

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 web structure. It is partially overlaid by a light blue diagonal band that runs from the top left towards the bottom right.

EPAM Cloud Infrastructure Orchestrator ver.2.1.56

What's New

November 2015

[CI2WN-S52-56](#)

Version 1.0

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1 OVERVIEW

EPAM Orchestration Framework version 2.1.56 was released on November 7, 2015. We are glad to introduce the following new features and improvements:

- A number of service delivery changes took place during the past month.
- We improved the Cost Estimator to make it more informative, and allowed estimating hardware resources.
- We improved the Run wizard to make it more user friendly and informative.
- Adobe AEM Service was implemented.
- Relational Database Service was introduced.
- A number of security updates were introduced.
- A number of maintenance and support features were enhanced.
- Documentation unification and restructuring process goes on.



Our users often address us with the questions for EPAM Private Cloud SLA details and clarifications. For you to be more acquainted with the subject and to prevent misunderstandings and unexpected situations, we strongly recommend to review [EPAM Cloud Service Offering](#) document.



In order to make Cloud usage more convenient for our users, we introduce the changes to the log in procedure for virtual instances in EPAM Regions.

Please use your domain credentials to log in to all instances, created after November 7. This refers to the VMs in all EPAM regions, except EPAM-KZ1.

2 EVENTS AND ANNOUNCEMENTS

During the latest month, there have been a number of events related to EPAM Cloud service provisioning. These events were announced by emails, and, here, we would like to refresh this information and provide more details.

2.1 EPAM CLOUD TRENDS

EPAM Cloud has become a part of everyday life for thousands of EPAMers. We often tell about the service development and expansion, and today we decided to complement the features stories with the details on the actual usage trends, in numbers of the VMs used throughout the latest three months:

- EPAM-MSQ3 (OpenStack) region usage increased by 21.5%
- EPAM-BY1 region usage increased by 2.6%
- EPAM-UA1 region usage increased by 18.4%
- AWS regions usage increased by 34.4%
- **In total, the number of instances in EPAM Cloud increased by 8.0%**



2.2 AZURE DISCOUNTS CANCELLED

Several months ago we introduced EPAM Cloud integration with Microsoft Azure. Since that time, there was a number of discounts that allowed you to try Azure Cloud for free or for 50% of the real price.



Please pay attention that starting from October 1, **all the discounts are canceled**, and the resources in **Azure** are charged according to standard Azure pricing policy. You can find the details on [this page](#).

Thus, starting from October 1, your project costs can significantly increase if there are project resources hosted in Microsoft Azure cloud.

2.3 AWS DEACTIVATION RULES CHANGED

Starting from November 7, the policy of AWS resources treatment after project deactivation changes.



secondary contacts will get email notifications on these resources:

Project: DEMOPRO		Oct, 2015
<p>The project DEMOPRO was closed in UPSA. Please note that this project has a number of resources remaining in EPAM Private Cloud. Please, review the resources and migrate the necessary ones to another project, or take other actions to save the information you will need in future.</p> <p style="color: red; text-align: center;">The resources that remain in the project will be automatically removed in 5 day(s).</p>		
Project Info		
Project Name:	DEMOPRO	
Cloud Project State:	Active	
Active in zones:	EPAM-CSA-HYPERV , AWS-EUWEST , AWS-USEAST	
Specified resources will be removed in 5 day(s):		
STORAGE:	vol-39ac7523	EPAM-CSA-HYPERV
STORAGE:	vol-da663ae0	EPAM-CSA-HYPERV
STORAGE:	vol-d72d8a81	EPAM-CSA-HYPERV
STORAGE:	vol-cd311bcf	AWS-EUWEST

Figure 1 - Project Resources Notification

You have **7 days** to review the listed resources and either copy all the necessary data to other carriers or submit a [request](#) for linking the closed project ID (AWS Account) to a new one.



Important: to get access to the resources in the closed project, you need to have an IAM user registered for you.

To get one, please submit a [request](#) to our Support team.

In seven days after project deactivation, all the remaining resources are automatically removed without any possibility to restore them in future. Please be careful and review the resources before that, in order to omit unexpected troubles and irreversible data loss.

2.4 NEW DATA CENTER AND STORAGE POLICIES

Many of EPAMers have heard of a new EPAM office located in Minsk. The new building is not only a modern, comfortable and functional workplace for hundreds of employees. It is also a place where a brand-new data center is placed. During the latest weeks, we were performing a step by step migration of our Minsk infrastructure there.

One of the great features of the data center is the high level of its autonomy: in case of electricity cuts, the servers can be kept active for up to eight hours, which is typically more than enough to repair any issue.

data, and their capacity is enough to provide new abilities and for us.

We are glad to announce, that recent changes allowed us to expand some storage-related limitations in EPAM Cloud and introduce the following changes:

- The system disk size for Windows instances is increased to 100GB
- The system disk size for Linux instances is increased to 40GB
- The additional storage price is 30% lower (per 1GB) than that of the system storage (in all EPAM region, except for EPAM-KZ1)
- The default maximum volume size is increased to 500GB, and overall daily storage creation quota is increased to 2.5TB (in all EPAM region, except for EPAM-KZ1)

Please pay attention that the increase of the system disk size automatically increases the price of the VMs in EPAM-MSQ3 region, as it is based on the OpenStack technology as the resources are charged for **provisioned** space, not the actually used one.

3 CLOUD MANAGEMENT CONSOLE UPDATES

Besides basic new features, we keep on working on the usability and user friendliness of Cloud Management Console, which becomes more and more popular among our users.

This time, we are glad to introduce a small, but convenient update on the Run wizard, and two improvements concerning cost estimations.

3.1 IMPROVED COST ESTIMATION

Estimating the cost of the future infrastructure is an important part of project planning. Our users are well acquainted with the [Cost Estimator](#) tool allowing to get approximate costs of the resources to be created, based on the resource types, usage rates and hosting regions.

This time, we implemented two updates that make cost estimation easier:

- **Estimation of each instance.** Cost Estimator used to provide only the total price for all resources you plan to create. Now, you can see not only the total price, but also the specific price of each instance in the set:

The screenshot shows the 'COST ESTIMATOR' interface. It is divided into sections: 'PRICE MODEL' (Availability Region: EPAM-BY1), 'COMPUTE INSTANCES', 'BLOCK STORAGE', and 'TOTAL'. The 'COMPUTE INSTANCES' section lists two items: one with OS: WINDOWS, Shape: MEDIUM, Qty: 1, Reservation: 1 MONTHS, Usage: 8 HOURS/DAY, and a price of \$32.41; and another with OS: LINUX, Shape: SMALL, Qty: 2, Reservation: 1 MONTHS, Usage: 100 %, and a price of \$75.05. The 'BLOCK STORAGE' section lists two items: one with Volumes: 1, Size (GB): 50, Reservation: 1 MONTHS, Usage: 8 HOURS/DAY, and a price of \$107.46; and another with Volumes: 2, Size (GB): 30, Reservation: 1 MONTHS, Usage: 100 %, and a price of \$31.68. The 'TOTAL' section shows a total price of \$139.15. The interface includes 'EMAIL' and 'CLOSE' buttons at the bottom.

Resource Type	Configuration	Price
Compute Instance	OS: WINDOWS, Shape: MEDIUM, Qty: 1, Reservation: 1 MONTHS, Usage: 8 HOURS/DAY	\$32.41
Compute Instance	OS: LINUX, Shape: SMALL, Qty: 2, Reservation: 1 MONTHS, Usage: 100 %	\$75.05
Block Storage	Volumes: 1, Size (GB): 50, Reservation: 1 MONTHS, Usage: 8 HOURS/DAY	\$107.46
Block Storage	Volumes: 2, Size (GB): 30, Reservation: 1 MONTHS, Usage: 100 %	\$31.68
TOTAL		\$139.15

Figure 2 - Cost Estimator: Detailed Pricing

- **Hardware servers estimation.** Hardware servers registered in Cloud are billed according to a specific policy. We added the ability to calculate hardware servers usage same way it is done with virtual servers. All you have to do is select EPAM-HW1 region in the regions list, and specify the necessary details.

Configuration	CPU	HDD (GB)	Mem. (GB)	Qty	Reservation	MONTHS	Usage	Price
EPAM	4	500	32	2	1	MONTHS	100%	\$1116.62
NOTHER	4	500	32	1	1	MONTHS	100%	\$100.08
TOTAL								\$1216.69

Figure 3 - Cost Estimator: Hardware Costs

- **Estimation on running.** Besides the listed features, with the current update, you will get the **Estimated Price** of the created VMs, at the final stage of the **Run** wizard:

STEP 4: Please confirm

✓

Commands to execute

RUN INSTANCE
{shape=MEDIUM, imageId=W2012R2Std, count=1}

CREATE AND ATTACH VOLUME
{sizegb=80}

Estimated monthly price

Average: \$38.89
100% load: \$57.72
30% load: \$31.36

Please note that the estimations are based on statistically calculated average system storage usage rates. Additional volumes usage is not taken into account.

Cancel Prev Run Stack

Figure 4 - Run Wizard Estimations

These estimations will be performed for both single VMs and multiple resources that are to be created within a stack execution.

The estimations include three prices:

- 100% load - the price for a VM running 24/7
- 30% load - the price for a VM, running during standard working hours
- Average - the average monthly price for the VM of a specified configuration.

The estimations are based on the assumption that 100% of the system storage is used. Additional volumes usage is not taken into account

Please note that storage usage can significantly influence the actual price of your resources.

We would like to thank [Ivan Tabaravets](#) for suggesting the feature.

3.2 RUN WIZARD UPDATE

Please also note that, comparing to the previous version of the Run wizard, we removed the Step 2: Select Available region, and added the region selection dropdown list to the first step:

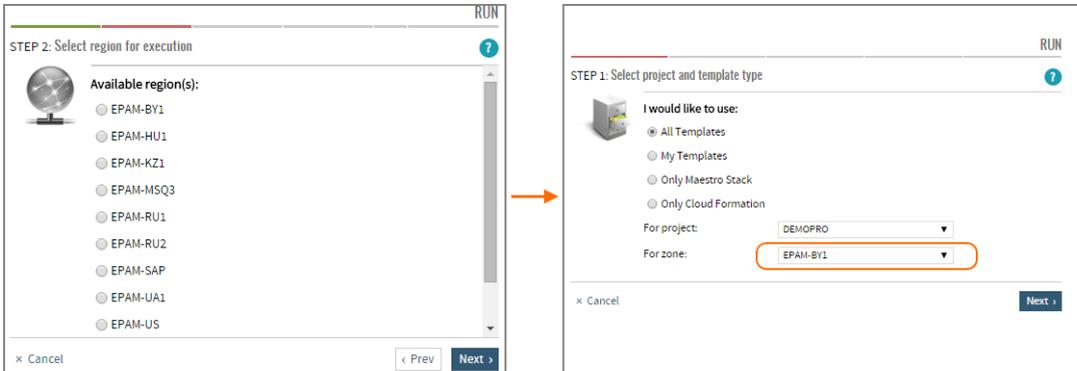


Figure 5 - Region Selection in the Run wizard

3.3 MANAGEMENT FILTERS

The [Management](#) page provides the information on all your project resources existing in Cloud and allows to see the details of each of them and to manipulate them, within the scope of your permissions.

With this update, we introduce **the detailed filters** tool you can use for precise search of resources by any parameter or a set of parameters.

Thus, now, there are three levels of search detailing on the Management page:

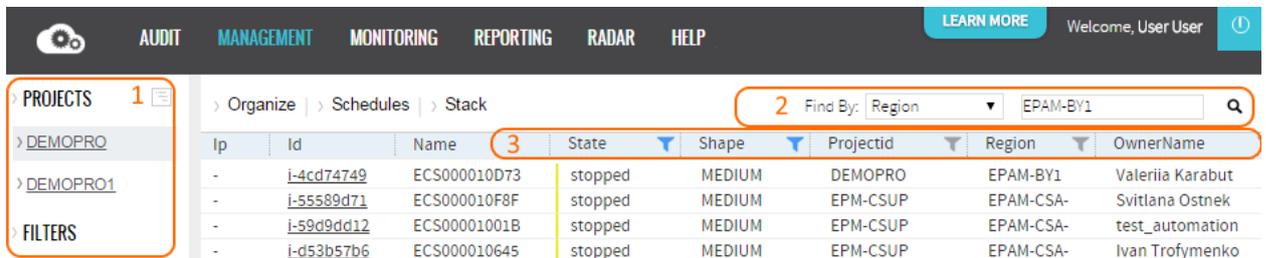


Figure 6 - Filters on the Management page

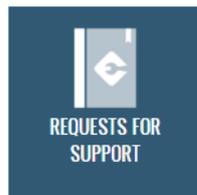
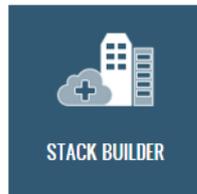
1. Project tree filter - allows to filter resources within project and project/region scope
2. Find By filter - allows to filter resources by one parameter
3. Filter by parameter - allows to filter the search results by one or several instance parameters.

3.4 REGIONS STATUS INFORMATION

Sometimes it happens that the connection to a project VM is lost. In most cases, the problem is caused by Cloud infrastructure issues, related to regions availability.

Starting from Orchestration v.2.1.56, you can check the status of all regions EPAM Cloud operates with, including Azure and AWS ones, and see the statistics of their availability story.

This information is given on the [Status Dashboard](#) page, which can be reached from the main [Cloud Dashboard](#):



Status Dashboard Fri, Nov 6, 2015

This page gives real-time detailed information on each of the Orchestrator zones (regions) availability and status. For your convenience, zones are grouped by virtualization provider (OPEN STACK, AWS, AZURE, CSA). If a zone cannot be reached for some reason, a warning mark is displayed next to its name.

There are the following possible zone statuses:

- ACTIVE - zone is active and available
- INACTIVE - zone is deactivated and cannot be reached
- UNREACHABLE - zone cannot be reached die to some connection or infrastructure issue
- MAINTENANCE - zone is under maintenance and cannot be reached

> AWS-USEAST > AWS-EUWEST > AWS-SAEAST

Name	AWS-USEAST
Node	OR2-MSQ-DEV
Node Status	RUNNING
Status	Active
Details	Zone is in active state.
Last 7 days SL	91.58%
Last 30 days SL	90.06%
Current year SL	N/A

> AZURE-NORTHEU-DEV > AZURE-JE-DEV > AZURE-JW-DEV

Name	AZURE-NORTHEU-DEV
Node	OR2-MSQ-DEV
Node Status	RUNNING
Status	Active
Details	Zone is in active state.
Last 7 days SL	91.58%
Last 30 days SL	90.06%
Current year SL	N/A

Figure 7 - Status Dashboard

For your convenience, zones are grouped by virtualization provider (OPEN STACK, AWS, AZURE, CSA). If a zone cannot be reached for some reason, a warning mark is displayed next to its name.

There are the following possible zone statuses:

- ACTIVE - zone is active and available
- INACTIVE - zone is deactivated and cannot be reached
- UNREACHABLE - zone cannot be reached die to some connection or infrastructure issue
- MAINTENANCE - zone is under maintenance and cannot be reached

Under the status information, you can see the Last 7 and Last 30 days SLA statistics, which shows how long the zone was available during the specified time period, in % of the overall period length.

4 PLATFORM SERVICES UPDATES

With the current update, we are glad to introduce two updates in EPAM cloud platform services:

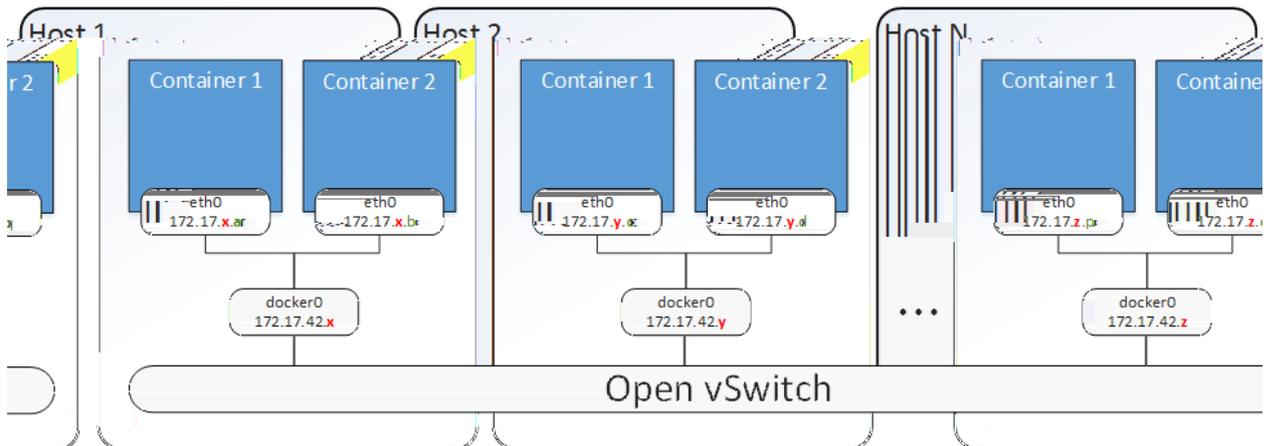
- Docker networking improvements.
- Adobe AEM Service implementation.
- Relational Database (RDB) Service implementation.

The details on these features are given below in this section.

4.1 DOCKER NETWORKING IMPROVEMENTS

Docker is one of the services that get much expectations and feedback from our users. It has been in demand since we introduced it as one of EPAM Cloud features, and we keep on improving it with each production update.

This time, we are glad to announce the solution that allows to connect all Docker containers, giving them access to each other irrespectively of the parent host they are located on. The solution is based on the [Open vSwitch](#) technology used to provide software-defined networks. The picture below illustrates the overall scheme of connection between hosts within one Docker cluster



The picture above also shows the basic rule of internal IPs generation. Each container includes a marker (Ethernet bridge docker0), and a specific identifier, unique within the host.

Please note that the static part of the address can change during the service further development.

In case you need to get the details on any container, run the **or2-docker-container (or2dc)** command to find the list of the containers in your Docker cluster, their IDs, status and connection details.

```
or2-docker-container -p [project] -r [region]
```

Sometimes, in troubleshooting and performance analysis purposes, you may need to know more details about the containers than the **or2dc** command response provides. In this case, you can login to the host VM using your domain credentials, and run the following command:

```
docker inspect [container_id]
```

The command will return a full detailed information on the selected container.



The provided solution allows to create up to 40 hosts within one cluster.

4.2 ADOBE AEM SERVICE INTRODUCTION

EPAM Cloud team traditionally goes on expanding Cloud service facilities with updating existing services and creating new ones.

With the current production update, we are glad to introduce Adobe AEM service, which can provide your project with a web content management system, equipped with a wide range of powerful tools.

The service is available only in EPAM and AWS regions.

The service, when activated, includes a VM with an installed Adobe AEM (v.6.0.0.20140509), and gives users the following facilities:

- websites development;
- websites authoring and management;
- environments administering in order to ensure that the configuration fits project requirements;
- defining and managing workflows for different tasks, including content creation and management;
- digital assets repository management;
- social community tools setup, and others.

An AEM cluster represents a set of AEM instances: single author instance and publish instances as many as needed for project. Replication is configured from author instance to all publish instances within the cluster. In addition, there is one dispatcher above author instance (hosted on it), needed for caching pages, and one dispatcher above all publish instances (hosted on the first one) acting as a load balancer.

The generalized diagram of the elements interrelation is given on the picture below:

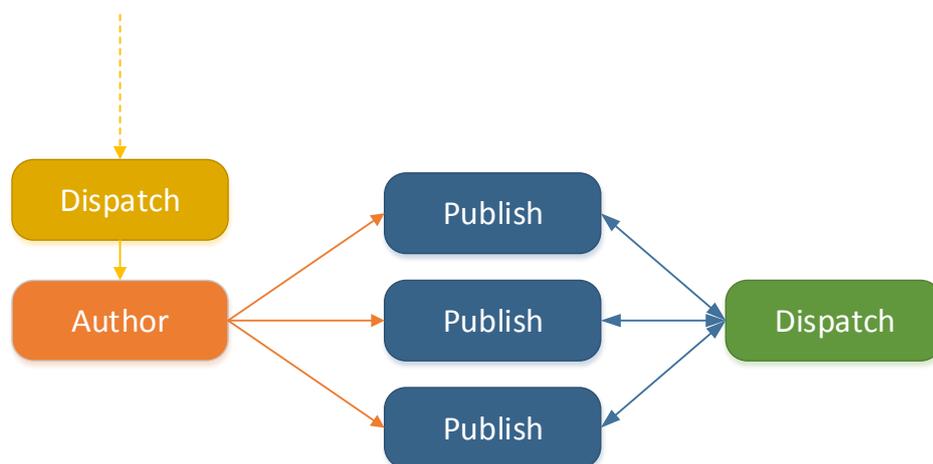


Figure 8 - Adobe AEM Service Diagram

There are two ways to activate the service:

- By calling the **or2-manage-service** Maestro CLI command:



Adobe Experience
Manager

```
or2ms -s aem --activate --project [project] --region [region] --shape [shape] --cluster-name [cluster-name]
```

where **--shape** is an optional parameter specifying the shape of the author instance (MEDIUM is the default and the smallest possible one).

- By calling the **or2-manage-aem (or2aem)** command with the **activate-cluster** action:

```
or2aem --project [project] --region [region] --shape [shape] --action activate-cluster --cluster-name [cluster-name]
```

Both commands, when called, initiate the running of an author instance, used to create and manage content and to administer a website. By default, this is s **MEDIUM CentOS6_64-bit** instance. You can change the shape by using the optional **--shape** parameter, but the shape should not be smaller than MEDIUM.

The cluster name should be unique for a project within a region.

The admin password is specific for each AEM instance, and can be seen in the **--full** output of cluster or publish instance creation command, or the **or2aem** command with the **describe** action:

```
or2aem --project [project] --region [region] -a describe
```

After the cluster is created, you can run the **or2aem** command with the **attach-publish** action to add a necessary number of publish instances which will deliver your product to end users.

The **or2aem** command is also used to perform the following actions:

- retrieve the information on the existing AEM clusters (with **-a describe** action);
- remove publish instances (with **-a detach-publish** action)
- deactivate the whole cluster (with **-a deactivate-cluster** action). Please note, that to deactivate a cluster, first you need to detach all the relative publish instances.

You can also use the **or2ms** command to deactivate the service (after all the publish instances are detached):

```
or2ms -s aem --deactivate --project [project] --region [region] --shape [shape] --cluster-name [cluster-name]
```

You can create any necessary number of clusters in each project and region.

4.3 RELATIONAL DATABASE SERVICE INTRODUCTION

The other service introduced by EPAM Cloud, is the Relational Database (RDB) PostgreSQL service, which automatically creates a PostgreSQL/MySQL database entity.

The RDB service is available only in EPAM regions.

The service is manipulated with the **or2-manage-rdb (or2rdb)** command with different **--action/-a** parameter values (describe, install, remove).

All you have to do to start the service is running the command with the following parameters:

```
or2rdb -p project -r region -a install -t type [-n db_name] -u db_username [-pwd db_password] [-d description] [-f file_path]
```



Where:

- **-a install** - obligatory parameter; the action parameter specifying that a new database instance should be created
- **-t type** - obligatory parameter; the type of the database to be installed (mysql, postgresql)
- **-u db_username** - obligatory parameter; the username that will be used to login to the created database
- **-n db_name** - optional parameter; the name of the database to be created; if not specified, will be generated automatically
- **-p db_password** - optional parameter; the password to be used to login to the created database. If not specified, a random password will be generated.
- **-d description** - optional parameter; the description of the new database.
- **-f file_path** - the parameter specifying the path to the initialization script used for database configuration.

When the command is launched, Orchestrator runs a MEDIUM-shaped Ubuntu12.04_64-bit instance, attaches three 100GB volumes to it, installs the necessary database and applies all the settings.

When the configuration is over, you can login to your instance and start using the database with the credentials specified/generated during the service start.



It is possible to run several DB instances in one project/region.

5 SECURITY UPDATES

Security is an important aspect of Cloud provisioning especially when it goes to working with a hybrid cloud, where VMs are created within a self-service, and the security team does not have time to check every instance which appears.

To face this enterprise-level challenge, we introduced a number of automatic checks that allow to detect infrastructures hosted on both EPAM and external platforms.

5.1 SECURITY CHECKS

Currently, we have introduced the following security-related actions:

- Resource owners check. When a person leaves a project, there may remain some resources, assign The information on such resources is gathered to **weekly vulnerability reports** that are sent to project management and Cloud support teams.
We strongly recommend to remove them or reassign them to actual project members.
- **Cloud Trail Service** was activated for all AWS accounts. The service monitors all the API calls that are performed in AWS. This information can be used to solve different troubleshooting tasks. Currently, the service helps to detect the moments when VMs change their security group from **Default** to **0.0.0.0/0** and become available via Internet. The service sends requests to Nessus vulnerability scanner and makes it check each VM where the change is detected. The information on the changes are sent to a special report.
Once in a month, Nessus re-scans all VMs in 0.0.0.0/0 group.
For more details on AWS security groups, please see [this page](#).
- For EPC-based instances, we created a logic of monthly scanning the VMs in DMZ - those that are in a high risk zone, because they are exposed to internet and can be accessed from outside EPAM network.
- To improve EPAM Cloud security, we enhanced authorization mechanism of the admin utility. Now, access is granted by user-specific keys, assigned to each administrator, personally.

5.2 AUDIT EVENTS GROUPING

Another important point in provisioning of high-level security is the tool that allows to track all the events taking place in the infrastructure initiated by either user or Orchestration. This is implemented via **or2audit** Maestro CLI command and the [Audit](#) page on Cloud Web Console.

For better usability, we divided all the possible events into four groups:

- PROJECT - the events related to project services status updates and static IPs allocation and removing
- ACS - the events related to auto configuration service
- HARDWARE - the events related to hardware resources manipulations in Cloud
- DOCKER - the events related to Docker service performance
- AEM - the events on the AEM service
- JENKINS - the events on the Jenkins service

By **default**, the **or2audit** command displays the events related to project resources manipulations. To see the events of the other groups in Maestro CLI, use the **--group group_name** parameter:

```
D:\maestro-cli-prod\bin>or2audit -p EPM-CSUP -g project -d 10
Response:
=====
date                | user                | action                | message
=====
2015-10-19T10:04:53+00:00 | Siarhei Karanets    | AWS_MANAGEMENT_CONSOLE_ACCESS_ATTEMPT | AWS management console access attempt.
2015-10-19T10:04:56+00:00 | Siarhei Karanets    | AWS_MANAGEMENT_CONSOLE_ACCESS_SUCCESS | AWS management console access granted.
=====
```

Figure 9 - Project events audit in Maestro CLI

To see the events of a specific group on the [Audit](#) page, perform the following steps::

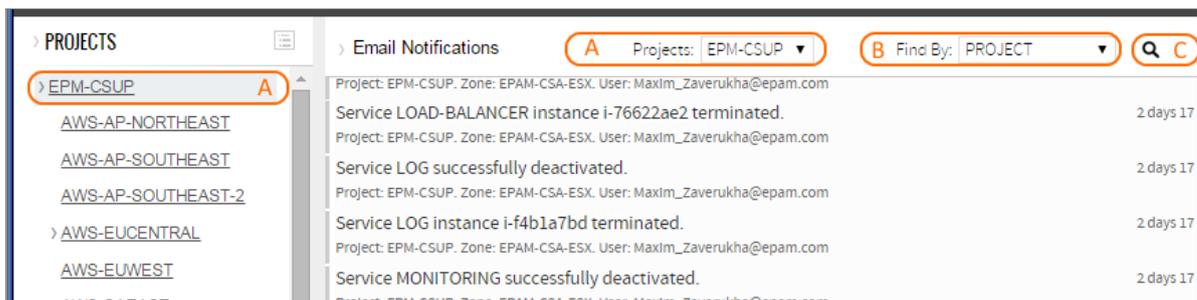


Figure 10 - Project events audit on UI

- A. Select the project to monitor events
- B. Select the filter if you want to see the events other than in Default group
- C. C

In the events list, you can see the event name, the influenced resources, and the time when the event took place. You can click any event to see the details on it.

5.3 MONTHLY INSTANCE RUN REPORTS

Another innovation we introduce with the Orchestration update 2.1.56 is the **monthly instance run** report which is sent to project primary and secondary contacts and Cloud support teams.

The report includes information on all the VMs that were created during the past month within the project infrastructure development trends. This is also one of the tools that can help you detect unexpected or excessive resource usage and to prevent infrastructure overload and unnecessary expenses.

6 CLOUD MAINTENANCE AND SUPPORT UPDATES

One of the important things in providing a high-quality service is delivering convenient tools for the service support and maintenance.

reliable and less time and effort consuming.

This section describes the updates we introduced with this update.

6.1 UPDATES IN SYNCHRONIZATION WITH UPSA

EPAM Orchestrator is closely integrated with UPSA, and retrieves all the information about projects and projects members from it. Thus, it is necessary to synchronize the data in Orchestration DB with the data from UPSA.

This synchronization is performed once a day.

Before this update, Orchestrator sent numerous API calls to UPSA to check whether any entry was changed. This time, together with the UPSA team, we simplified the process. Orchestrator now gets the information only on the changes that took place at UPSA, and corrects the database according to the information about these changes.

This makes the synchronization be performed faster and significantly decreases the load on UPSA.

6.2 FASTER AWS PROJECTS REGISTRATION

life. Thus, we pay big attention to improving AWS integration on both user and maintenance sides.

We enhanced and automated the procedure of project DLs creation for AWS, thus **the time needed for project activation was decreased to 3 hours**.

6.3 WEEKLY CLOUD SL REPORT

With EPAM Orchestration v.2.1.56 we introduce the weekly Cloud SL report that displays the uptime rate of the EPAM Cloud infrastructure by regions. This statistics is based on Cloud Healthcheck data. Every 15 seconds a Healthcheck report is generated for every EO instance. This report contains the information about EO instances and zones availability and is updated every Sunday at 23.00 UTC (0).

SL calculation mechanism has 2 counters for each zone:

- the number of Healthcheck reports for zone generated since orchestrator was started (timesChecked)
- the number of reports claiming that zone was available via EO (timesAvailable)

The SL formula is: $(\text{timesAvailable} / \text{timesChecked}) * 100\%$

The report is sent to EPAM Cloud Support teams.

7 DOCUMENTATION UPDATES

As EPAM Cloud is a self-service, it needs to be documented in details. The scope of services and facilities provided by Orchestration constantly grows, thus, the documentation set has been expanding respectively throughout the time.

With the previous update, we started the big task on Documentation update and restructuring, and we concentrated on both user guides and our Service Offering document that regulates the principles of EPAM Cloud service provisioning.

7.1 SERVICE OFFERING UPDATES

EPAM Cloud is an essential service which inf

In order to clarify the scope of provisioned services and EPAM Cloud team responsibilities, we introduced the [EPAM Cloud Service Offering](#) document, designed to regulate all the aspects and details of EPAM Cloud service delivery, maintenance and support.

However, the service is not an invariable construction, it is being constantly developed and updated, as well as provisioning conditions change from time to time. This causes us to review the Service Offering once in a while to update it and make more convenient, clear and corresponding to the changing context.

Thus, with the current production update, we reviewed the document, and introduced a number of changes:

- Azure-related information is added
- Personal projects information extended
- Support team responsibilities section updated
- SLA information updated
- Service changes notifying information added
- Images manipulation rules clarified

There is also a number of minor changes and corrections throughout the text. The full set of Cloud documentation is available on <https://cloud.epam.com/site/learn/documentation> .

7.2 RESTRUCTURING AND SIMPLIFICATION

In order to make the knowledge base more comprehensive and to minimize time and effort necessary to maintain and synchronize all the resources, we started the documentation simplification and restructuring process.

We started reorganizing the existing documents, combining them by topics. The table below describes the changes we introduced:

	New document	Old documents and parts that were added
1	Maestro CLI: Quick Start	<ul style="list-style-type: none"> Maestro CLI: Quick Start Maestro CLI: Setup Guide Quotas Guide (Personal Projects and quotas) Subscriptions Guide (User subscriptions management)
2	Maestro CLI User Guide	<ul style="list-style-type: none"> Maestro CLI: Developer's Guide (partially) Maestro CLI: Reference Guide + Multiple workspaces
3	EPAM Orchestrator Services Guide	<ul style="list-style-type: none"> Cloud Services: reference Guide Cloudify Service Guide Auto Configuration: User Guide Checkpoints: User Guide + Images Manipulation + Checkpoints Manipulation + Static IPs Manipulation
4	Hybrid Cloud Guide	<ul style="list-style-type: none"> AWS Utilization Guide + Azure usage
5	EPAM Orchestration Account Management	<ul style="list-style-type: none"> Subscriptions Guide (manager's part) Project Management: User Guide Quota Utilization Guide (except for Personal Quotas) Billing Guide + Hints to optimize costs (Appendix)

8 FEATURE REQUESTS

EPAM Cloud is constantly developing, we keep on improving the existing features and creating the new ones.

We are doing our best to make EPAM Private Cloud meet your expectations, and often it turns out we manage to anticipate your needs with our new features.

Meanwhile, your feedback is very important to us. We carefully collect all your complains and suggestions, and take them into account when planning our Service development.

One of the powerful options of feedback gathering is that you can feel free to submit a new feature request, if you believe your idea can be appreciated by EPAM Cloud users. You can share your ideas to our [Consulting](#) team or on the [Feature Requests](#) section.

The Feature Request main page has a voting block where our users can vote for the features they consider to be more important and necessary. This helps us to determine the priority of the feature request processing: the features that get more voices are scheduled for sooner implementation.

Each Feature Request is described in details on a corresponding page. You can view them and leave your comments on the suggested solutions.

The year is coming to its end, and we start planning our yearly activities for 2016. This is the best time to submit your ideas and vote for already submitted ones.

We will gladly turn your wishes into our plans!

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VERSION HISTORY

Version	Date	Summary
1.0	November 7, 2015	First published