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VMware Cloud Director extension for Data Solutions 1.5

Frequently Asked Questions (FAQ)

General Information

Q. What is the VMware Cloud Director extension for VMware Data Solutions?

A. VMware Cloud Director extension for Data Solutions is a plug-in for VMware Cloud Director (VCD) that enables VMware Cloud Service Providers (VCSP) to deliver the portfolio of developer services like: on-demand messaging, , event streaming (Confluent platform), database management services (SQL, NoSQL, PostgreSQL, & MongoDB) at massive scale on their multitenant environment.

Q. How do I start using the VMware Cloud Director extension for VMware Data Solutions?

A. Download the plugin from the Broadcom Support Portal. Version 1.0 brings you the following capabilities: on-demand messaging through RabbitMQ, and version 1.1 brings you database software support for MySQL and PostgreSQL. While version 1.2 brings in MongoDB Community and Enterprise services. Version 1.3 we delivered support for the Confluent Platform - a full-scale data streaming platform that enables you to easily access, store, and manage data as continuous, real-time streams. Version 1.4 we delivered Backup & Restore capabilities for SQL & PostgreSQL instances and metering support. And in the latest 1.5 version, we have delivered integration with Data Service Manager to bring DB Management capabilities both on VM and TKG custer based deployments.

Licensing & Pricing

Q. How can I license a Data Solutions service?

A. To start deploying RabbitMQ, VMware SQL with MySQL and VMware SQL with PostgreSQL services provided through the Data Solutions extension, you need to add licenses for them in the Commerce Portal. To do so, log in to the Commerce Portal and under a Contract ID, click One-off Orders. Click New Order and then select the license which will be added to your contract. For the MongoDB Enterprise edition, you need to obtain your license directly from MongoDB. After that, you can use the MongoDB Enterprise for Kubernetes images in the Data Solution Extension. MongoDB Community is free of charge and does not require a license.Using the commercial features of the Confluent Platform also requires an enterprise license. This license can be obtained from Confluent. An enterprise license provides access to all Confluent commercial features for a production environment. An enterprise license is an annual paid subscription that expires after 365 days.The software ceases to function after the license expires.
The Data Service Manager is a native component of VMware Cloud Foundation and does not need any additional license.

Billing and Metering

Q. What are the commercial terms to use the VMware Cloud Director extension for VMware Data Solutions?

A. The extension comes with no additional cost. It is a free-to-use plugin. However, the providers are charged for consuming VMware Data Solutions on a per-core basis. Refer to the latest Product License Guide (PLG) for more details on VMware Data Solutions pricing. MongoDB Community is free of charge service, while the MongoDB Enterprise requires a license obtained from MongoDB. VMware does not charge MongoDB Enterprise usage as of

now. Similarly, Confluent services are priced based on Confluent license pricing.

Q. Do I have to license the entire Tanzu Kubernetes Grid cluster if I want to use Data Solutions?

A. No, you will only need to license the containers where the data services run, and you will only pay for the used CPU cores by the deployed services per container.

Q. Do I have to license the management cluster of the Tanzu Kubernetes Grid for using Data Solutions?

A. No. For Data Solutions, you only need to license the container where the data service is deployed.

Q. Do I have to license the entire worker on which the container with the data solution runs?

A. No, you just need to license the container where the data service is deployed.

Q. Do I have to license the whole container where the data service is deployed?

A. Yes. You need a Data Solutions license if the service is activated and deployed in a container in a Tanzu Kubernetes Grid cluster.

Q. How is the usage of the deployed services calculated?

A. The usage for VMware SQL with MySQL and VMware SQL with PostgreSQL is calculated based on the used CPU cores for each container where the service runs. For DSM MySQL and DSM PostgreSQL, the allocated CPU cores are calculated. To calculate the usage of those services, identify all containers where they run. Determine the configured vCPUs for the container. Sum the count of configured vCPUs and convert it to Cores. For RabbitMQ, all configured Kubernetes vCPU Resource Limits for Containers with RabbitMQ Nodes must be identified for reporting. Containers with Kubernetes Operators do not need to be identified for reporting.

Q. How should I meter the usage of the data services?

A. There is no automatic metering of the Data Solutions Extension. However, on the provider and tenant administrator's solution detail page, admins can get the real-time CPU core consumption data for each solution. Users must manually calculate and report your data solutions service usage to the Commerce Portal. You can use VMware Chargeback to calculate the usage of your tenants or use the kubectl tool to identify the containers running the RabbitMQ and SQL services.

Q. How many points will be reported when I am using a VMware SQL with MySQL instance with a minimum deployment of 500 milliCores and hyperthreading enabled?

A. When hyperthreading is enabled, then the number of cores is half the vCPU cores. In this case, the CPU cores which will be reported are 500 milliCores/1000/2=0,25 cores.

Q. Do I have to pay more when having a database instance with enabled High Availability (HA)?

A. Yes, SQL database replications are considered billable. What will be considered billable though depends on the type of recovery that you will perform. The general guidance for hot and cold disaster recovery can be found in this document. Information on enabling HA for VMware SQL with MySQL can be found here. How to use HA with VMware SQL with Postgres check here.

Operational

Q. What are the new features of VMware Cloud Director extension for VMware Data Solutions 1.5?

A. In this release, we have provided integration with Data Service Manager through which VCSPs and tenants can deploy mMySQL & PostgreSQL DB instances on Virtual machines. Kindly refer to the documentation page for more info.

Q. What operations can I perform with the VMware Cloud Director extension for VMware Data Solutions 1.5?

A. As a tenant administrator you can create, update, upgrade, rollback, share and delete RabbitMQ, SQL and NoSQL data services to selected Tanzu Kubernetes Grid clusters and on provider managed Data Service Manager infrastructure . You can also apply advanced settings for improving the

performance and security of those services. As a provider administrator, you can publish the RabbitMQ, SQL, NoSQL & Data Service Manager infrastructure policies & services to all or selected tenants on their storage, and you can also update the container registries which keep your services Docker images. As a tenant user, you will be able to configure a MongoDB Ops Manager for managing your MongoDB Enterprise instances and monitoring their health and performance. Similarly for Confluent services.

Q. I am already using the VMware Cloud Director extension for VMware Data Solutions 1.x. How to upgrade to version 1.5?

A. This is a simple and straightforward process. Please follow the VMware Cloud Director extension for VMware Data Solutions 1.5 upgrade process to upgrade the extension from 1.x

Q. I am hosting distributed applications with low latency and high throughput. Can I expect more services to serve those applications?

A. Yes, VMware is constantly working to support and service partner needs. Support for other highly scalable and reliable databases and cache services is on the roadmap.

Q. Can I monitor the provisioned data and messaging services?

A. Yes, the Data Solutions plug-in uses Grafana and Prometheus for data monitoring, alerting, and visualization. They must be installed on a Tanzu Kubernetes workload node. The detailed steps can be found here. MongoDB Enterprise also comes with an Ops Manager that shows the performance of the deployed MongoDB Enterprise instances and sets alerts for them.

Q. Is database backup possible with Data Solutions?

A. Backup and restore of data instances are supported for DSM SQL and Tanzu SQL on DSE UI. It is also available through the Kubernetes CLI. How to back up VMware SQL with MySQL database, check here. Learn how to back up VMware SQL with PostgreSQL here. The MongoDB Enterprise instances can also be backed up and restored with the MongoDB Ops Manager.

Q. Can high availability for SQL/NoSQL services be configured in Data Solutions?

A. Yes, while creating a SQL database you have the option to enable high availability for it in the Data Solutions user interface. Check out the High Availability information on VMware SQL with MySQL here. Learn how to use HA with VMware SQL with PostgreSQL here. While creating a MongoDB Community or Enterprise service, you can choose a template that deploys multiple replicas of the database to support high availability. Read more here.

Q. Does Data Solutions Extension has API that I can use for automation?

A. Yes, Data Solutions Extension operations can be automated with the Cloud Director API, which uses Data Solutions defined entities to bound queries with. Defined entities are external resources that VMware Cloud Director can manage.

Technical Requirements

Q. What are the requirements for using the VMware Cloud Director extension for VMware Data Solutions 1.5?

A. The following products are needed for provisioning messaging and data services with the VMware Cloud Director extension for VMware Data Solutions 1.5 plug-in:

- VMware Cloud Director 10.5.1 and 10.6
- Container Service Extension 4.2.1 and 4.2.2
- Container Service Extension CPI
- Tanzu Kubernetes Grid Multi-cloud 1.5.4+, 1.6.1+
- Kubenetes 1.22.x+vmware.1
- VMware SQL with MySQL for Kubenetes 1.9 and 1.10
- VMware SQL with PostgreSQL for Kubernetes 2.2 and 2.3
- Data Service Manager SQL 2.1
- VMware RabbitMQ for Kubernetes 1.4 and 1.5
- MongoDB Community for Kubernetes 0.9.0
- MongoDB Enterprise for Kubenetes 1.23 & 1.24

- vSphere Cloud Provider Interface version 1.3.0 or later if using a load balancer with TLS for RabbitMQ

Q. Do I need VMware Cloud Director Container Service Extension for using VMware Cloud Director extension for VMware Data Solutions 1.5 with Data Service Manager?

A. Yes, it is needed so that you can provision messaging and data services to your Tanzu Kubernetes Grid clusters created through VMware Cloud Director Container Service Extension 4.2.1 or 4.2.2. For DSM SQL instances CSE clusters in provider org; for other solutions, you need tenants to install CSE clusters.

Q. What is VMware Harbor Registry?

A. VMware Harbor Registry is an enterprise-class registry server that stores and distributes container images. Harbor allows you to store and manage images for use with VMware Tanzu Kubernetes Grid Integrated Edition (TKGI). It is needed as a secure source for pulling the needed images for the operation of the extension, which are: the Data Solutions Operator, VMware SQL with MySQL, VMware SQL with PostgreSQL, RabbitMQ, MongoDB Community and MongoDB Enterprise.

Q. How can I set up Data Solutions Extension?

A. After installing the Data Solutions plug-in, you need to configure a Tanzu Container registry from where you will pull images of the Data Solutions operator and MySQL, PostgreSQL, and RabbitMQ. To do so, manually copy the path of the Data Solutions operator image from the VMware Harbor Registry to the internal Tanzu Container registry. Also, copy the paths of the images of the services to the local registry. Configure the registry credentials and repository addresses from the Data Solutions portal. For MongoDB Community and Enterprise, update the container registries that hold the respective MongoDB images after the installation of the Data Solutions Extension. Check Managing Container Registries to learn more.

Support

Q. How is the support model for VMware Cloud Director extension for Data Solutions ?

A. Support for VMware Cloud Director extension for Data Solutions is included with the VCF support entitlement. Should the CSPs need VMware by Broadcom support for Data services components like RabbitMQ, MySQL & PostgreSQL, they should be requested by subscribing to the Tanzu Platform.

For DBs deployed thru DSM, users need to subscribe for Private AI Foundation add-on.

Users would get MogoDB and Confluent support from their respective vendors.

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