

EPAM Cloud Infrastructure

Orchestrator ver. 2.0.17

What's New

November 2012

[CIWN-S17](#)

Version 1.0

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1. Overview

EPAM Cloud Infrastructure team is devoted to providing the best possible solutions for our customers. We have been working hard to provide you these awesome new features as well as any issues detected and implement your suggestions. The most notable results of our work are detailed in the sections below.

2. Confirmation Letters

From now on each time you run an Instance using *EPAM Orchestrator 2.0.17*, you receive an automatic confirmation e-mail, containing all relevant information pertinent to the launched Instance. The former includes type of the instance, its description, name of the respective PMC project, input parameters, execution result, and several useful commands you can execute to manage your instance.

An example of such letter is shown on the screenshot below.

Project ID: EPM-CIT	November 15
Region: EPAM-MSQ-QA	2012
Instance Run	
Instance Info:	
Instance ID:	EVBYMINSD4528T1
User:	Oleksandr Maksyuta
Owner:	Oleksandr Maksyuta
Template Name:	CentOS6-template
VM CPU Count:	1
VM Memory, MB:	1740
Useful Service Commands:	
Stop (pause) instances:	or2stop --project EPM-CIT --region EPAM-MSQ-QA --instance EVBYMINSD4528T1
Start (resume) instances:	or2start --project EPM-CIT --region EPAM-MSQ-QA --instance EVBYMINSD4528T1
Reboot instances:	or2reboot --project EPM-CIT --region EPAM-MSQ-QA --instance EVBYMINSD4528T1
Terminate instances:	or2kill --project EPM-CIT --region EPAM-MSQ-QA --instance EVBYMINSD4528T1
Debug Info:	
Host:	epbyminsd0424.minsk.epam.com
Host Datastore:	FCP_14812_AGGR1_V54_L0

Figure 1 - Confirmation Letter

3. New commands and tools

EPAM Orchestrator 2.0.17 now includes new commands to help in managing and controlling existing environment.

3.1. Set/Get/Delete properties command

To personalize any started instance under your specific project, you can now use custom tags to assign them to specific instance. By bringing this functionality we give you the power to label your instances, so navigation and federation of instances is as simple as it is possible.

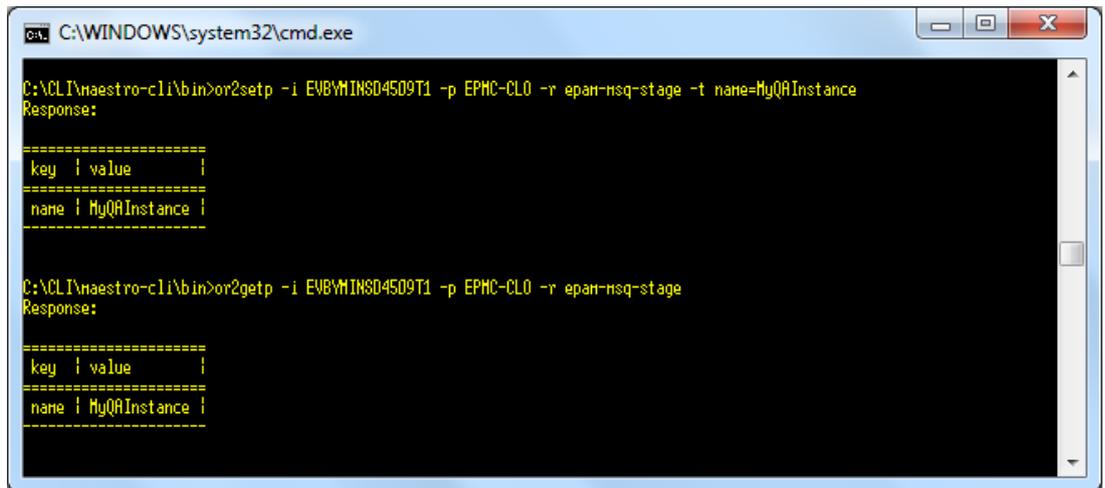


Figure 2 – Custom Properties utilization

3.2. Audit command

'or2audit' command allows managers, developers, accountants to keep track of instances utilization, view history of actions for VMs and keep track changes made to instance. This feature outputs history for only 'Start', 'Stop', 'Reboot' and 'Terminate' actions.

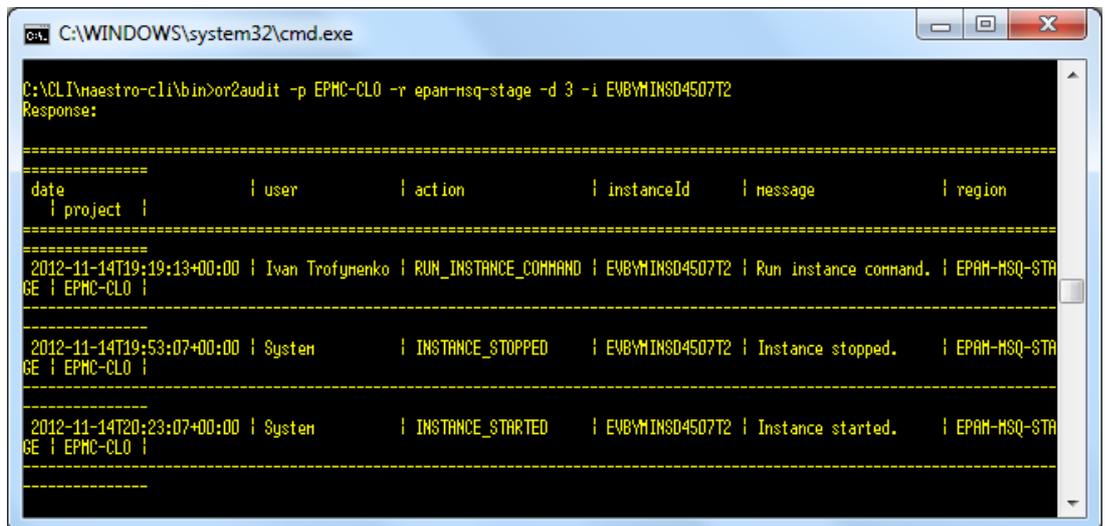


Figure 3 – Audit command utilization

3.3. Update CLI Client command

If executed, this command will check for new version of 'Maestro CLI Client' and update to latest version of it. As per this release, command has to be executed manually and no automatic notification of available update will be shown. Notification will be introduced in next release.

You can get more details on these commands in '[Maestro CLI User/Reference Guide](#)'.

4. New templates

EPAM Orchestrator 2.0.17 users are now able to use new enterprise templates to run environments.

We take special pride in making the newly released Microsoft Windows 8 available to our users. See the full list of available templates in the table below.

ID	Description
W2012Std	Windows Server 2012 Standard Edition
W2k8R2Std	Windows Server 2008 R2 Standard Edition
OracleLinux6-template	Oracle Linux 6 64-bit
Win8-64	Windows 8 64-bit Enterprise Edition
CentOS6-template	Linux CentOS 6.3 64-bit
Ubuntu12.04-template	Linux Ubuntu 12.04 64-bit
Win7-32	Windows 7 32-bit Enterprise Edition
CentOS5-template	Linux CentOS 5.8 64-bit

Table 1- EPAM Orchestrator 2.017 Templates

5. New output for describe instances

Based on requests and collected feedback from our pilot projects we have changed the way an 'or2din' command outputs. Additional information is now available in the output, which makes it more comprehensive. We have added the 'Owner' and 'Image' information to the output, so you can see the person who started the VM and understand the Image it is based on.

```

C:\WINDOWS\system32\cmd.exe
C:\CLI\maestro-cli\bin>or2din -p EPHC-CLO -r epam-msq-stage
Response:
=====
InstanceID | dnsName | publicIp | state | cpu | memory | guestOS
| owner | image |
=====
EVBVMINS04502T2 | EVBVMINS04502T2 | 10.6.131.198 | running | 1 | 1740 | Ubuntu Linux (64-bit)
| Ivan Trofymenko | Ubuntu12.04-template |
=====
EVBVMINS04503T2 | EVBVMINS04503T2 | 10.6.131.199 | running | 1 | 1740 | CentOS 4/5/6 (64-bit)
| Ivan Trofymenko | CentOS6-template |
=====
EVBVMINS04504T2 | EVBVMINS04504T2.ninsk.epam.com | 10.6.131.200 | running | 1 | 1740 | MS Windows Server 2008 R2 (64-bit)
| Ivan Trofymenko | W2012Std |
=====
EVBVMINS04505T2 | EVBVMINS04505T2.ninsk.epam.com | 10.6.131.201 | running | 1 | 1740 | MS Windows Server 2008 R2 (64-bit)
| Ivan Trofymenko | W2k8R2Std |
=====

```

Figure 4 – Describe Instances output

6. Fixes and Improvements

As we strive to provide the most stable and reliable products and not afraid to stand corrected, a large portion of our time and effort has been dedicated to bug detection and fixing. Among the most notable results:

- Appropriate responses after instance reboot have been introduced;
- 'or2din', 'or2kill', 'or2dreg', 'or2reboot' and 'or2dshape' commands were tweaked to function correctly

Also, following the delivery of Cloud Infrastructure Trainings and subsequent first user stories concerning *EPAM Cloud Orchestrator 2.0.17*, we have been gathering user feedback. We are now happy to announce that among lots of tasks, improvements and issues, detected by our users almost all of them have already been fixed/implemented and some closed as not reproduced and similar reasons. The rest of the issues are a work in progress, as we believe that no customer feedback can be left unnoted.

The most notable improvements are detailed below:

6.1. Exit codes

Each execution of a Maestro-CLI command now returns an exit code. Exit codes help you understand what exactly went wrong during command execution. The list of exit codes is provided below:

Exit code	Description	Possible causes
0	Success	Successful command execution
1	Operation not permitted	Undefined execution failure
13	Permission denied	Cannot retrieve user credentials
		HTTP response 401: Request requires user authentication or authorization.
22	Invalid argument	JCommander CLI arguments parsing error
		HTTP response 505: Input parameter is incorrect
41	Unknown error 41	HTTP response 402: Performing this request is forbidden
58	Unknown error 58	HTTP response 502: Execution did not complete
61	No data available	HTTP response 407: Response is empty. Probably resource not exists.
70	Communication error on send	HTTPResponse from HTTPClient is null
95	Operation not supported	HTTP response 404: Request did not match any request mapping
111	Connection refused	java.net.UnknownHostException
		org.apache.http.conn.HttpHostConnectException
135	Unknown error 135	406 Not Acceptable (HTTP/1.1 - RFC 2616)

Table 2 - Orchestrator 2.017 Exit Codes

6.2. Correct instance state

Based on most common request from our users, we have implemented correct labels for current instance state. Those are 'Pending', 'Starting', 'Rebooting', 'Running', 'Stopping' and 'Stopped', 'Terminating' and 'Terminated', 'Error' and 'Missing'. Comprehensive level is increased.

6.3. Support for various OS

EPAM Orchestrator 2.017 is now fully compatible with Microsoft Windows, Apple Mac OS and *nix operating systems. Instructions for utilization of CLI tools for these systems have been included in respective project documentation (See. Section 7 - [New Documentation](#)).

7. New Documentation

Our technical writing department has a package of new and up-to-date documentation prepared. We've taken into account user feedback leading to such improvements, as an updated Command Description table in Maestro CLI Reference Guide and several 'NB' sections, ensuring all more-or-less complex actions are described in detail and understood by each and every user of *Orchestrator 2.017*.

Among those:

- [Maestro CLI Reference Guide/User Guide](#)
- [Maestro CLI Setup Guide](#)
- [Maestro CLI Quick Start Guide](#)

Our [Confluence Space](#) has also been heavily updated, now including the following topics, among others:

- [Frequently Asked Questions](#) section based on customer feedback
- [Trainings](#), including final and intermediary presentation versions
- [Video](#) guidelines

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Version history

Version	Date	Summary
1.0	November 15, 2012	Initial version is published



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