Effective Kubernetes

Cloud Manager

Asynchronous Processing

About Cloud Manager & Kubernetes

Cloud Manager is a platform and web UI for **Kubernetes** (K8s) aimed to simplify devops work. It provides a clean UI/UX for most commonly performed tasks while retaining all the power of **Kubernetes**. You can use it to deploy and scale applications and services, define configuring resources, run jobs, install marketplace solutions from catalogs, perform multi-cluster operations, setup CI/CD pipelines, and much more.

Kubernetes has become the *de-facto* industry standard for deploying and managing container-based solutions, cloud native, and microservice architectures. However, many professionals and members of the community have voiced some frustration with the steep learning-curve involved in bringing **Kubernetes** to its full potential. This is caused by a combination of factors, including the complexity of **Kubernetes** resource model, the need for intricate YAML manifest files for configuration, and lack or immaturity or simply not sufficient high-level tooling.

Cloud Manager fills that important gap in making **Kubernetes** an effective platform for devops and develop micro-service architectures. Developers and devops staff become productive, without getting lost in the hurdles of low-level configuration. Rather they can focus on building, iterating, deploying, testing, and scaling applications and services.

Multi-Cluster, Multi-Cloud

Cloud Manager is designed from the ground-up to support devops in multiple **Kubernetes** clusters and multiple clouds, including on-premises and public clouds. You configure access to one or more clusters, and create **(Name)Spaces** and deploy workloads on any of the clusters with the same integrated environment.

It supports multiple methods of cluster authentication, and can be integrated with clusters from multiple cloud providers. You can perform inter-cluster operations as well, such as copy-paste of deployments and configuration resources across multiple clusters.

Getting Started – Cloud & On-Permises

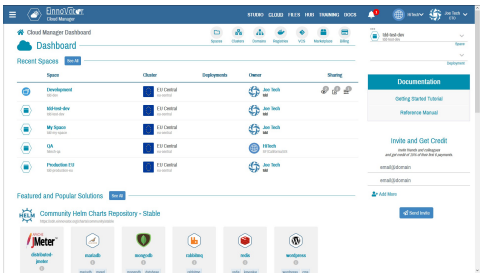
You can get started with **Cloud Manager** easily by signing up on **EInnovator** *public cloud* at https://cloud.einnovator.org. This allows you to start deploying applications and marketplace solutions, and build docker images for your apps immediately, A set of shared K8s clusters fully setup are made pre-available, to ramp up your work in an cost-effective way.

You can also deploy **Cloud Manager** on other public clouds and on-premises, including your laptop and organization data-center. We provide an installation package that contains scripts to perform the installation automatically.

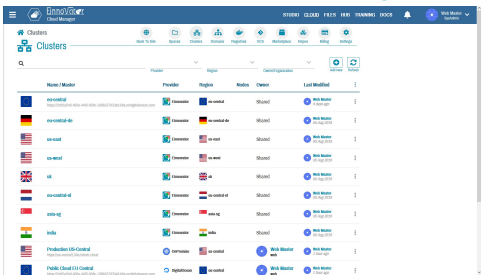
Quick Links

- Deploying Cloud Manager on-permises: https://cms.einnovator.org/publication/cloud-manager-reference-manual/_/deploy-onpremises.md
- Cloud Manager Reference Manual: https://cms.einnovator.org/publication/cloud-manager-reference-manual
- Cloud Manager Tutorial: https://cms.einnovator.or/document/cloud-manager-tutorial

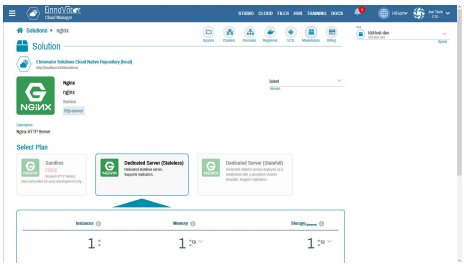
Cloud Manager User Dashboard



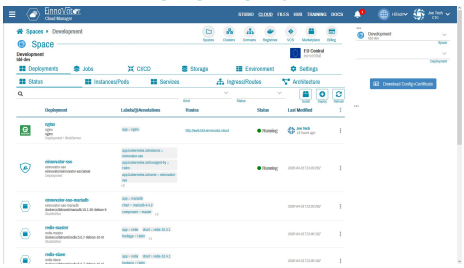
Multi-Cloud, Multi-Cluster Management



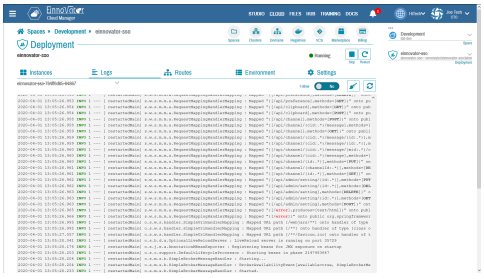
Installing Marketplace Solutions



Managing Deployments



Inspecting Pod Logs



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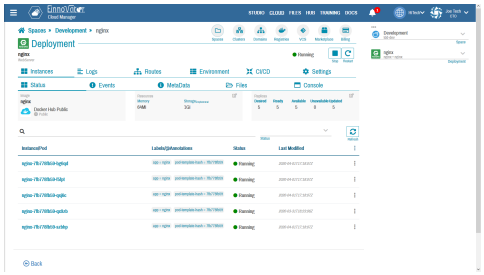
Running, Scalling & Troubleshooting Deployments

Cloud Manager provides an intuitive UI to launch new **Deployments** of different kinds, including *stateless* replicated deployments, **StatefulSets**, and individual **Pods**. All configuration details of deployments, including persistent **Volume** mounts, *environment variables*, and advanced deployment options can be easily setup. Space-wide configuration resources such as **ConfigMaps**, and **Secrets** can also be pre-configured and used by applications.

Cloud Manager provides easy access to the logs of **Kubernetes** Pods. You can easily switch between logs of different Pods of same deployment, follow log tails, search and filter log content, with color high-lighting. You can inspect all details about a resource specs, as in **kubectl**, but with the commodity of a web UI.

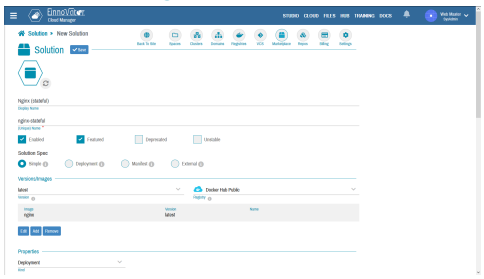
Scaling Deployments



Solution Catalogs

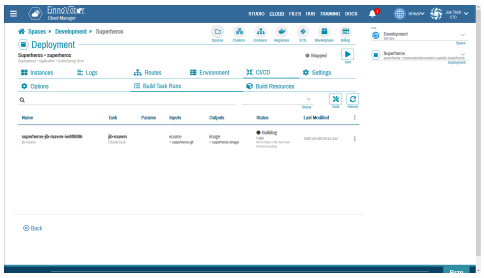
Cloud Manager allows administrators to defined and share reusable services and *solutions* provided by community or developed in-house. Solutions can be defined standalone or as part of a *catalog* or *solution repository*. Administrators specify all the configuration details for a solution, so developers can follow a one-click approach to install backing and support services, such as databases, messages broker, monitoring tools, and reusale middleware. Multiple solution formats are supported, including integration with package manager **Helm**, declarative specifications, and YAML templating tool **YTT**.

Creating Reusable Solutions



CloudManager also comes with built-in management consoles for several kinds of services. You can access the file-system of Pods with a **File Manager**, execute shell commands with a **Console** or terminal for pods, and use a DB management console for ad-hoc querying, troubleshooting and data backups/snapshots – currently supports **MySQL/MariaDB**, with support for other DBs in the road-map.

Building Docker Images (CI/CD)

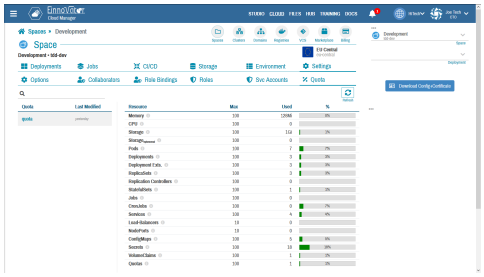


CICD Pipelines

Being able to quick iterate and deploy new versions of your apps, is a mandatory requirement to increase the quality of your software, keep users happy and engaged, keep developers productive, deliver a rapid time to market, and more generally to have the capacity to experiment with new business ideas fast.

Cloud Manager provides developers and devops staff a simplified experience to setup these *continuous integration & delivery* pipelines with **Tekton**. You can build and deploy new Docker images and deploy them with a single click. All the details are taken care automatically.

Setting Space Quotas



Security, Collaboration & Quotas

Cloud Manager integrates with a **SSO Gateway** to secure and authenticate access to managed **Kubernetes** clusters. It provides a simplified role-based access-control model, that maps into Kubernetes **RBAC** abstraction. Users can easily invite others to access a **Space** and assigned them selected roles. Social communication is also supported as comments posted by authorized users to channels. Administrators can also set **Quotas** on **Spaces** to limits resource utilization.

EInnovator – Software Systems

EInnovator.org enables organizations to build modern software systems, by providing a combination of solutions, consulting and professional services, technical resources and education. We offer a diverse product portfolio for organizations to leverage, including cloud tools, development environments, and reusable middleware. Our flagship products include Cloud Manager for K8s, App Studio a Cloud IDE, and Micro-Service Suite.

EInnovator™

Training – Bookings & Inquiries
training@einnovator.org

Support & Consultancy
support@einnovator.org

Product & General Info, Partners
info@einnovator.org