

A decorative graphic on the left side of the page, featuring a complex network of thin, light blue lines connecting various points, resembling a mesh or a data network structure. The lines are more densely packed on the left and become sparser towards the right.

# **EPAM Cloud Orchestrator Cloud Reporting Overview**

## **Short Guide**

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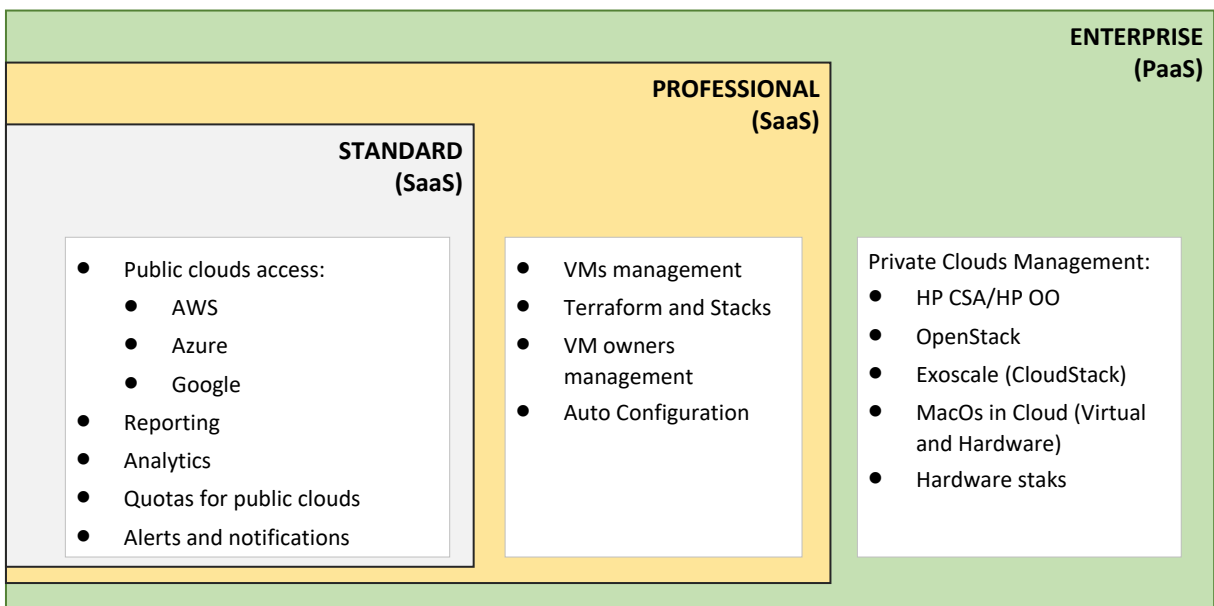
## INTRODUCING EPAM CLOUD ORCHESTRATOR

EPAM Cloud Orchestrator is a solution that allows to manage, control and monitor virtual infrastructures across public and private clouds.

EPAM Cloud Orchestrator is the result of over six years of EPAM’s experience in building hybrid cloud management solutions. It allows users to create, manage, monitor and control virtual infrastructures in terms of self-service, with minimum interaction with the IT operations teams.

It works across multiple cloud platforms, including public cloud providers and virtualization platforms for building private clouds.

EPAM Orchestrator is provided in three options, and the choice depends on the customer’s business needs:



- **The Standard Deployment** model is based on the Software as a Service approach, where the customer is registered under EPAM Orchestrator, and is provided with the following facilities:
  - 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 VM 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 that will inform the customer on the significant events on their resources.
- **The Professional Deployment** model is based on the Software as a Service approach, where the customer is registered under EPAM Orchestrator, and is provided with all the facilities of the Standard model, complemented with the following:

- Virtual machines management. A VM 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.
- **The Enterprise Deployment** model is provided as Platform as a Service solution. EPAM Orchestrator 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:
  - HP OO/ HP CSA
  - OpenStack
  - Special setup for MacOs provisioning (including virtual and hardware Mac instances)
  - Ability to manage (register, monitor) hardware resources.

The Enterprise deployment model also includes a set of additional features on different layers of the solution. This document describes the main features for PaaS and SaaS models of EPAM Orchestrator provisioning, and allows to compare the feature sets.

## EPAM CLOUD REPORTING OVERVIEW

Working with EPAM Cloud Orchestrator involves lots of processes and actions. To be in full control of the virtual infrastructures performance, and to be able to analyze trends for planning further activities, it is very important to receive timely information about their performance and the events occurring during their work.

To serve these purposes, EPAM Cloud Orchestrator has a comprehensive reporting system offering **over 50 built-in reports** that can be **customized** according to enterprise business needs.

These reports are described below in groups, based on reports origin and purpose.



Please note:

1. EPAM Orchestrator is a multi-tenant solution, where each tenant is bound to a specific unit – department, team, customer, etc. Reports generation is also influenced by tenant approach.
2. EPAM Orchestrator currently includes two implementations: internal EPAM Hybrid Cloud, used for EPAM project needs, and EPAM Orchestrator SaaS solution. The functionality for both can vary in details.

Report type	Description	Availability		
Unit (tenant) Management Reports		Standard	Professional	Enterprise
Unit (tenant) Activation Report	Sent when a unit is activated in Cloud. As soon as the report is delivered, unit members can start using EPAM Cloud within the scope of their permissions.	-	-	+
Daily and Weekly audit reports	List of all instance-related events for a day or a week.	weekly	weekly	+
Checkpoints Lifetime Report	A weekly report that contains the list of all checkpoints belonging to the unit at the moment of report creation, and describes checkpoints details, including lifetime information.  The report allows to detect outdated checkpoints in order to remove them, thus reducing the parent instance cost and infrastructure load.	-	-	+
Image creation	The notification informs unit management that a new custom image was added to the unit resources (either created on the basis of existing instances or imported from outside).	-	-	+
Unit (tenant) deactivated	The report informs the unit management and team that it was deactivated, lists the remaining Cloud-related resources and notifies that they will be automatically removed within up to 7 days.  The report is sent daily, during 7 days after unit deactivation, unless all the resources are terminated or migrated.	-	-	+
<b>Billing Reports</b>				

Report type	Description	Availability		
Unit (tenant) Management Reports		Standard	Professional	Enterprise
Quota reports (Alert and Update)	<p>Quota reports are one of the costs control tools that allow to keep track of current Cloud-related expenses.</p> <p>Quota alerts are sent if the quota usage in a specific region reaches the defined level.</p> <p>If quota amount changes, Quota Update reports are sent.</p>	+	+	+
Report for a unit (tenant)	The report describing unit chargeback for a specified period of time.	+	+	+
Report for account	The report describing the chargebacks of all units assigned to a specific EO account.	+	+	+
Summary Report	Monthly report providing billing, services and resources usage information, and optimization tips for all units to which the recipient is assigned.	-	-	+
Extended Billing Reports	Specific billing reports that can include billing information on all personal projects, all active/inactive units, and others.	-	-	+
Resource Management Reports				
Instance Management Reports	Notifications sent on actions resulting in changes of the instance status (Run, Start, Stop, Terminate).	-	+	+
Instance Error Report	<p>The notification is sent if an instance failed to start and gets the ERROR state.</p> <p>This message informs the instance requestor (owner) and responsible people on the issue, so that it can be quickly investigated and fixed.</p>	-	+	+

Report type	Description	Availability		
Unit (tenant) Management Reports		Standard	Professional	Enterprise
Console Credentials	The report is sent by request and includes the console credentials for accessing the specified virtual machine.	-	-	+
User schedule execution report	The report is sent automatically and describes the issues that took place during user schedules execution.  Thus, the owners of the affected instances can update their state manually, if necessary, and the responsible people can investigate the case.	-	+	+
Instance was automatically removed from a user schedule	Sent to the owner of a terminated instance after it is automatically removed from a schedule it was subscribed to.	-	+	+
Maestro Stack Execution Failed/Succeeded	Contains the status of a Maestro Stack execution.	-	+	+
File/Image deletion	Sent on a file or image deletion from Orchestrator.	-	-	+
Monitoring Item Snapshot	Contains the current data on one of the instance monitoring items.	-	-	+
Event Snapshot	Contains the current data on one of the instance events.	-	-	+
<b>Hybrid Cloud Reports</b>				
Access Credentials granted	Sent on granting access credentials in AWS or Azure and includes related access details.	-	-	+
AWS IAM Users weekly report	Lists the IAM users that were created during the past week, as well as the users who got temporary access to AWS console.	-	-	+
AWS images healthcheck report	Provides AWS images healthcheck results.	-	-	+

Report type	Description	Availability		
Unit (tenant) Management Reports		Standard	Professional	Enterprise
<b>Security Reports</b>				
Monthly CLI update notification	Notification of Maestro CLI update to the latest version. This notification requires an action by the Maestro CLI user.	-	-	+
Weekly vulnerability report	The report describes automatically detected vulnerabilities in virtual infrastructures. This includes changes in Security groups, the issues detected during automatic scanning, and the list of the resources that belong to users who do not belong to the unit any more.	-/+	-/+	+
Nessus Scan Report	The report describes vulnerabilities detected by Nessus Vulnerability Scanner, with their descriptions and prioritization.	-/+	-/+	+
<b>Personal reports</b>				
Activation/Deactivation	Sent to a user on their personal project activation or deactivation.	-	-	+
Notification unsubscription forbidden	The report is sent to a user in case they try to unsubscribe from subscriptions that are obligatory for them. The report lists the subscriptions and provides explanation on why unsubscription is forbidden.	-	-	+
<b>Cloud Support and Management Reports</b>				
Issue reports	Notification of any failures occurring in various services (Scheduling Service, Chef Service)	-	-	+

EPAM Cloud Orchestrator – Reporting Overview

Report type	Description	Availability		
Unit (tenant) Management Reports		Standard	Professional	Enterprise
Administration Reports	Notifications of administration procedures (Custom permission creation, customer or manager account refresh from enterprise database, resource quota increase approval, IP validation, CSA subscription synchronization)	-	-	+
Customer/Manager accounts successfully refreshed	Notification of successful refresh of customer or manager accounts information from enterprise database.	-	-	+
EPAM Cloud SL Report	Contains the SL report for the specified date.	-	-	+
Cloud Radar Reports	Contains the general information on the overall virtual capacities existing in EPAM Cloud infrastructure.	-	-	+
Daily/Monthly instance run report	Contains the data of all instances run within the specified day/month.	-	+	+
Billing month is closed	Notification of successful performance of billing month closure procedure.	-	-	+



**VERSION HISTORY**

<b>Version</b>	<b>Date</b>	<b>Summary</b>
1.3	April 10, 2018	- Updated with SaaS details
1.2	January 28, 2018	- Removed the Suspend operation mentions
1.1	July 15, 2017	- Classification changed from Confidential to Public, approved by Dzmitry Pliushch
1	March 12, 2016	- First published