



Maestro3



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1. GENERAL TERMINOLOGY

CLOUD COMPUTING

Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. The term is generally used to describe data centers available to many users over the Internet.

Maestro3:

Maestro3 works with the main cloud computing providers and platforms – AWS, Microsoft Azure, Google Cloud, OpenStack.

MICROSOFT AZURE

Microsoft Azure, cloud computing platform by Microsoft. Visit the <u>Microsoft Azure Official Website</u> for details on Azure cloud.

Maestro3:

Maestro3 includes integration with Azure, which allows to run, manage and monitor resources in Azure using Maestro3 tools. Such integration may be required by the project specifics, or the customer's instructions, or the geographic location.

AMAZON WEB SERVICES (AWS)

Amazon Web Services, cloud computing platform by Amazon. Visit the <u>AWS Official Website</u> for details on AWS cloud.

Maestro3:

Maestro3 includes integration with AWS, which allows to run, manage and monitor resources in AWS using Maestro3 tools. Such integration may be required by the project specifics, or the customer's instructions, or the geographic location.

GOOGLE CLOUD PLATFORM (GCP)

Google Cloud Platform, cloud computing platform by Google. Visit the <u>Google Cloud Platform Official</u> <u>Website</u> for details on Google Cloud.

Maestro3:

Maestro3 includes integration with Google Cloud, which allows to run, manage and monitor resources in Google using Maestro3 tools. Such integration may be required by the project specifics, or the customer's instructions, or the geographic location.

OPENSTACK

Open-source <u>Infrastructure-as-a-Service</u> platform used to support large virtual servers in a data center. Visit OpenStack Official Website for details. <u>https://www.openstack.org/</u>.

Maestro3:

Maestro3 can work with private clouds based on OpenStack technology.

PUBLIC CLOUD

The cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider.

Maestro3:

Maestro3 allows access to the main public clouds, such as Amazon Web Services, Microsoft Azure, Google Cloud.

PRIVATE CLOUD

The cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). It may be owned, managed, and operated by the organization, a third party, or some combination of them, and it may exist on or off premises.

Maestro3:

Maestro3 allows to manage private clouds based on OpenStack technology.

HYBRID CLOUD

The cloud infrastructure is a composition of two or more distinct cloud infrastructures (private, community, or public) that remain unique entities, but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds).

Maestro3:

Maestro3 provides its users the full scope of facilities for creating, manipulating, and monitoring resources in a hybrid cloud, in terms of self-service.

2. ACCESS AND PERMISSIONS

IAM USER

Maestro3:

IAM, Identity and Access Management, is a framework of policies and technologies for ensuring that the proper people in an enterprise have the appropriate access to technology resources. IAM systems fall under the overarching umbrella of IT security and Data Management.

Identity and access management systems not only identify, authenticate and authorize individuals who will be utilizing IT resources, but also the hardware and applications employees need to access. It addresses the need to ensure appropriate access to resources across increasingly heterogeneous technology environments and to meet increasingly rigorous compliance requirements.

For more details on using the IAM approach on different cloud providers see: <u>AWS</u>, <u>Azure</u>, <u>Google</u> <u>Cloud</u>.

SSO

Single Sign-On - authentication approach which allows users login different applications using the same login credentials. After you login once, your credentials will be automatically fetched when you switch from application to application.

Maestro3:

Maestro3 is designed to integrate with the corporate SSO of your company.

PERMISSION GROUP

Maestro3:

A set of Maestro3 operations grouped by purpose and expected admission level of the users who will have access to the group.

Each user has access to one or several permission groups depending on their <u>role</u> within the tenant.

The set of operations included to each permission group can be customized within the "Manage role mapping" option of the Permissions page.

USER CREDENTIALS

Login and password combination provided by the user to access the system.

Maestro3:

In Maestro3, users can log in to Windows and Linux instances using their standard domain credentials. At the same time, use of SSH keys is also supported.

USER PERMISSIONS

Maestro3:

Set of allowed and denied operations assigned to a user and defining this user's access to cloud services.

User permissions are defined by the combination of <u>permission groups</u> enabled for the user based on their role on the respective tenant.

USER ROLE

Maestro3:

User attribute defining the user's general level of access to the Cloud. Influences user permissions.

Based on the user's specified role on a tenant, the user is allowed to perform a scope of operations defined in one or several permission groups.

The set of permission groups enabled for each role can be customized with the "Manage permission groups" option on the Permissions tab.

WINDOWS PASSWORD IN AZURE

Maestro3:

The password for Azure Windows instances is generated at instance creation and is sent in an email to the instance requestor. No specific actions on password deciphering. In case the password is lost, it is impossible to request it again.

WINDOWS PASSWORD IN AWS/GOOGLE

Maestro3:

On Windows instances, the password generated by AWS is used. It can be retrieved with the Get Windows Password option in the instance details on the AWS Management Console. The other method which does not require accessing AWS directly, is decrypting the password with Maestro tools.

3. BILLING

BILLING AT MONTH-END CLOSURE

Maestro3:

A process taking time within 5 first days of each month, which includes verification and synchronization of all billing data from external and private platforms, as well as bills check and verification.

The final point of the procedure is delivering Billing reports and Monthly Summary reports to project managers and primary contacts.

BILLING ENGINE

Maestro3:

Maestro3 provides a modern, comprehensive, and easy to use billing engine. It includes multiple and customizable pricing policies, discounts, costs adjustment and fault management tools, as well as analytics and monitoring mechanisms aimed to simplify resources usage and billing information gathering and processing.

CHARGEBACK (INVOICING)

Maestro3:

The process of assigning Cloud-related bills to tenants using Maestro3, so that these bills could be further distributed between projects owners/customers.

Also: the actual costs, resulting from this process.

PAY-AS-YOU-GO

In cloud computing pay-as-you-go means a method of charging for services usage based on actual utilization.

Maestro3:

Maestro3 provides the usage-based payment method in which users pay only for the services provided or resources actually consumed.

The cloud resources are billed on the hourly basis. The actual charge depends on a number of factors, such as whether the virtual machine is running or stopped, how much storage volume is actually consumed, whether checkpoints and images are used, etc.

The cost of a tenant in different configurations can be estimated using the native cost estimation tool of cloud providers.

The Reporting tab of the Cloud Management Console allows monitoring the hourly project costs as well as the cost of the used resources.

PRICING POLICY

Maestro3:

A set of rules used to calculate the price of cost objects in the cloud. Allows to set a price for a cost object in the cloud; define the rounding method, applying for a certain time (from/to); used to set costs in private regions, as well as for modifications of costs in public clouds.

4. INFRASTRUCTURE MANAGEMENT

ANSIBLE CLIENT

Ansible is an IT automation tool used to configure systems, deploy software, and orchestrate more advanced IT tasks such as continuous deployments or zero downtime rolling updates. Select the tenant and region for which the Ansible client should be generated. The result will be a downloadable zip, containing the dynamic inventory files.

Maestro3:

In Maestro3, Ansible can be used to configure instances automatically by accessing them via SSH keys.

CLOUD MANAGEMENT CONSOLE (CLOUD UI)

Maestro3:

A graphical user interface for Maestro3, available as a web application and a native mobile application.

Cloud UI provides instant access to Maestro3 tools and services an enables virtual infrastructures review and management, as well as tenant and user settings customization.

Cloud Management Console includes:

- <u>Tenant switcher</u>
- Dashboard
- <u>Cloud Management Console Tabs</u>

CLOUD MANAGEMENT CONSOLE TABS

Maestro3:

A page of the <u>Cloud Management Console</u> which includes a set of tools for virtual infrastructure or account management, grouped by a specific purpose.

The following tabs are available:

- Reporting Here you can find your tenant's billing information.
- Management Lists all resources available for your tenants.
- Catalog Allows to review and manage Terraform and AWS CloudFormation templates.
- Stacks Here you can find detailed information on stacks based on templates from the Catalog.
- Images The tab allows to review existing custom images and run new virtual instances based on them.

• Permissions – The tab allows to customize user permission and specify the scope of actions the user can perform in the cloud.

 Notifications – The tab provides you with all notifications on actions within your subscription.

• My Account – The tab allows to set up personal account settings, such as SSH keys, default parameters, permissions (review only), theme.

CONTENT VIEW

Maestro3:

Content View is displayed upon selecting a resource which you want to review in the Maestro3 Management, Catalog, Stacks, or Images sections.

The new pane appears to the right from the list of the objects. It contains the details on the selected resource and the manipulation buttons, grouped by purpose.

DASHBOARD

An element of UI providing instant access to application controls and key performance indicators.

Maestro3:

The start page of the <u>Cloud Management Console</u>. It provides access to various Cloud infrastructure management and monitoring functions supported by Maestro3.

It includes the following components:

- <u>Dashboard Menu</u> The Menu on the top of the Dashboard, allowing access to <u>Cloud</u> <u>Management Console Tabs</u>. Available on Desktop UI only.
- <u>Tab link</u> A tile on the dashboard, allowing access to <u>Cloud Management Console Tabs</u>. Available on Mobile UI only.
- <u>Wizard</u> A tool that allows to perform certain infrastructure or project manipulations via a sequence of dialog boxes that lead you through a number of steps, each designed to define a specific scope of settings (Run, Console, Security Guard, Manage Metrics, Manage Quotas etc.)
- <u>Metric Tile</u> A tile on the dashboard providing information on one of infrastructure performance and state metrics monitored for your cloud infrastructure.

The Dashboard is available in web and mobile applications.

DASHBOARD MENU

Maestro3:

The menu on the top of the <u>Dashboard</u>, allowing access to <u>Cloud Management Console Tabs</u>.

The Dashboard Menu is available only on Desktop interface. In mobile interface, <u>Tab Links</u> are used instead.

INSTANCE

A virtual machine, run in public clouds.

Maestro3:

A virtual machine run and controlled by Maestro3.

To request and run an instance in Maestro3, the following parameters should be specified:

- The tenant to which the instance is to be assigned
- The <u>region</u> in which the instance will be used
- The <u>image</u> (operating system configuration) to be used with the instance
- The <u>shape</u> (number of CPUs and RAM volume) of the instance to be created

RESOURCE

Infrastructural and Billing objects in a cloud.

Maestro3:

An element of virtual infrastructure controlled and monitored by Maestro3.

Each resource is billed and split into cost objects according to the billing policies of the hosting cloud provider.

The users can review and manage resources in terms of self-service, using the tools provided by Maestro3 or by accessing the native management consoles of cloud providers used to host their infrastructures.

The list of all resources available for your tenants can be found on the Management, Catalog, Stacks, and Images <u>tabs</u>. There, you can see the details on these resources, manage them, and remove, if necessary.

SCHEDULE

Maestro3:

Configuration allowing automatic performance of instance start/stop actions at specified time.

Properly configured schedules can save tenant costs without affecting the overall performance of the infrastructure and, therefore, increase the infrastructure efficiency.

For example, setting a schedule to stop a development instance every day at the end of the working hours will lower the instance cost, as resources of a stopped instance are charged at a lower rate.

Schedules can be configured either via the Schedules Wizard.

SSH / SSH KEY

The Secure Shell (SSH) protocol creates a channel between an SSH client and an SSH server, enabling a secure connection over an unsecured network.

Maestro3:

The typical example of SSH usage is logging in to remote computers by users. This also applies to connecting to virtual instances in private and public cloud providers, supported by Maestro3.

SSH key is a tool that allows to identify the user and proceed with the connection. The key pair consists of two parts: the public key stored at SSH server (in Maestro3), and the private key, stored on the user's workstation.

A Maestro3 user can either create a key pair using Maestro3 via the SSH Wizard) or import an existing key for the further usage. To be used for logging in to virtual instances, the SSH key is typically specified at instance creation. The user is fully responsible for the private key secure storage on their workstation.

TAG

Maestro3:

A label consisting of a key and value, used to identify and filter cloud <u>resources</u>, such as instances and volumes, for further easier reference and manipulation.

TAB LINK

Maestro3:

A tile on the dashboard, allowing access to <u>Cloud Management Console Tabs</u>. Available on Mobile UI only.

Tab Links are available only on Mobile interface. On Desktop interface, <u>Dashboard Menu</u> is used instead.

TAB MENU

Maestro3:

The menu displayed at the left of each of the Cloud Management Console Tabs.

The Tab Menu includes the Tenant Tree, which allows to switch between the tenants and regions, and the Menu, allowing to switch between tabs and wizards.

Tab Menu is not displayed on the <u>Dashboard</u>, where <u>Dashboard Menu</u> and <u>Tab Links</u> are used,

TEMPLATE

Maestro3:

Maestro3 supports <u>Infrastructure-as-Code</u> approach, allowing to pre-define resource settings in specific files, called stack templates, and automatically apply these settings by referencing these files. It is possible to manage <u>Terraform</u> structures stored in GitHub or upload single templates to Maestro3 server for further usage. Maestro3 also supports AWS <u>CloudFormation</u> templates creation, review, launching and terminating, applicable only for AWS-based infrastructures.

TENANT SWITCHER

Maestro3:

The element at the top right corner of Cloud UI, allowing user to switch between tenants to which they have access.

VOLUME

Maestro3:

Storage memory available in a virtual machine by default (system volume), or additionally attached to it.

Additional volumes can be increased, detached from instances, attached to instances again, and deleted when no longer needed. Additional volume is charged on the hourly basis per GB of the used storage volume. Storage volume is charged on stopped instances too, however, the charge is lower than that for running instances.

For details on volume types of different cloud providers, go to AWS, Azure, Google Cloud.

VIRTUAL MACHINE

A virtual machine (VM) is an emulation of a computer system. Virtual machines are based on computer architectures and provide functionality of a physical computer. Their implementations may involve specialized hardware, software, or a combination.

Maestro3:

In Maestro3 virtual machines are typically referred to as instances.

WIZARD

Maestro3:

A wizard is a Dashboard tool that allows to perform certain infrastructure or tenant manipulations via a sequence of dialog boxes that lead you through a number of steps, each designed to define a specific scope of settings.

5. MONITORING & AUDIT

ANALYTICS

Maestro3:

Maestro3 tool calculates and analyzes various data related to the infrastructure performance (KPIs, service usage, etc.) and is available at different levels of the cloud resource hierarchy - region, tenant and instance. Analytics is represented to the user in a numeric and graphic form by means of reporting.

Maestro3 provides also information on the tenant resources usage. This information can be analyzed and used to optimize the resources usage and overall infrastructure performance, cutting the project costs and load, but saving the necessary capacities.

AUDIT

Maestro3:

Maestro3 Audit system allows getting instant information on all relevant events, related to instances or tenants, for a specified period and get info on the events that happened in the past. This includes running/starting instances, stopping/terminating them, as well as operations with storage volumes, properties etc. Not only the events are listed here, but also the emails of the people who manipulated those resources.

Audit data can be accessible via the Management page in the Dashboard menu. Alternatively, it can be sent to users' email addresses by means of reports.

All audit information on each resource is provided also in the Content View section.

QUOTA

Maestro3:

Financial limitation applied to a project and specifying the desired monthly cost limit for tenant.

Quotas are set up by project responsible persons with the help of the Manage Quotas wizard.

Quotas mechanism also includes the possibility to set up notifications informing on the level of the quota depletion, and to specify which actions should be performed by Maestro3 when the quota limit is reached.

METRIC

Indicator of performance or condition of infrastructure on instance or tenant level.

Maestro3:

Customized metrics established as user's own set of preferred metrics that will be accessible "at hand" – on the main Cloud Dashboard, on Management and Reporting pages, so that there will be no need to dive into the analytics tools each time they need the metrics' details.

Cloud analytics works with a wide range of infrastructure information, covering every level: from general Private Cloud statistics, to tenant and region details, and performance monitoring of each specific instance.

METRIC TILE

Maestro3:

A tile on the <u>Dashboard</u> providing information on one of infrastructure performance and state <u>metrics</u> monitored for your cloud infrastructure.

The tiles are added and removed using the Manage Metrics wizard.

MOM - "MONTH-OVER-MONTH"

Shows the change in the value of a specific metric as a percentage value of the previous month. Monthover-month growth is often used to measure the growth rate of monthly revenue, active users, number of subscriptions, or other key metrics.

Maestro3:

In Maestro3 the chargeback changes as compared to the previous is displayed in Monthly Analytics Optimization report, in Summary report in section Monthly Billing Report by Tenants, and in Custom Unit Report.

NOTIFICATION

A message automatically sent to users in order to inform that there has been some activity on their account.

Maestro3:

A message sent by Maestro3 aimed to inform user on infrastructure change or account-related activities (for example, instance state change, schedule failure, login attempt, etc). In addition to information about the event, notifications can also include action items (for example, APPROVE/REJECT buttons for login attempt approval).

A notification is sent to email and duplicated and stored on the Notifications tab of the <u>Cloud</u> <u>Management Console</u>.

For native mobile application users, most important notifications are also delivered as push notifications.

Maestro3 - Glossary

Depending on their content and purpose, notifications are targeted at different groups of users, based mainly on their <u>role</u> and virtual resources ownership. Some notifications are sent to initiators of specific events (for example, Login Request Approved/Rejected notification).

The notifications are sent automatically to recipient's email and are duplicated and stored on the Notifications <u>Console tab</u>.

REPORT

A document that delivers information of specific purpose and content in an organized format to a specific target audience.

Maestro3:

Automatically aggregated summary of statistics related to virtual infrastructure state, performance, or costs.

Depending on their content and purpose, reports are targeted at different groups of users, based mainly on their <u>role</u> and virtual resources ownership. Some reports can be initiated manually and are sent to the requester (for example, billing reports).

The notifications are sent automatically to recipient's email and are duplicated and stored on the Notifications <u>Console tab</u>.

TOTAL / SUBTOTAL REPORT

Maestro3:

The Billing Engine provides two types of reports (Subtotal, Total for the tenant, tenant group, and region), where:

- Subtotal shows price for resources for the specified period, split into categories.
- Total shows total price for resource utilization for the specified period.

Reporting type can be customized via the Settings wizard on the Reporting page.

6. SECURITY

MAESTRO3 SECURITY

Maestro3:

Set of techniques, rules and regulations, aimed to protect assets within Maestro3 managed cloud. Maestro3 can be customized to correspond to security requirements of enterprises.

The cloud security includes both the measures taken by Maestro3 to ensure reliable safety and protection of their user's assets and the rules, regulations and restrictions imposed on the users to maintain the high security standards implemented in Maestro3.

SECURITY GUARD

Maestro3:

The wizard that allows to check security assessment for your instances, from checking a single instance to scanning the whole region. Security procedure involving checking instances for vulnerabilities.

VULNERABILITY

Cloud infrastructure flaw which may result in compromising of confidentiality, availability or consistency of cloud assets.

Maestro3:

Maestro3 Security Policy allows integration into the enterprise's security procedures and deadlines.

7. SERVICE PROVISIONING

ALIASES

Maestro3:

A unified name used to reference similar entities in different cloud platforms.

To provide better usability and unification, Maestro3 supports referencing machine images and instance capacity settings (shapes) with aliases.

The user selects the alias, and Maestro3 automatically addresses the necessary entity in the respective cloud provider. For example, using the same machine image alias, you can get instances with similar operating system settings in different clouds, without need to investigate native libraries.

Aliases also work as an additional control tool that allows Maestro3 admins/owners select the machine images and capacities settings preferable for specific customers.

CLOUDFORMATION

AWS service targeted on collections of AWS resources and their dependencies and allowing quick and reliable automated provisioning of services and applications, based on pre-defined templates, where all the necessary configurations are described.

Maestro3:

Maestro3 allows to work with AWS CloudFormation templates to manage resources in AWS regions, and supports Terraform templates format for automating the management of resources on all supported platforms (private clouds, AWS, Azure).

INFRASTRUCTURE-AS-CODE (IAC)

Infrastructure as code (IaC) is the process of managing and provisioning computer data centers through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools. The IT infrastructure managed by this comprises both physical equipment such as bare-metal servers as well as virtual machines and associated configuration resources. The definitions may be in a version control system. It can use either scripts or declarative definitions, rather than manual processes, but the term is more often used to promote declarative approaches.

Maestro3:

Within Maestro3 IaC is featured by Terraform and CloudFormation.

INFRASTRUCTURE-AS-A-SERVICE (IAAS)

The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).

Maestro3:

Maestro3 can work with private clouds based on OpenStack technology based on laaS approach.

INSTANCE OWNER

Maestro3:

User acting as a contact point for an instance and receiving notifications on instance status changes. The instance owner cannot unsubscribe from the notifications related to the virtual machine they own.

Initially, the user requesting the instance is the owner of such instance. However, instance ownership can be transferred to a different user, if needed.

The instance owner is given in the Content View on the Management tab of the Cloud Management Console.

IMAGE (MACHINE IMAGE)

Machine Image is a custom template used to run instances in cloud. It includes the initial instance configuration (for example, an operating system, an application server, and applications), and additional settings depending on cloud provider.

Maestro3:

Image is to be specified in the virtual machine creation request. The image selection influences the virtual machine price and, in some cases, the available shape options. For example, virtual machines with Windows images can only have Medium shape or larger.

Maestro3 operates two types of images:

- Default images a standard set of images, provided initially by Maestro3 and referenced by <u>aliases</u>.
- Custom images the images created by users based on existing virtual instances.

MULTI-TENANCY

A multi-tenant cloud is a cloud computing architecture that allows customers to share computing resources in a public or private cloud. Each tenant's data is isolated and remains invisible to other tenants. Multitenancy allows to set up a separate space (tenant) for each project, business unit, customer, etc.

Maestro3:

Maestro3 allows working with multiple tenants in different public clouds (AWS, Azure, Google). Meanwhile, it provides single tools for managing and reviewing resources in any of the used clouds, and in most cases the only difference the user can see is the name of the cloud they are currently addressing. Once the user logged in, switching between tenants and clouds does not need additional authorization and is performed.

VIRTUALIZATION

Creation of a virtual version of a resource or device, for example, a server or a storage device.

Maestro3:

Maestro3 is a platform for creating, running and managing virtual machines emulating certain computer systems and executing applications similarly to physical computers.

PLATFORM-AS-A-SERVICE (PAAS)

The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

Maestro3:

Maestro3 provides an option to use the **Enterprise Deployment** model based on PaaS approach, where Maestro 3 is set up on the customer's side and includes all the features of the Standard and Professional models, as well as the ability to set up private virtual regions. Private regions can use the following technologies:

- OpenStack
- Special setup for MacOs provisioning (including virtual and hardware Mac instances)
- Ability to manage (register, monitor) hardware resources.

REGION

Group of Cloud hardware servers geographically located in the same place, managed independently and isolated from other servers.

Maestro3:

Maestro3 allows its users to use private regions as well as regions of public cloud providers (AWS, AZURE, Google Cloud)

SELF-SERVICE

Maestro3:

Underlying concept of a cloud computing services, in which users evaluate, create, monitor and analyze their resources and control their costs individually without requesting help from the Support service or IT department.

SHAPE (INSTANCE SHAPE)

Maestro3:

Maestro3 <u>alias</u> used to identify the capacity of the virtual instance to be run. Each shape references instance types in different cloud providers which are the most similar to each other in terms of performance. Instance shapes can be configured according to the customers' needs.

SOFTWARE-AS-A-SERVICE (SAAS)

The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

Maestro3:

Maestro3 provides options to use the Standard and Professional Deployment models, based on SaaS approach, where the customer is registered under Maestro3, and is provided with the following facilities:

Standard Deployment model

- A single-entry point to the unified and simply organized reporting for all customer's resources across all public clouds they use.
- A set of analytics tools for all virtual resources under the customer's account. This includes analytics on instance and tenant levels.
- Quotas management tool, that allows to set up the monthly expense limits for virtual infrastructures and the scenarios for different stages of quotas depletion.
- Alerts and notifications informing the customer on the significant events on their resources.

Professional Deployment model, where the customer is provided with all the facilities of the Standard model, complemented with the following:

- Virtual machines management. An instance can be ordered in several clicks, and the process is unified for all the supported clouds.
- Using Terraform and other stacks solutions to automate infrastructure management.
- Managing virtual machines owners. This allows to set up the higher level of control on the infrastructure events, and better cooperation with the responsible persons.
- Auto configuration for complex automated infrastructure setup.

SUBNET

Maestro3:

A subnet is a logical part within a larger network.

In a cloud, each tenant is activated in a specific subnet within the network, so that the infrastructures belonging to different tenants do not interfere with each other. This also applies to infrastructures in public cloud providers.

TENANT

Unified concept of AWS account, Google account, or Azure Subscription.

Group of users independent of other groups but sharing the same cloud infrastructure and resources. A tenant may be a company or a department within a company or a customer, etc.

Maestro3:

Maestro3 uses the <u>multi-tenant approach</u> in its billing system where different tenants are charged for the actually consumed resources. The maintenance costs are distributed between the cloud tenants.

TENANT GROUP

Maestro3:

Group of users independent of other groups but sharing the same cloud infrastructure and resources. A tenant may be a company or a department within a company or a customer, etc. A group of users can consist of tenants sharing different cloud providers.

TERRAFORM

Terraform by HashiCorp – a cross-platform solution which allows managing complex infrastructures, even when they are hosted in multiple clouds. The separated planning and execution phases allow to review the infrastructure state and the upcoming changes, which makes the users confident in the results.

Maestro3:

THEME

Maestro3:

A set of visual settings for displaying Maestro3 user interface, which every user can select individually according to personal preferences.

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VERSION HISTORY

Version	Date	Summary
1.0	August 30, 2019	Initial version published
1.1	October 10, 2019	Initial version clarified. Additional articles added in order to add precise details.