageous to mix different SMT types within a Kubernetes cluster.
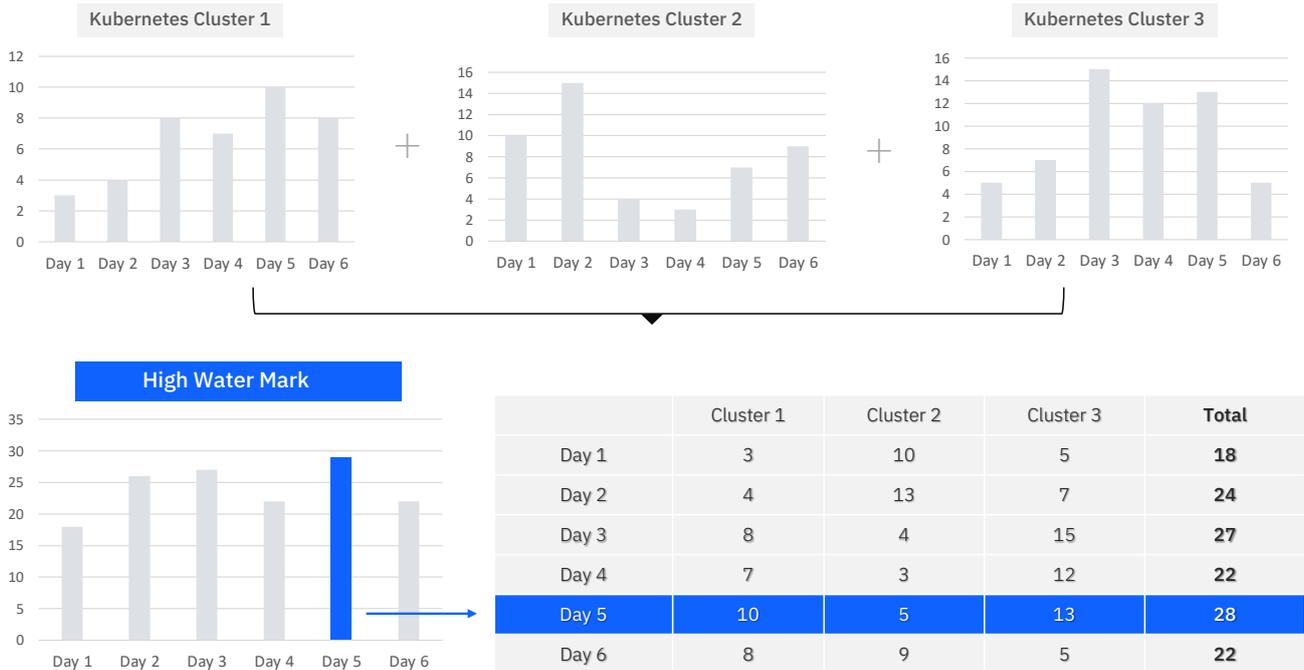
IBM License Service can adjust core counts to account for SMT and HT to ensure that VPC or PVU license usage is based on physical cores and not logical cores. However, some configuration is needed to enable this capability within IBM License Service. Please refer to the IBM License Service documentation for more information on how to configure IBM License Service to take SMT and HT into account, and related commands to identify the SMT or Hyperthreading status of the worker nodes within the Kubernetes cluster.

Note that early releases of IBM License Service did not have the capability to adjust core counts for SMT and Hyperthreading. Therefore, all clients must regularly check to ensure that their installations of IBM License Service are the latest available to benefit from the most complete capability. If you have difficulty upgrading, please open an IBM support ticket to officially document and report these barriers to upgrading.

Scenario 3: High Water Mark in multi-cluster environments

IBM's Container Licensing policy requires you to license your peak use of processing capacity across a period of time. This peak use is calculated for each Kubernetes cluster. If you have an IBM program deployed on multiple Kubernetes clusters, these peak use measurements need to be summed across all applicable clusters.

The diagram below shows a graphical representation of High Water Mark VPC license usage count for an IBM Program across 3 Kubernetes clusters with registered VPC daily peak license usage per Clusters.

	Cluster 1	Cluster 2	Cluster 3	Total
Day 1	3	10	5	**18**
Day 2	4	13	7	**24**
Day 3	8	4	15	**27**
Day 4	7	3	12	**22**
Day 5	10	5	13	**28**
Day 6	8	9	5	**22**

Even though the peak use of an individual cluster may appear on different days, it is the peak use across all clusters at the same time that must be counted as a high watermark. As this requires a certain amount of analysis, we recommend that you use IBM License Service Reporter to automate this task.

Scenario 4: Rolling Updates

Rolling Updates enable you to update your Kubernetes Pods and Containers to new versions in a seamless way which prevents any downtime in your application. When you issue a rolling update command, Kubernetes will stop the running Pods of the previous version and start up the Pods of the replacement version. To prevent downtime, this necessitates a period of parallel running of both old and new versions. There can be situations where an IBM License Service measurement takes place during this period; for example, if the application is large and complex it may take a while to perform the rolling update, or if the scheduled measurement coincides with the rolling update.

In previous versions of IBM License Service this could result in both the old and new deployments being counted for licenses. This has been addressed in version 1.18 of IBM License Service. Its ability to identify this situation has been enhanced and this will prevent duplication of license counts. No action or configuration is required from the client.

If you have not yet upgraded to version 1.18 and believe that ILS has errantly identified license requirements for duplicate Pods/Containers due to an in-progress Rolling Update, you can provide system evidence (for example, a log showing the Kubernetes command being issued, and when the operation completed which can be compared to the timestamp of the audit snapshot). Attach these logs to your audit snapshot.

More information about Rolling Updates on Kubernetes can be found here and on Red Hat OpenShift Container Platform here.

FAQs

Why should I be interested in taking advantage of Container Licensing?

If your deployment is making use of containers with Kubernetes orchestration, then Container Licensing will allow you to license only the available capacity of your containerized Products rather than being required to license the entire cluster where your containers may be operating.

Additionally, container licensing offers the ability to count fractional cores across the entire cluster rather than forcing each worker node or Pod to be counted to the next full integer.

IBM License Service also automates collection of license usage data to help clients identify their software's resource usage across the cluster; allowing them to adjust licensed entitlements and stay in compliance.

Is container licensing available for both Passport Advantage and Passport Advantage Express customers?

Yes.

How do customers enroll in the Container Licensing program?

Customers are currently only able to opt into Container licensing terms on a transactional basis via a Container Licensing transaction addendum. With the release of next version of the IPAA, Container licensing terms will be included in the Agreement.

Is the new licensing model only supported on Kubernetes-based container management systems or any container runtime system/method?

Clients may deploy on any Kubernetes-based solution. However:

– IBM Cloud Paks are limited to Red Hat OpenShift.

– If you are not employing Kubernetes orchestration, you cannot take advantage of Container Licensing for IBM programs.

Are Windows-based containers supported?

Currently only Linux-based containers are supported.

How does Container Licensing impact the Red Hat OpenShift Container Platform ("RHOCP") entitlement that comes with Cloud Paks?

Container Licensing is based on the vCPU requirements of the Cloud Paks. Customers should license OpenShift to the number of vCPUs that are required for their Cloud Paks as well as any additional overhead.

For all Cloud Paks except Cloud Pak for Applications:

These Cloud Paks grant licenses to RHOCP on a ratio basis, as documented in the relevant LI document. For example, every 1 VPC of Cloud Pak license may give 3 cores of **restricted** RHOCP.

While the Container Licensing policy requires running Pods associated with a Cloud Pak to be licensed, some Pods and/or Services do not count towards the license requirement. An example of this is "Foundation Services": while the services themselves do not require a Cloud Pak license, the running of these services **does** utilize RHOCP capacity and therefore licenses to RHOCP are needed.

Such situations can result in a client requiring more licenses for RHOCP than for the Cloud Pak itself. To accommodate this, the license ratio for RHOCP is typically greater than 1:1 so that sufficient licenses to RHOCP are granted to run the Cloud Pak Pods and Services. However, care must be taken to ensure that your specific deployment configuration does not require more licenses to RHOCP than are granted by the Cloud Pak. Should this be the case, additional RHOCP licenses will need to be procured so that your use of RHOCP is fully licensed.

For Cloud Pak for Applications ("CP4A"):

RHOCP is one of the listed programs that you can license together with the Enterprise Runtimes of CP4A with a license ratio of 1:1. The RHOCP license is unrestricted, so any workload can be run on RHOCP if the licenses to RHOCP held are sufficient to cover the required cluster capacity.

The Enterprise Runtimes of CP4A include:

– Red Hat Runtimes

– Open Liberty

– WebSphere Application Server Network Deployment

– WebSphere Application Server

– WebSphere Application Server Liberty Core

– MobileFirst Platform Foundation

Please refer to the License Information document relevant to the deployed version of CP4A for the most recent version of this list.

Alternatively, you may choose to acquire RHOCP licenses directly from Red Hat instead of licensing the platform with CP4A entitlements. In this case, the IBM Certified Containers of the Bundled Programs of CP4A will be counted according tgo the IBM Container Licensing policy and license ratios applied to each Bundled Program as specified in the License Information document.

Is Container Licensing mandatory for IBM Cloud Paks?

No. The application of the Container Licensing counting rules is not mandatory when using IBM Cloud Paks. Cloud Paks may be deployed on a Full-Capacity basis. In addition, it is possible to deploy Cloud Paks on 'traditional' virtualization technologies such as virtual machines, where the Sub-Capacity counting rules will apply.

Can I use Sub-Capacity terms for my containerized IBM Programs instead of Container Licensing terms?

Due to the way in which Kubernetes deploys containers throughout a cluster, the use of sub-capacity with IBM License Metric Tool is not possible. Therefore, if you wish to make use of containers alongside Kubernetes orchestration, you must either use Container Licensing or license the Full-Capacity of every cluster.

If I choose Container Licensing am I able to switch back to Virtualization Capacity licensing in the future?

How you license your software depends on how your software is deployed.

– Container deployments which make use of Kubernetes orchestration must use Container Licensing or be licensed at the Full-Capacity of the cluster (worker nodes only).

– Software deployed within VMs may use sub-capacity licensing

Some IBM programs permit the use of container platforms that are not orchestrated by Kubernetes. If you wish to deploy IBM programs on these environments, please consult your IBM representative for a technical review of your environment to assess the level of licensing, and which licensing policies, might apply.

All deployments may also license to the full capacity of the nodes where the software is (or may be) deployed. Therefore, if you decide to deploy software in containers with orchestration via Container Licensing and then decide to migrate all or part of the environment back to traditional VMs, the part that is now on VMs can be licensed on Virtualization Capacity licensing.

How will Container Licensing impact audit and compliance?

Customers must maintain the IBM License Service rather than IBM License Metric Tool (note: IBM License Metric Tool still must be used for Sub-Capacity deployments). Beyond this, audit and compliance are no different than the Sub-Capacity licensing rules as stated in the International Passport Advantage Agreement.

How do I remain compliant with Container Licensing?

The IBM License Service is capable of automatically tracking license usage of containerized software. Clients may utilize the audit reports from IBM License Service that provide clients with daily peak available capacity for their licensed Programs (and solutions within Cloud Paks). This allows clients to verify their usage in relation to their licensed entitlements and proactively adjust.

Cloud Paks ship with preset CPU Limit specifications. Am I able to change the CPU Limit specifications? Who is responsible if the CPU Limit specifications get changed?

The preset CPU Limit values that ship with each Program are used in all QA, performance testing, etc. While IBM does not recommend modifying these settings, if you choose to do so, please first consult the product documentation to understand the acceptable documented ranges for your Programs.

Eligible License Metrics

What licensing metrics are eligible for Container Licensing?

There are currently two supported metrics: Processor Value Unit ("PVU") and Virtual Processor Core ("VPC").

Why are some products using an eligible metric ineligible for container licensing?

Products which have not been converted into a containerized image and hence do not support being run in a containerized environment are ineligible. Additionally, any product that has not been enabled to run and be tracked by IBM License Service will not be eligible for Container Licensing.

How can I determine if a product is licensed based on an eligible metric?

The product and/or part number description will state the licensing metric. The following links are sources for Passport Advantage pricing/licensing:

– IBM License Information document database

– IBM Passport Advantage Licensing

Is there a formula for calculating the PVUs based on the processor type? Is a PVU table available for Container Licensing

The PVU table does not apply to Container Licensing. Containers might not show which processor executes the workload. Due to this, the PVU rate is set at a single value of 70 PVUs per Virtual Processor Core (VPC) or virtual CPU (vCPU).

Is there a conversion matrix which shows how to convert VPCs into PVUs and vice versa? Do both these metrics apply to Container Licensing?

VPC and PVU are both metrics which are supported by Container Licensing. The following ratio is used for calculations between the two:

– 1 vCPU = 70 PVU

– 1 vCPU = 1 VPC

vCPU Capacity Counting Methodology

How are Virtual Processor Cores (VPCs) licensed vs. core count?

Generally, 1 VPC = 1 physical core or 1 vCPU.

Why are CPU Limits needed for containers?

IBM licenses containers based on their potential capacity rather than actual usage. If a container does not have a limit, then the potential capacity for that container is the entire node capacity. Therefore, the container would be charged as such.

What is peak available capacity (high-water mark)?

IBM has traditionally charged for software based on peak capacity across the license period. For example: If on a full year license, a Program typically used 8 cores, but in November it used 12 cores, the license charge for the year would be 12 cores.

This does not change for Container Licensing. IBM License Service tracks license usage while frequently polling how many Pods (and cores) for an application are deployed. Therefore, the highest point is taken as the license requirement for the license period.

It should be noted that Cloud Paks (other than Cloud Pak for Data) take into account Cloud Pak ratios. Therefore, if at a single moment Program A with a 3:1 ratio uses 9 cores, while Program B with a 1:1 ratio uses 4 cores, then 7 cores would be the high-water mark for the Cloud Pak (9/3 -> 3 + 4/1 -> 4 = 7)

Can I license entitlements for one processor core in a container?

Yes, the minimum licensing requirement is one core.

Can we license entitlements for less than one processor core in a container?

No, fractions of a core will be accounted for by adding all cores within the pods for each Program in the cluster and rounded up to the nearest full integer.

How can I understand my overall VPC or PVU consumption across multiple Kubernetes Clusters?

You can manually aggregate license usage or you can (preferably) use IBM License Service Reporter.

IBM License Service

Are customers required to report their license deployments to IBM?

Clients must create quarterly reports as stated in the Container Licensing terms. They must maintain this documentation as evidence of on-going license compliance management of entitlements available to IBM middleware. As per the terms of the offering, clients must make these reports available upon IBM or independent auditor's request (refer to the IBM Passport Advantage Agreement).

Is a tool currently required to track container license use?

Yes, the use of the IBM License Service is required for Container Licensing.

Does IBM support the use of any 3rd party tools for license tracking in containers?

No, only the IBM License Service may be used.

How much does IBM License Service cost?

Like IBM License Metric Tool, IBM License Service is free of charge.

Can I use IBM License Service on third party cloud environments?

Yes, you can take advantage of our Bring Your Own Software License ("BYOSL") policy for deploying IBM software on Eligible Public Clouds. The Eligible Public Clouds are listed on the BYOSL page.

What is the penalty for not using IBM License Service?

Customers who do not use IBM License Service must license IBM programs for all cores in the entire Kubernetes cluster. This is because, when taking advantage of Kubernetes, containers can run on any node throughout the cluster. Therefore, there is a potential that a single program could have containers which take advantage of the entire capacity of the cluster at one time.

How long do I have to install IBM License Service?

Clients new to Container Licensing are required to implement IBM License Service within 90 days of their first Eligible Product deployment within a container. For subsequent deployments the IBM License Service must be deployed and enabled immediately.

What are the exceptions to the requirement to use IBM License Service for container licensing?

There are no exceptions.

Where does IBM License Service run in my environment?

IBM License Service runs in a Pod within a worker node within the Cluster as determined by the Kubernetes scheduler.

How can I get IBM License Service?

IBM License Service may come preinstalled when deploying containerized software via each IBM Cloud Pak's services and within IBM Certified Containers. Please verify the installation upon your first container deployment. If IBM License Service is not installed, contact product support or talk2sam@us.ibm.com

What is the part number used to order IBM License Service?

There is no part number associated with IBM License Service.

Does the IBM License Service come with entitlement to Red Hat OpenShift Container Platform (RHOCP)?

No. IBM License Service does not come with a free RHOCP entitlement. License Service is included in the IBM Cloud Pak services and therefore leverages available RHOCP entitlements of the Cloud Pak or direct entitlements that the customer obtains from Red Hat.

When License Service is being utilized outside of Cloud Paks, the customer is responsible for any overhead that License Service may require.

Does IBM License Service consume many computing resources? Will it impact the performance of programs?

IBM License Service is a lightweight tool that consumes very little resources. Please refer to the knowledge center documentation for more information.

Am I required to use IBM License Metric Tool if I am using IBM License Service?

If you are only running a containerized environment, then IBM License Metric Tool is not required. However, IBM License Metric Tool is still a requirement for Virtualization Capacity environments. If you have a hybrid environment, then both tools must be installed.

When a Rolling Update is in progress, is IBM License Service able to prevent license consumption over-reporting due to both old and new deployments running at the same time for a small period?

Yes. This capability has been added in version 1.18 of IBM License Service. If you are using a previous version of IBM License Service there may be situations where a Rolling Upgrade could result in license consumption being overcounted. If this occurs, please retain and archive system logs which demonstrate the time period over which the Rolling Upgrade took place, and attach them to your license usage reports.

Further Reading

IBM License Service Operator
A GitHub repository providing information on IBM License Server and detailed instructions on how to deploy IBM License Service for Container Licensing.
https://ibm.biz/license_service4containers

IBM Cloud Pak Foundational Services
A page providing documentation relating to IBM License Service and IBM License Service Reporter.
https://www.ibm.com/docs/en/cpfs?topic=tluime-tracking-license-usage-in-multicluster-environment-license-service-reporter

IBM License Information Documents
A searchable repository of documents, each of which discusses in detail the licensing terms for an individual IBM program (or family of programs).
https://www.ibm.com/terms/?cat=software-license

IBM BYOSL Policy on Public Cloud
The BYOSL policy detailing the terms and conditions for deploying IBM software in an eligible public cloud.
https://www.ibm.com/software/passportadvantage/eligible_public_cloud_BYOSL_policy.html

IBM Cloud Paks
A page that provides details and useful resources relating to IBM Cloud Paks.
https://www.ibm.com/cloud/paks

IBM Certified Containers
A page that details the features of an IBM certified container.
https://www.ibm.com/docs/en/cloud-private/3.2.0?topic=started-cloud-paks-certified-containers

International Passport Advantage Express Agreement ("IPAEA")
The agreement relating to software licensed under Passport Advantage Express
www.ibm.com/terms?id=Z125-5831

International Passport Advantage Agreement ("IPAA")
The agreement relating to software licensed under Passport Advantage
www.ibm.com/terms?id=Z125-5831

Questions and Comments:

If you have questions regarding the content of this licensing guide, or any aspect of IBM's licensing terms and conditions, please contact us at www.ibm.com/about/software-licensing/contact.