IBM Cloud Pak for Data

License Measurement Methodology

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IBM

Program Details

Product Name/Family	IBM Cloud Pak for Data
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Change Log

Date	Changes
April 2023	Initial version

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Description of Applicable Metrics

Virtual Processor Core (“VPC”)

A Physical Server is a physical computer that is comprised of processing units, memory, and input/output capabilities and that executes requested procedures, commands, or applications for one or more users or client devices. Where racks, blade enclosures, or other similar equipment is being employed, each separable physical device (for example, a blade or a rack-mounted device) that has the required components is considered itself a separate Physical Server. A Virtual Server is either a virtual computer created by partitioning the resources available to a Physical Server or an unpartitioned Physical Server. A Processor Core is a functional unit within a computing device that interprets and executes instructions. A Processor Core consists of at least one instruction control unit and one or more arithmetic or logic units. A Virtual Processor Core is a Processor Core in an unpartitioned Physical Server, or a virtual core assigned to a Virtual Server. Licensee must obtain entitlements for each Virtual Processor Core made available to the Program.

Licensee can deploy the Program (if supported) using full capacity licensing, sub-capacity licensing (https://www.ibm.com/software/passportadvantage/subcaplicensing.html), or container licensing (https://www.ibm.com/software/passportadvantage/containerlicenses.html). See the linked websites for more information.

Some services contained in IBM Cloud Pak for Data are licensed under the following metrics which, once measured, must be converted to VPC licenses:

General Purpose Graphics Processing Unit (“GPGPU”)

A GPGPU is a separately installable or identifiable component that is designed for and limited to workload-specific computation and is used as an application-specific accelerator in support of the computer's central processing units. Licensee must obtain an entitlement for each GPGPU that is managed or used by the Program.

About IBM Cloud Pak for Data

IBM Cloud Pak for Data is a set of services running atop the IBM Cloud Pak for Data platform. The platform consists of a set of foundational services which enable core functionality of the Cloud Pak and are included free of charge (see Components not used for establishing required entitlements). It is the services being run atop the platform which must be measured for licenses for IBM Cloud Pak for Data.

VPC entitlements held to IBM Cloud Pak for Data are fungible; the licenses can be used for any combination of the following included services (those with "Included with Cloud Pak for Data" in the *Pricing* column):

```
IBM Match360 with Watson
Watson Machine Learning
Watson Machine Learning Accelerator
Watson OpenScale
Watson Studio
Analytics Engine powered by Apache Spark
Data Refinery
DB2 Big SQL
Decision Optimization
Execution Engine for Apache Hadoop
SPSS Modeler
Cognos Dashboards
Data Privacy
Guardium External S-TAP
Watson Knowledge Catalog
Data Virtualization
DB2 Data Gate
DB2 Data Management Console
DB2 Event Store [for CP4D v4.5 and earlier]
DB2 Warehouse
RStudio Server with R
Watson Pipeline [from CP4D v4.6]
Watson Studio Runtimes
```

Check IBM Documentation for the list of services relevant to your deployed version.

Cloud Paks are mostly deployed in container environments which are managed ("orchestrated") by Kubernetes. To minimize the number of licenses required for installations, clients should ensure that they are eligible for Container Licensing. This means running IBM License Service to monitor and report use across all Kubernetes Clusters (discussed later in this document). For versions of the IBM Passport Advantage Agreement available at the time of publishing, a Container Licensing Addendum must also be signed.

To count the number of licenses for the Cloud Pak as a whole, you sum the total number of VPCs consumed by each of the running services listed above. However, it is not always a 1:1 relationship between the licenses used by the individual service and the licenses required for the Cloud Pak:

- A ratio may need to be applied to determine how many VPC licenses for the Cloud Pak are required (for example, 1 VPC of *Service A* may require 2 VPCs of Cloud Pak license).
- A service may be measured by a metric other than VPC which must then be converted to VPC licenses for the Cloud Pak.

These conversions are documented in the relevant License Information document.

Cartridge Licenses

In addition to the services that can be licensed with a Cloud Pak for Data license, IBM offers separately licensed services which are available as “cartridges”.

Cartridges convey dual entitlements: the programs may be run in a containerized environment or as “standalone” applications (that is, on a traditional virtual or physical environment). You must choose between the two methods of deployment on a per-unit basis. Having entitlement to cartridges is therefore a manner of “future-proofing” programs which are deployed on traditional environments at present but carry the option to move to a containerized solution in the future.

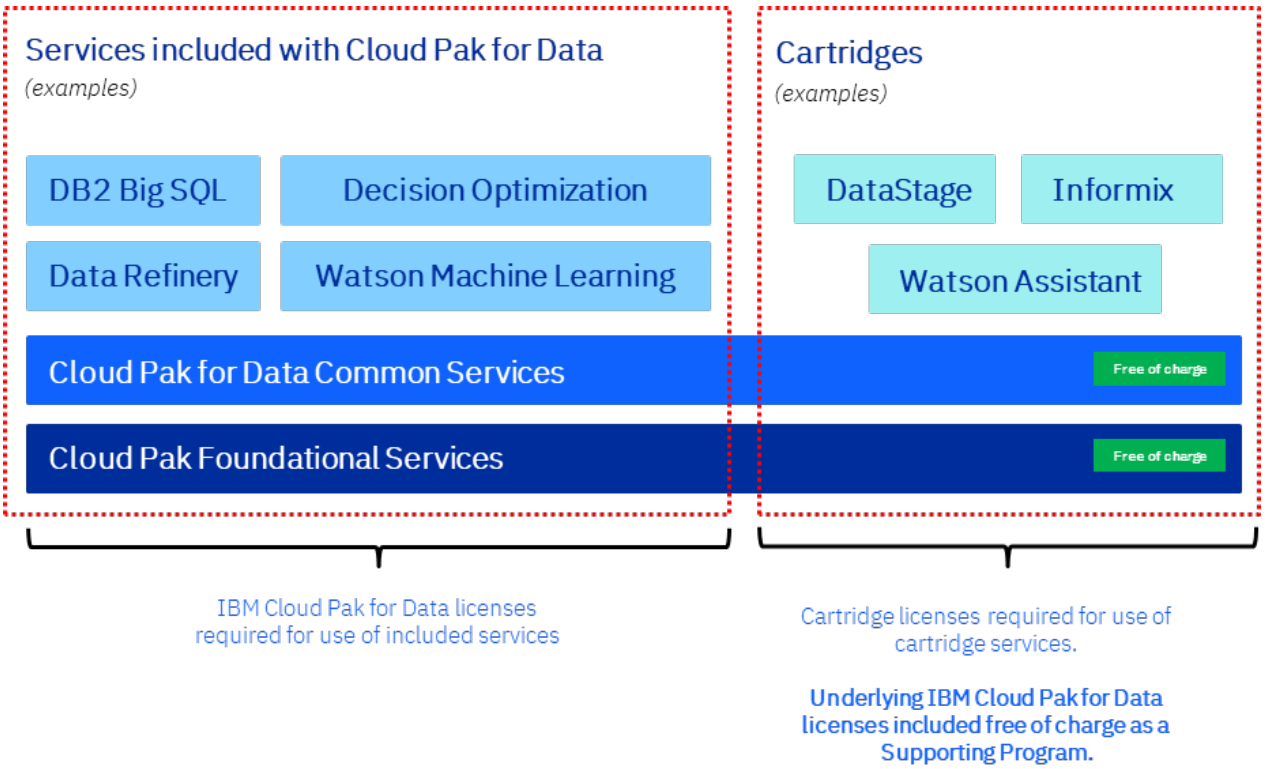
If the cartridges are run in a containerized environment, they consume VPCs of Cloud Pak for Data to provide their services, since the cartridges sit atop the Cloud Pak for Data platform. However, the licenses for the cartridges include Cloud Pak Foundational Services and the Red Hat solutions required to run on the Cloud Pak for Data platform. Therefore, no additional licenses to the Cloud Pak for Data platform need to be purchased owing to the cartridges’ incremental use of the platform so long as the built-in Cloud Pak for Data infrastructure is only used to support the Cartridge (see example below).

> **CP4D entitlement bundled with a Cartridge is for the exclusive use by that Cartridge’s services**
>
> If a cartridge (“Service A”) is using 24 cores of “built-in” Cloud Pak for Data infrastructure which are being used exclusively to support the 24 cores of its own service, the Cloud Pak for Data infrastructure does not require any additional licenses.
>
> If a further 24 VPCs of Cloud Pak for Data are purchased to run another service (“Service B”) by extending the infrastructure used for Service A (rather than running Service B on its own, discrete infrastructure) then the 24 VPCs being used to run Service A must be licensed as well because the infrastructure is no longer being used exclusively to support Service A.
>
> A total of 48 VPCs of IBM Cloud Pak for Data would be required for Cloud Pak for Data which supports both Services A and B.

For provisioning and operational reasons it is important to know how many additional resources need to be made available to support the functioning of the cartridge, and this will vary depending upon your intended use case.

A simplified visualization demonstrating the relationship between Cloud Pak services and cartridges is shown in Figure 1 below.

Figure 1: Cloud Pak Services and Cartridges



To provide clients with maximum flexibility, cartridge licenses can be purchased to "top up" an existing pot of licenses to the same program. For example, if you have an existing licensed deployment of IBM DataStage, you may opt to purchase cartridge licenses for additional growth or net new requirements.

Modernization licenses

Cartridge licenses are only available for newly purchased licenses; it is not possible to convert existing "legacy" licenses via cartridges to "modern" entitlements which bring with them the optional flexibility of deployment on the Cloud Pak platform. Like cartridge licenses, modernization licenses are unique to IBM Cloud Pak for Data.

Modernization licenses allow a client to harmonize its entitlement so that all licenses are "modern" and can be run in containers on the Cloud Pak platform in the future. Trading your entitlement up through a modernization license does not require you to move to a containerized environment; you may continue to run the program as a standalone deployment but retain the option to move onto the Cloud Pak for Data platform in the future.

A modernization license is a bundle of a cartridge license and a "bonus core" of Cloud Pak for Data Enterprise Edition. This additional entitlement to Cloud Pak for Data Enterprise Edition is typically granted pro-rata against the number of entitlements to the modernization license you purchase. Some modernization licenses carry a 1:1 entitlement of Cloud Pak for Data; others may carry 2:1, 4:1, and so on. Check the License Information document for the exact ratio for your modernization product.

This additional entitlement to Cloud Pak for Data offers even more flexibility for clients. It means that the modernization license has value even if the cartridge license is never used. The Cloud Pak for Data licenses can be used to license the Cloud Pak for Data platform for other uses.

Standard Edition vs Enterprise Edition

The only difference between Standard and Enterprise editions of IBM Cloud Pak for Data is that Standard Edition contains a restriction on the size of the cluster that it can be deployed upon. The maximum size of the cluster is 64 VPCs.

How to measure license consumption

Measuring the license consumption for IBM Cloud Pak for Data requires you to measure the use of the individual services that you have deployed which are included as part of the IBM Cloud Pak for Data bundle.

If you have licensed any cartridges to add additional capabilities on top of those provided by the services included in the base IBM Cloud Pak for Data bundle, these must also be measured and compared with the number of entitlements you hold to those cartridges.

Calculating the number of Virtual Processor Core licenses required

Step 1: Use IBM License Service (and optionally, IBM License Service Reporter)

IBM License Service must be enabled in each Kubernetes Cluster. It is included as part of Cloud Pak Foundational Services and is the only approved metering tool that permits clients to take advantage of Container Licensing. As well as ensuring that clients are eligible for Container Licensing, IBM License Service takes the effort out of determining license consumption.

The operators which IBM ships with Cloud Pak installation media include Kubernetes Annotations which tell IBM License Service the information it needs to be able to identify components, map them to Cloud Paks, identify the applicable license metric and determine whether the application should be counted for licensing. Operators are essentially instructions which tell Kubernetes how to create, configure and manage instances of an application.

IBM License Service counts those Pods which are in “Ready” (running) state. Pods that are not in that state are not counted for licensing.

IBM License Service Reporter

Running *IBM Cloud Pak for Data* components across multiple Kubernetes Clusters requires that there are multiple instances of IBM License Service to monitoring their use to comply with IBM’s Virtualization Capacity (Container Licensing) policy. This is because IBM License Service monitors use only on its own cluster.

This means that the peak use of *IBM Cloud Pak for Data* must be measured across all clusters, aggregated, and the peak requirement across all clusters identified. This can be a time-consuming task.

IBM License Service Reporter aggregates the outputs of multiple IBM License Service installations and produces a consolidated report which demonstrates the peak use of *IBM Cloud Pak for Data* across all clusters monitored during the reporting period. You can also integrate IBM License Metric Tool (ILMT) to generate reports across both your traditional and containerized environments.

If you have not enabled IBM License Service and are not eligible for Container Licensing then the processor cores of the machines in the Kubernetes Cluster must be counted for VPC licenses for each service whose Pods are in “Ready” (running) state.

1 VPC license of Cloud Pak for Data is required for every 1 VPC license consumed by each service, except for the individual services specified in the next step which are not measured by VPC and must be converted to VPC.

Step 2: Count GPGPU licenses for specific Watson components and convert to VPC

The following services included in IBM Cloud Pak for Data, if used, are measured under the metric “General Purpose Graphics Processing Unit” (GPGPU) which must be counted and then converted to VPC licenses of Cloud Pak for Data. IBM License Service cannot automatically count the number of GPGPUs present in each machine.

```
Watson Machine Learning
Watson Machine Learning Accelerator
Watson OpenScale
Watson Studio
```

Each GPU (commonly referred to as a “graphics card”) contained in each physical machine which is supporting the containers or Pods which are running each of the services listed above, or are managed by services listed above, must be counted and summed if they are configured for use by the data science tools.

- Each GPU that has been added to a resource plan for the model should be counted.

While many modern processors contain integrated graphics, only discrete GPUs (that is, physical graphics cards separate to the CPU) can be leveraged by the Watson offerings.

> Do not count virtual display adaptors. Virtual display adaptors are software-based devices and should not be included in the count of General Purpose GPUs. Only hardware-based display adaptors should be counted.

Counting GPUs in Microsoft Windows

It is possible to identify the number of graphics cards installed in your machine using one of the following methods:

- In **Device Manager** expand the “Display Adapters” sub-menu in the device list. The installed graphics cards will be listed underneath.
- In **System Information** select “Displays” in the left pane. This sits within the “Components” grouping. The right pane will populate with a set of information which is repeated for each graphics card installed on the system.
- In **Command Prompt** type “`wmic path win32_VideoController get name`”. The command will output one line for each graphics card installed, with the name of the card on each line.
- In **Windows Powershell** type “`Get-WmiObject win32_VideoController Description`”. An entry will be output for each graphics card installed on the system.
    - You can run this query against one or more remote computers by appending the “ComputerName” argument followed by a list of computer names which you wish to query. For example, “`-ComputerName M1, M2, M3`”. You may also need to use the argument “`-Credential [username]`” to specify the name of a user account with privileges to perform this query on the remote computers such as a domain admin account.

Counting GPUs in Linux

It is possible to identify the number of graphics cards installed in your machine using one of the following methods:

- In **System > Preferences > Hardware Information** identify the graphics cards in the left-hand pane.
- Using one or more the following commands:
  - `sudo lshw -C display`
  - `glxinfo -B` (provides detailed information about GPU name, vendor and other details).
  - `sudo lspci -v | most`
  - `nvidia-smi` (relevant for computers with NVIDIA graphics cards and NVIDIA binary drivers installed)
  - `nvidia-settings` (which invokes the NVIDIA GUI tool which may be available if the installed graphics card is of the NVIDIA brand)

Counting GPUs in AIX

It is possible to identify the graphics cards installed in your machine using the "`prtconf -v`" command and looking through the output to find and count the number of entries relating to the display adaptors.

Convert the total number of GPGPUs counted for each service to VPC licenses for Cloud Pak for Data

The table below sets out how many VPC licenses for IBM Cloud Pak for Data are required for each GPGPU counted for each of the services you are using:

Table 1 – GPGPU to Cloud Pak VPC conversion ratios

Cloud Pak Service	Conversion Ratio (Service → Cloud Pak licenses)
Watson Machine Learning	1 VPC for every GPGPU
Watson Machine Learning Accelerator	1 VPC for every GPGPU
Watson OpenScale	1 VPC for every GPGPU
Watson Studio	1 VPC for every GPGPU

The number of VPC licenses for all the services above must then be added to the total number of VPC licenses calculated in Step 1.

Step 3: Count licenses for cartridges

As cartridge licenses are held separately from the Cloud Pak for Data licenses, the consumption of these licenses does not need to be added to the Cloud Pak for Data license requirement. This step is included for completeness purposes only.

If you have purchased licenses for any cartridges, identify their use and measure the licenses required for these cartridges.

- If the cartridge is measured on a Virtual Processor Core (VPC) metric, then IBM License Service or IBM License Metric Tool (ILMT), depending upon whether the deployment is standalone or in a containerized environment, will likely include these cartridges in your measurement reports.
- If you have deployed the containers using IBM standard Kubernetes Operators, Kubernetes Annotations will be included by default which would enable IBM License Service to identify the programs and count the required number of licenses.
- Always check the outputs of ILMT and IBM License Service to your own internal documented understanding of your deployment to ensure that the reporting is as expected. For example, ensure that the correct edition of the Program is being reported (in the case of DB2), and that all installations are being reported with the correct Production or Non-Production status.

The License Information documents for the relevant cartridges and versions detail the license metric by which the cartridges are measured. The “License Information Document(s)” section below lists the cartridges available at the time of writing and the applicable metrics.

In some cases, metrics need to be converted to Virtual Processor Core licenses. This will require measuring the number of licenses to the underlying metric and then applying the ratio as specified in the License Information Document to determine the number of VPC licenses required.

Components not used for establishing required entitlements

The following components of *IBM Cloud Pak for Data* can be installed and used but do not count towards the number of entitlements required for the Program (**please refer to the LI for your specific product/version for the latest set of included Foundational Services – components may be added over time**):

```
Common Services of Cloud Pak Platform (that is, Foundational Services):
      Audit Logging
      Catalog
      Certificate Management
      CLI Tools Guide
      Common Web UI
      Helm REST APIs
      Identity Access Manager
      Installer
      License Service
      Logging
      Metering
      Monitoring
      System Health Check
      Platform UI

Common Services of Cloud Pak for Data Enterprise Edition:
      Control Plane
      Common Database Services (database provisioning and management UI)
      Portworx Storage*
```

** Portworx Storage has been removed from the Common Services from version 4.5 onwards. It is still fully supported and available as an introductory trial or can be purchased separately either from IBM directly or from Portworx. IBM offers VPC licenses for this service which makes maintaining compliance simpler as you equalize the cores between the Cloud Pak licenses and Portworx Enterprise.*

Special consideration for Cartridge licenses and Common Core Services ("CCS")

If a system is licensed with a Cartridge license, the CCS components are non-chargeable as specified above.

If additional Cloud Pak for Data licenses are added, the CCS used by the Cartridge become chargeable. This is because CCS are a shared component and are chargeable in the Cloud Pak for Data Enterprise Edition license. Since the use of the CCS by Cloud Pak for Data Enterprise Edition cannot be separated from the use by the Cartridge, the shared component becomes chargeable.

If you have deployed these components using IBM Operators, then the Kubernetes Annotations will automatically be set so that IBM License Service will not count these components as requiring licenses.

If you wish to amend the Annotations manually, it is the value of "`productChargeContainers`" that tells IBM License Service which components to count:

Value of `productChargeContainers`	**Meaning**
"All"	All containers are chargeable and should be counted for licenses
"None"	None of the containers should be counted for licensing. Use when the Pod is entirely comprised of components listed above.
<a list of container names>	The containers named in the list should be counted for licensing. In other words, ensure that the containers which contain *only* the components listed above, and no other chargeable components, are not present in the list.

For more information about IBM License Service see the user guide.

Bundled and Supporting Programs

Supporting Programs are licensed at no additional cost as long as they are used exclusively in a manner necessary for, or directly related to, a licensed use of the Principal Program. You should ensure that installations of Supporting Programs are documented so that they are not accidentally used for any other purpose as this requires the installations to be separately licensed. Records will also ensure that installations used solely as Supporting Programs are not inadvertently counted for licensing purposes.

For a more detailed explanation of Bundled and Supporting Programs please read the user guide on the IBM Software Licensing & Compliance website.

The list of Bundled and Supporting Programs may change between versions; select the LI document for your version from the links in the License Information Document/(s) section.

The following Programs are Supporting Programs for version 4.0:

```
Red Hat OpenShift Container Platform
Red Hat OpenShift Container Storage
IBM Spectrum Virtualize for Public Cloud*
IBM Spectrum Scale*
IBM Spectrum Discover*
IBM Spectrum Protect Plus*
Anaconda Individual Edition
```

** The IBM Spectrum products are no longer included as Supporting Programs from version 4.6 onwards. New clients may benefit from a 12-month supporting trial with the 'purchase' of a part number which is free of charge. After the trial has expired, a license is required. Clients who have previously deployed Cloud Pak for Data versions 4.0 or 4.5 retain their previous bundled limited-term IBM Spectrum entitlement, even after upgrading to version 4.6.*

Once you have identified the installations of any Supporting Programs, ensure that these are documented in your internal Software Asset Management records as being associated with *IBM Cloud Pak for Data*. This has two benefits:

1. It will ensure that these installations are not accidentally counted as licensable deployments and included in measurements for any separate licenses to these Bundled or Supporting Programs that you may hold.
2. Restrictions or limitations on the functionality that may be used can be documented. These are in addition to the general limitation that the program may only be used to support the functioning of the Principal Program.

Entitlements granted for Bundled and Supporting Programs

Subject to the specific terms of the License Information document, you are generally permitted to deploy sufficient copies of the Bundled or Supporting Programs to reasonably support your use of the Program.

For the following Bundled or Supporting Program(s), you are granted a specific number of licenses to use. Any deployment exceeding this granted entitlement must be separately licensed.

Supporting Program	Entitlement (for Cloud Pak for Data 4.0)
Red Hat OpenShift Container Platform	**3 VPCs** of Red Hat OpenShift Container Platform **for every 1 VPC** of Cloud Pak for Data entitlement you hold.
Red Hat OpenShift Container Storage	A flat entitlement of **36 Terabytes** (of which 12 Terabytes are usable storage) is granted for 36 months only. After this time, you must discontinue use and destroy all copies of the Programs.
IBM Spectrum Virtualize for Public Cloud, IBM Spectrum Scale and IBM Spectrum Discovery	A flat entitlement of **12 Terabytes** collectively across all three Supporting Programs is granted for 36 months only. After this time, you must discontinue use and destroy all copies of the Programs.
IBM Spectrum Protect Plus	A flat entitlement of **4 Terabytes** is granted for 36 months only. After this time, you must discontinue use and destroy all copies of the Programs.

Note that as of version 4.5, the IBM Spectrum offerings above have been replaced with a new suite called “IBM Spectrum Fusion”. A flat entitlement of 6 Terabytes is granted of each of the following: Primary Storage, Backup Storage and Metadata Management. The entitlement is valid for 12 months only.

Additional Restrictions for Bundled and Supporting Programs

The following additional restrictions apply to the use of Bundled and Supporting Programs:

Bundled or Supporting Program	Restrictions
Anaconda Individual Edition	Access to and use of the packages accessible from the Anaconda Individual Edition is only for purposes of integration with IBM Cloud Pak for Data.
IBM Db2 Warehouse	Unless DB2 is used as part of your internal development and test environment for internal non-production activities, the following restriction applies: You may only use this Program for a data warehouse and run a data warehouse workload. You must have user data from a single database spread across two or more active data partitions or at least 75% of the user data residing in column-organized tables with a majority of the workload accessing the column-organized tables. User data residing in Staging Tables is excluded from the calculation of the percentage of user data residing in column-organized tables. ** Staging Tables means tables used for the sole purpose of staging and pre-processing for the purpose of holding, transforming and then loading into user accessed tables, and that are not available for OLTP or other applications to perform read or write transactions against except for the purpose of staging the data as described above.*

Non-Production Licenses

The following license, if held, may only be used on deployments in a non-production environment:

```
IBM Cloud Pak for Data Enterprise Edition for Non-Production
```

Licenses held under this part number cannot be used to license deployments in a production environment, or any deployments which are performing production workload or using production data.

Production licenses (that is, licenses that do not have a non-production limitation) may be used to license deployments in non-production environments if there are sufficient surplus licenses after licensing any production deployments.

The Non-production Environments licensing guide provides more information about how IBM approaches the licensing of non-production use of IBM programs and the available options.

If any installations qualify for non-production licenses, we recommend that you document this so that it can be referred to when managing your overall license requirement, and if required for a licensing verification activity.

Program-specific considerations

The following components can only be used as part of your internal development and test environment for internal non-production activities:

Bundled or Supporting Program	Non-Production Component(s)
Watson Machine Learning	AutoAI Time Series

Non-licensable installation and/or use

Backup and Standby Installations

Installations solely used for backup and standby purposes (and users logging into those installations) may not require a license. Such installations are intended to enable clients to continue to be operational if an emergency occurs and servers stop working, without requiring additional entitlements.

IBM has published policies for determining whether a backup or standby installation requires a license:

- one for programs licensed under the International Program License Agreement ("IPLA") or Customer Relationship Agreement ("CRA")
- one for programs licensed under the older IBM Customer Agreement ("ICA")

The Backup and Disaster Recovery licensing guide explains in more detail whether a license is needed for installations by reference to the type of configuration.

If any installations are backup and/or standby installations which meet the criteria set out in the IBM policy, such installations should not be included as licensable installations. Ensure to keep a record of the reason why these installations do not require a license, along with any backing evidence that you are able to obtain to this effect.

Installations subject to Temporary Additional Use authorization

Under specific scenarios (such as datacenter migrations, system-to-system migrations) IBM authorizes clients to use additional installations for non-production use for a period of up to 90 days. This is set out in a policy document on the IBM website.

Before discarding any installation from the license count ensure that the installation complies with the three main principles of the policy:

1. The reason for the additional installation must fall under one of the valid scenarios listed in the policy.
2. The installation must not be older than 90 days (by reference to the date it was installed and the date the count is being performed). If it is older than 90 days, ensure that specific authorization has been gained from IBM for its continued use, and that this is documented.
3. The other, licensable installations of the program are properly licensed. If there are license shortfalls or use outside of the terms of the applicable license agreement(s), then the Temporary Additional Use authorization does not apply.

Part Numbers

The part numbers listed below are taken at a point in time and represent the latest part numbers that may be used to license the Program. IBM endeavors to keep this list up to date; however, to ensure that you have the most up-to-date information available, please use the **Product Search** functionality on the IBM Software Licensing & Compliance website.

The link which will take you to the specific results for this Program is:
http://www.ibm.com/about/software-licensing/product_search?search=5737-H76

Part Description	License	S&S	Reinstatement
IBM Cloud Pak for Data Enterprise Edition	D1YGZLL	E0PD4LL	D1YH0LL
IBM Cloud Pak for Data Enterprise Edition Non-Production	D27RMLL	E0QXFLL	D27RNLL

Product Evolutions

This program may have undergone evolutions during its lifecycle. This may have resulted in the program name or license metric changing. As a result, the current name may differ from that stated on your original Proof of Entitlement. The table below lists the evolutions that this program has undergone:

Date	Evolved From	Evolved To
July 14, 2020	IBM Cognos Dashboard Integration for Watson Studio Local Non Production (VPC) - **Base:** D20FRLL - **S&S:** E0PK7LL	IBM Cloud Pak for Data Enterprise Edition Non-Production (VPC) - **Base:** D27RMLL - **S&S:** E0QXFLL
April 7, 2020	IBM InfoSphere Regulatory Accelerator for IBM Cloud Private for Data (VPC) - **Base**: D22EVLL - **S&S:** E0PW6LL	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base:** D1YGZLL - **S&S:** E0PD4LL **Ratio:** 3 VPCs per 1 VPC of the withdrawn program

Date	Evolved From	Evolved To
July 14, 2020	IBM Watson Knowledge Catalog Professional for IBM Cloud Pak for Data (VPC) - **Base:** D2348LL - **S&S:** E0Q61LL	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base:** D1YGZLL - **S&S:** E0PD4LL **Ratio:** 3 VPCs per 1 VPC of the withdrawn program
July 14, 2020	IBM Db2 Event Store Enterprise Edition (VPC) - **Base**: D1VISLL - **S&S**: E0NYBLL	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base**: D1YGZLL - **S&S**: E0PD4LL **Ratio**: 2 VPCs for every 5 VPCs of the withdrawn program
July 14, 2020	Watson Studio Local Management and Deployment (VPC) - **Base**: D20BJLL - **S&S:** E0PJHLL	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base:** D1YGZLL - **S&S:** E0PD4LL **Ratio:** 1 VPC for every 1 VPC of the withdrawn program
July 14, 2020	IBM Cognos Dasboard Integration for Watson Studio Local (VPC) - **Base:** D20FPLL - **S&S:** E0PK6LL	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base:** D1YGZLL - **S&S:** E0PD4LL **Ratio:** 1 VPC for every 1 VPC of the withdrawn program
December 8, 2020	IBM StoredIQ InstaScan Enterprise Edition (Terabyte)	IBM Cloud Pak for Data Enterprise Edition (VPC) - **Base:** D1YGZLL - **S&S:** E0PD4LL **Ratio:** 22 VPCs for every 1 TB of the withdrawn program

Previous Names

This program has also been known under the following Program names:

- IBM Cloud Private for Data

Product Lifecycle Information

Version	General Availability	End of Marketing	End of Support
4.x.x	June 23, 2021		
3.5.x	November 20, 2020		April 30, 2023
3.0.x	June 19, 2020		September 30, 2022

Source Materials

License Information Document/(s)

Cloud Pak for Data

Version	Program ID	Program
4.5	5737-H76	IBM Cloud Pak for Data Enterprise Edition IBM Cloud Pak for Data Enterprise Edition for Non-Production
4.0 Update 2	5737-H76	Same as above
4.0 Update 1	5737-H76	Same as above
3.5	5737-H76	Same as above
3.0.1	5737-H76	Same as above
3.0	5737-H76	Same as above

Cartridge Licenses

There are many cartridge licenses available; the latest entry for each at the time of writing is included in the table below.

Version	Program ID	Program	Metrics
4.5	5900-ACT	IBM Master Data Management Non-Financial IBM Master Data Management Financial	RVUs converted to VPC
4.5	5900-AFF	IBM Product Master Production IBM Product Master Non-Production	RVUs converted to VPC
1.0	5900-AQH	IBM Business Analytics Enterprise	Authorized User
11.2.2	5900-ABL	IBM Cognos Analytics Authorized Viewer	Authorized User
11.2.2	5900-ABL	IBM Cognos Analytics Authorized Explorer	Authorized User
11.2.2	5900-ABL	IBM Cognos Analytics Administrator	Authorized User VPC
11.2.2	5900-ABL	IBM Cognos Analytics Viewer	VPC
11.2.2	5900-ABL	IBM Cognos Analytics Explorer	VPC
11.2.2	5900-ABL	IBM Cognos Analytics Authorized User	Authorized User
11.2.2	5900-ABL	IBM Cognos Analytics Advanced	Authorized User VPC
11.2.2	5900-ABL	IBM Cognos Analytics User	VPC
11.2.2	5900-ABL	IBM Cognos Analytics for Non-Production Environment	VPC
4.5	5900-AC5	IBM Planning Analytics	Authorized User, VPC and PVU
4.5.0	5737-I55	IBM Watson Assistant	Install, Monthly Active User
4.0.0	5737-I55	IBM Watson Assistant for Voice Interaction	Thousand Monthly Minutes, Concurrent Connection, VPC
11.5	5900-ACB	IBM Db2 Advanced	VPC or PVU converted to VPC

Version	Program ID	Program	Metrics
11.5	5900-ACC	IBM Db2 Standard Edition	VPC or PVU converted to VPC
4.0.7	5737-L90 CCO34533 CCO34534	IBM Watson Speech Services IBM Watson Speech to Text IBM Watson Text to Speech	Monthly Characters, Monthly Minute
N/A	5737-I51 CC034417 CC034418 CC034419 CC034420 CCO29692 CCO29712	IBM Watson Discovery IBM Watson Discovery Enterprise IBM Watson Discovery Enterprise NPE IBM Watson Discovery Enterprise for IBM CP4D BD IBM Watson Discovery Enterprise NPE for IBM CP4D BD Watson Discovery Base Watson Discovery Additional Capacity	Install and Document, or RVU (based on documents) and VPC
8.3	5737-N71 5737-N71 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51 5737-D51	IBM OpenPages IBM OpenPages for Non-Production Environment IBM OpenPages Financial Controls Management IBM OpenPages Operational Risk Management IBM OpenPages IT Governance IBM OpenPages Policy Management IBM OpenPages Internal Audit Management IBM OpenPages Regulatory Compliance Management IBM OpenPages Model Risk Governance IBM OpenPages Third Party Risk Management IBM OpenPages Business Continuity Management IBM OpenPages Data Privacy Management IBM OpenPages Loss Event Entry IBM OpenPages SDI Connector for UCF Common Controls Hub	Application (5737-D51 programs) and VPC (5737-N71 programs)
3.0	5900-AEB	IBM Open Data for Industries IBM Open Data for Industries for Non-Production	VPC
14.10	5900-AGV	IBM Informix Advanced Enterprise Edition	VPC or PVU converted to VPC
14.10	5900-ACG	IBM Informix Enterprise	VPC or PVU converted to VPC
Update 1	5900-ACH	IBM Informix Workgroup Edition	VPC or PVU converted to VPC

Version	Program ID	Program	Metrics
6.6.1	5737-E41	IBM Financial Crimes Insight IBM Financial Crimes Insight for Non-Production Environment	Install
11.4	5900-AMQ	IBM Data Replication for Continuous Availability for Db2 IBM Data Replication for Continuous Availability for Db2 Non-Production	VPC or PVU converted to VPC
4.0	5900-ABU	IBM Watson Studio Premium IBM Watson Studio Premium for Non-Production	VPC (plus conversions for Bundled Programs from Authorized User, RVU, Concurrent User and PVU to VPC)
11.7.1.1	5900-ABQ	IBM DataStage Enterprise Plus IBM DataStage Enterprise Plus for Non-Production	VPC, PVU converted to VPC
11.7.1.1	5900-ABN	IBM DataStage Enterprise IBM DataStage Enterprise for Non-Production	VPC, PVU converted to VPC
11.7.1.1	5900-ABS	IBM Information Server IBM Information Server Non-Production	VPC, PVU converted to VPC

Modernization Licenses

There are many modernization licenses available; the latest entry for each at the time of writing is included in the table below.

Version	Program ID	Program
N/A	5737-E67	Db2 for IBM Cloud Private for Application Modernization
5.2	5655-DMS	IBM CICS Modernization Solution Pack for z/OS
11.2.2	5900-ABM	IBM Cognos Analytics User Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Explorer Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Modernization for Non-Production Environment

Version	Program ID	Program
11.2.2	5900-ABM	IBM Cognos Analytics Authorized Explorer Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Authorized Viewer Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Administrator Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Viewer Modernization
11.2.2	5900-ABM	IBM Cognos Analytics Authorized User Modernization
3.1.0	5737-E67	IBM Cloud Private for Application Modernization
11.4	5900-AMP	IBM Data Replication for Continuous Availability for Db2 Modernization
11.4	5900-AMO	IBM Data Replication for Continuous Availability for Db2 Warehouse Modernization
11.7.1.1	5900-ABR	IBM DataStage Enterprise Plus Modernization IBM DataStage Enterprise Plus Modernization Non-Production
11.7.1.1	5900-ABT	IBM DataStage Enterprise Modernization IBM DataStage Enterprise Modernization Non-Production
11.5	5900-ACE	IBM Db2 Advanced Edition Modernization
11.5	5900-ACF	IBM Db2 Standard Edition Modernization
1.0	5900-AN9	IBM i Modernization Engine for Lifecycle Integration
11.7.1.1	5900-ABT	IBM Information Server Modernization IBM Information Server Modernization Non-Production
14.10	5900-ACI	IBM Informix Enterprise Edition Modernization (update 1)
14.10	5900-ACJ	IBM Informix Workgroup Edition Modernization (update 1)
14.10	5900-AGU	IBM Informix Advanced Enterprise Edition Modernization (update 1)
12.0	5900-ACU	IBM Master Data Management Modernization
1.0	5725-K59	IBM Mixed Language Application Modernization Pattern

Version	Program ID	Program
8.3	5737-N70 5737-N70 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51 5725-D51	IBM OpenPages Modernization IBM OpenPages Modernization for Non-Production Environment IBM OpenPages Financial Controls Management IBM OpenPages Operational Risk Management IBM OpenPages IT Governance IBM OpenPages Policy Management IBM OpenPages Internal Audit Management IBM OpenPages Regulatory Compliance Management IBM OpenPages Model Risk Governance IBM OpenPages Third Party Risk Management IBM OpenPages Business Continuity Management IBM OpenPages Data Privacy Management IBM OpenPages Loss Event Entry IBM OpenPages SDI Connector for UCF Common Controls Hub
4.5	5900-AC6	IBM Planning Analytics Advanced Modernization
1.1	5655-DMS	IBM Problem Determination Modernization Solution Pack for z/OS
12.0	5900-AFG	IBM Product Master Modernization IBM Product Master Modernization Non-Production
9.6	5724-Y99 5733-RDW	IBM Rational Developer for I RPG & COBOL Tools IBM Rational Developer for I RPG/COBOL + Modernization Tools, Java Edition
1.3	5737-J43	IBM Security S.O.C. Modernization Suite
12.0.3	5725-I17	IBM Watson Explorer Modernization
4.5	5900-ABV	IBM Watson Studio Premium Modernization IBM Watson Studio Premium Modernization for Non-Production
2022.2.1	5900-A8N	IBM Z and Cloud Modernization Stack
1.0	CA0C	Sample patterns for IBM Mixed Language Application Modernization Pattern SupportPac:CA0C
2.1.0.2	5737-E67	UrbanCode Deploy for IBM Cloud Private for Application Modernization

IBM Offering Information

The offering information for the Cloud Pak for Data platform is listed below. Cartridges and modernization licenses are not included for the purposes of brevity.

Software Announcements

Number	Date	Title
221-202	June 15, 2021	IBM Cloud Pak for Data 4.0 provides an intelligent data fabric that combines and automates data and AI lifecycles, simplifying data management to accelerate digital transformation
220-468	October 27, 2020	IBM Cloud Pak for Data 3.5 and Cloud Pak for Data System 1.0.7.5 enhancements and new services simplify how your organization operationalizes, manages, and scales data and AI
220-197	April 7, 2020	IBM Cloud Pak for Data V3.0 boosts its multicloud data and AI platform capabilities with an Enterprise Edition for nonproduction workloads and support for Red Hat OpenShift 4.3, Master Data Connect, model risk management, and IBM Db2 Big SQL

Support Discontinuance

Number	Date	Title
922-055	April 12, 2022	Software support discontinuance: IBM Cloud Pak for Data 3.5.0
921-130	October 26, 2021	Software support discontinuance: IBM Cloud Pak for Data 3.0.x

Other References

Type	Name
IBM Documentation	What is included with your Cloud Pak for Data license
IBM Documentation	List of services included with, and cartridges available for IBM Cloud Pak for Data
IBM Documentation	List of foundational services common across all Cloud Paks
IBM Documentation	IBM License Service documentation
IBM Licensing Guide	IBM Cloud Paks licensing guide
IBM User Guide	IBM Licensing Tools: ILMT and IBM License Service user guide
IBM Licensing Guide	Licensing guide for Virtualization Capacity: Container Licensing

Questions and Comments:

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