

An abstract graphic on the left side of the page, featuring a complex network of thin, light blue lines connecting various points, creating a web-like structure. This graphic is partially overlaid by a large, light blue, semi-transparent triangular shape that points towards the right.

# Amazon WorkSpaces

Quick Start Guide

October 2020

Version 1.0

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## 1. AMAZON WORKSPACES AS A SERVICE IN EPAM CLOUD

Amazon WorkSpaces is a managed, secure Desktop-as-a-Service (DaaS) solution that can be used to provision either Windows or Linux desktops.



Using AWS WorkSpaces allows to deploy hardware or install complex software and delivers a desktop experience on the AWS Management Console using AWS CLI or API.

Using Amazon WorkSpaces makes it easier to manage hardware inventory, OS versions, patches, and Virtual Desktop Infrastructure (VDI) as well as helps to simplify the desktop delivery strategy.

With Amazon WorkSpaces, you get a fast, responsive desktop of your choice that you can access anywhere, anytime, from any supported device.

Flexible billing system gives an opportunity to pay for the used Amazon WorkSpaces either monthly or hourly. It allows you to save money when compared to traditional desktops and on-premises VDI solutions. You can find more information [here](#).

Now EPAM Cloud provides **Amazon WorkSpaces as a service based on Windows with pre-installed software package that fully meets the requirements of the EPAM Security Policy**. The service comes with all EPAM Cloud related features such as billing, reporting, analytics, etc., and is available for all EPAMers in all EPAM offices.

This document gives detailed description of the Amazon WorkSpaces features provided by EPAM Cloud as a service as well as provides instruction on how to start the service.

## 2. WHY USE AMAZON WORKSPACES IN EPAM CLOUD

Amazon WorkSpaces as a EPAM Cloud service can be used at least in the following **use cases**:

- **Alternative to EPAM workstation**  
You can use Amazon WorkSpaces if you have no possibility to get EPAM workstations or want to have Amazon WorkSpaces as an alternative to EPAM workstations.
- **Isolated projects**  
WorkSpaces can be a reasonable solution for the projects which include users with individual restrictions that should meet the group policies and where users have NO administrator rights. According to the project needs only pre-installed software package approved by management staff can be used for the project activities.
- **Customer oriented users**  
In accordance with the project requirements these users cannot utilize EPAM equipment or cannot install EPAM software but access to EPAM internal apps is obligatory.

### 3. AMAZON WORKSPACES AS A SERVICE FEATURES

The main features that distinguishes Amazon WorkSpaces as a service provided by EPAM Cloud includes:

- Providing the **image approved by EPAM Security Team that includes basic set of applications**
- Possibility to **connect to your WorkSpace and continue from right where you have left off**
- Opportunity to choose between **flexible billing options**
- **Synchronizing with EPAM Active Directory**
- Possibility to **use EPAM Domain Credentials** for logging in
- **Applying EPAM Group Policies**
- Providing **access to internal EPAM networks**
- Possibility to **use EPAM Cloud native billing tools.**

### 4. HIGH LEVEL SETTINGS FOR AMAZON WORKSPACES SERVICE

By default, in EPAM Cloud, Amazon WorkSpaces provided as a service have the following high-level settings:

Amazon WorkSpace service setting	Enabled/Disabled
Setting WorkSpaces user as local administrator	Enabled
Allowing end users to cache credentials on the client	Disabled
Enabling the users to restart WorkSpaces from the client	Enabled
Allowing end users to increase volume size. Please find more details by <a href="#">the link</a>	Disabled
Allowing end users to choose between Value, Standard, Performance, and other WorkSpaces types	Disabled
Allowing end users to switch between AlwaysOn and AutoStop	Disabled
Enabling users to rebuild their Workspace from their client	Disabled



*Please note that settings stated above cannot be managed individually.*

## 5. PREREQUISITIES

There are two main prerequisites that should be met by the user to obtain the Amazon WorkSpace as EPAM Cloud Service:

1. The user must be assigned to an active project in UPSA and have EPAM domain credentials like [user\\_name@epam.com](mailto:user_name@epam.com).
2. The user should submit [Providing Amazon WorkSpaces support request](#) and specify all necessary information. This request includes the approval from the PM/AM of the project.

## 6. AVAILABLE REGIONS

AWS WorkSpaces are available in nine AWS regions. For now AWS WorkSpaces provided by EPAM Cloud can be requested in **US East (N.Virginia)** and **EU (Frankfurt)** regions. We are planning to add other regions as the need required. The list of available regions is given in the table below.

	<b>AWS WorkSpace available regions</b>	<b>Available region for EPAM</b>
1	US East (N. Virginia)	US East (N. Virginia)
2	US West (Oregon)	No
3	Asia Pacific (Singapore)	Planning
4	Asia Pacific (Sydney)	No
5	Asia Pacific (Tokyo)	No
6	EU (Frankfurt)	EU (Frankfurt)
7	EU (Ireland)	No
8	EU (London)	No
9	South America (São Paulo)	No

## 7. AVAILABLE CONFIGURATIONS

A WorkSpace bundle is a combination of an operating system, and storage, compute, and software resources. When you request a WorkSpace, you can choose between the available bundles.



Figure 1 Amazon WorkSpace bundle components

The price for using Amazon WorkSpaces depends on bundle type and region you choose. By default, EPAM Cloud provides Windows based Amazon WorkSpaces of the following types:

<b>Bundle type</b>	<b>vCPU, Memory</b>	<b>Root Volume</b>	<b>User volume</b>
<b>Value</b>	1 vCPU, 2 GB Memory	80 GB	10 GB
	1 vCPU, 2 GB Memory	80 GB	50 GB
	1 vCPU, 2 GB Memory	80 GB	100 GB
	1 vCPU, 2 GB Memory	175 GB	100 GB

Bundle type	vCPU, Memory	Root Volume	User volume
<b>Standard</b>	2 vCPU, 4 GB Memory	80 GB	10 GB
	2 vCPU, 4 GB Memory	80 GB	50 GB
	2 vCPU, 4 GB Memory	80 GB	100 GB
	2 vCPU, 4 GB Memory	175 GB	100 GB
<b>Performance</b>	2 vCPU, 8 GB Memory	80 GB	10 GB
	2 vCPU, 8 GB Memory	80 GB	50 GB
	2 vCPU, 8 GB Memory	80 GB	100 GB
	2 vCPU, 8 GB Memory	175 GB	100 GB
<b>Power</b>	4 vCPU, 16 GB Memory	80 GB	10 GB
	4 vCPU, 16 GB Memory	80 GB	50 GB
	4 vCPU, 16 GB Memory	80 GB	100 GB
	4 vCPU, 16 GB Memory	175 GB	100 GB
<b>PowerPro</b>	8 vCPU, 32 GB Memory	80 GB	10 GB
	8 vCPU, 32 GB Memory	80 GB	50 GB
	8 vCPU, 32 GB Memory	80 GB	100 GB
	8 vCPU, 32 GB Memory	175 GB	100 GB

The latest image that has passed Security Check by EPAM Security Team includes Default Amazon WorkSpace Win10 (modified Windows Server 2016) and MS Office with EPAM Basic Software package:

- Mozilla Firefox
- Adobe Flash Player (NPAPI)
- Adobe Acrobat Reader DC
- OPSWAT Agent
- Qualys Cloud Agent
- GlobalProtect
- Sentinel AntiVirus

## 8. RESTRICTIONS AND POSSIBLE RISKS

EPAM Cloud provides Amazon WorkSpaces as a service as it is. EPAM Cloud Support team have no possibility to maintain and control the provided WorkSpaces on the deeper level.

AWS team is responsible for the service performance capability and if any issues arise, EPAM Cloud Support team will request for assistance from AWS team. So, the recovering process will take some time and in the worst-case scenario, Amazon WorkSpace will be recreated.



*Please note, that from technical point of view, there is no possibility to backup information on the Amazon WorkSpaces. We strongly recommend NOT to store the important information on your WorkSpaces but to back up the data to the reliable storage.*

Amazon WorkSpaces have certain restrictions on using video conference calls. At present this function is under beta testing on the AWS side. We will inform you as soon as it is available for users. Please follow the announcements.

## 9. HOW TO PURCHASE ONE OR SEVERAL AMAZON WORKSPACES

To purchase an Amazon WorkSpace, submit a respective support request - [Providing Amazon WorkSpaces support request](#) and describe all required information that includes project code, user name, WorkSpace Characteristics, billing options and [AWS region](#). This request includes the approval from the PM/AM of the project.

After the request is approved, EPAM Cloud Support team will create the Amazon WorkSpace.

Figure 2 Providing Amazon WorkSpaces support request

Once your request is approved and is resolved, you will receive all necessary information.

## 10. HOW TO START

To start working with AWS WorkSpace within EPAM Organization, please perform the following steps:

1. Install the necessary AWS client on your workstation [using this link](#).
2. Check your network connection using [Connection Health Check](#).
3. If you receive an appropriate email from Cloud Support Team, you can use provided credentials to start. Just choose Registration Code (XXXXX+XXXXXX) and username without @epam.com(user\_name).

Figure 3 Logging into Amazon WorkSpace

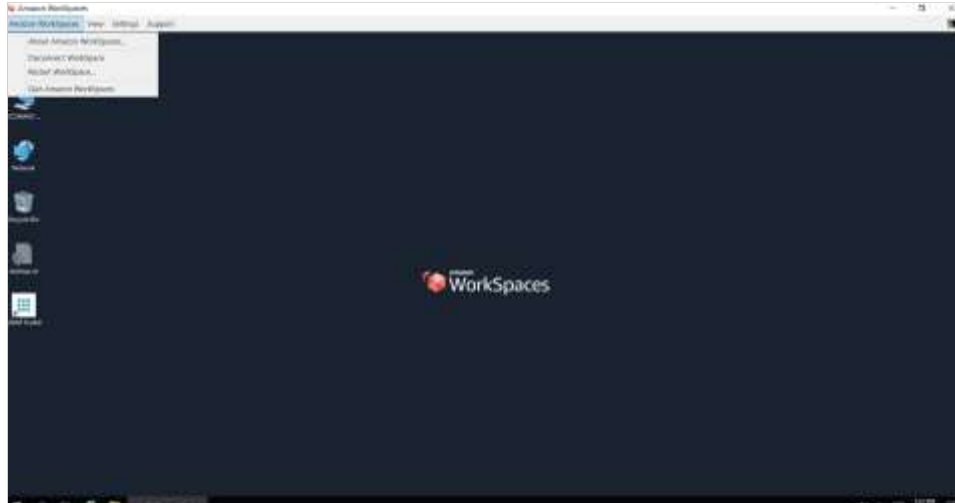


Figure 4 - Amazon WorkSpace Client

## 11. ACCESS TO AMAZON WORKSPACES

By default, users can access to their Amazon WorkSpaces from any supported device that is connected to the Internet. There are client applications for the following devices:

- Windows computers
- macOS computers
- Ubuntu Linux 18.04 computers
- Chromebooks
- iPads
- Android devices
- Fire tablets
- Zero client devices

You can find more information about Amazon WorkSpace Clients [here](#).

Due to integration with EPAM Active Directory, EPAM Cloud end users can:

- use their domain credentials to log into the Amazon WorkSpace
- have access to EPAM network including all internal EPAM services (Jira, UPSA, Telescope, etc.)

## 12. BILLING

With Amazon WorkSpaces, you pay only for what you use. The Amazon WorkSpace price is based on the bundle and billing mode. Amazon WorkSpaces can be provided on hourly and monthly basis.

With **monthly billing**, you pay a fixed monthly fee for unlimited usage during the month. It is a preferable solution for workers who use their Amazon WorkSpace full-time or as their primary desktop.

With **hourly billing** you pay a small fixed monthly fee per WorkSpace that covers AWS infrastructure costs and storage, and a low hourly rate for each hour the WorkSpace is used during the month.



Hourly billing is beneficial when Amazon WorkSpaces are used, on average, for less than a full working day or for several days a month. It is recommended to use this billing option for part-time workers, short-term projects, corporate training, and education.

In EPAM Cloud Amazon WorkSpace price includes the following components:

- Amazon WorkSpace Cost
- Infrastructure Fee (Shared cost)



Figure 5 Amazon WorkSpace components

The **Amazon WorkSpace cost** is taken from the AWS as it is.

The **EPAM Cloud infrastructure fee** depends on:

- the total cost of the infrastructure services for one account
- the weight ratio, which is calculated according to the time when the Amazon WorkSpace was used during the month.

The weight ratio is calculated for each Amazon WorkSpace separately. The EPAM Cloud infrastructure fee for the Amazon WorkSpace equals total cost of the infrastructure services for one account divided into the weight ratio for the Amazon WorkSpace. Or in other words, the total cost for using infrastructure services will be shared between the WorkSpaces within the account.

In the tables below you can find monthly and hourly pricing for using Amazon WorkSpaces in US East (N. Virginia) and Europe (Frankfurt) regions.



Please note that prices provided in the table are valid as for October 1, 2020. You can find more details about Amazon WorkSpaces pricing [by the link](#).

Prices in **US East (N. Virginia) region**

Bundle type	vCPU, Memory	Root Volume	User volume	Monthly pricing	Hourly pricing
Value	1 vCPU, 2 GB Memory	80 GB	10 GB	\$25.00	\$7.25/month+ \$0.22/hour
	1 vCPU, 2 GB Memory	80 GB	50 GB	\$28.00	\$9.75/month+\$0.22/hour
	1 vCPU, 2 GB Memory	80 GB	100 GB	\$31.00	\$13.00/month+\$0.22/hour
	1 vCPU, 2 GB Memory	175 GB	100 GB	\$36.00	\$19.00/month+\$0.22/hour
Standard	2 vCPU, 4 GB Memory	80 GB	10 GB	\$33.00	\$7.25/month+ \$0.30/hour
	2 vCPU, 4 GB Memory	80 GB	50 GB	\$35.00	\$9.75/month+\$0.30/hour
	2 vCPU, 4 GB Memory	80 GB	100 GB	\$38.00	\$13.00/month+\$0.30/hour
	2 vCPU, 4 GB Memory	175 GB	100 GB	\$44.00	\$19.00/month+\$0.30/hour
	2 vCPU, 8 GB Memory	80 GB	10 GB	\$45.00	\$7.25/month+ \$0.47/hour

Bundle type	vCPU, Memory	Root Volume	User volume	Monthly pricing	Hourly pricing
Performance	2 vCPU, 8 GB Memory	80 GB	50 GB	\$47.00	\$9.75/month+\$0.47/hour
	2 vCPU, 8 GB Memory	80 GB	100 GB	\$50.00	\$13.00/month+\$0.47/hour
	2 vCPU, 8 GB Memory	175 GB	100 GB	\$56.00	\$19.00/month+\$0.47/hour
Power	4 vCPU, 16 GB Memory	80 GB	10 GB	\$70.00	\$7.25/month+ \$0.68/hour
	4 vCPU, 16 GB Memory	80 GB	50 GB	\$72.00	\$9.75/month+\$0.68/hour
	4 vCPU, 16 GB Memory	80 GB	100 GB	\$74.00	\$13.00/month+\$0.68/hour
	4 vCPU, 16 GB Memory	175 GB	100 GB	\$78.00	\$19.00/month+\$0.68hour
PowerPro	8 vCPU, 32 GB Memory	80 GB	10 GB	\$127.00	\$7.25/month+ \$1.53/hour
	8 vCPU, 32 GB Memory	80 GB	50 GB	\$130.00	\$9.75/month+\$1.53/hour
	8 vCPU, 32 GB Memory	80 GB	100 GB	\$134.00	\$13.00/month+\$1.53/hour
	8 vCPU, 32 GB Memory	175 GB	100 GB	\$140.00	\$19.00/month+\$1.53hour

Prices in Europe (Frankfurt)

Bundle type	vCPU, Memory	Root Volume	User volume	Monthly pricing	Hourly pricing
Value	1 vCPU, 2 GB Memory	80 GB	10 GB	\$29.00	\$9.00/month+\$0.25/hour
	1 vCPU, 2 GB Memory	80 GB	50 GB	\$32.00	\$12.00/month+\$0.25/hour
	1 vCPU, 2 GB Memory	80 GB	100 GB	\$37.00	\$15.00/month+\$0.25/hour
	1 vCPU, 2 GB Memory	175 GB	100 GB	\$42.00	\$21.00/month+\$0.25/hour
Standard	2 vCPU, 4 GB Memory	80 GB	10 GB	\$37.00	\$9.00/month+\$0.34/hour
	2 vCPU, 4 GB Memory	80 GB	50 GB	\$40.00	\$12.00/month+\$0.34/hour
	2 vCPU, 4 GB Memory	80 GB	100 GB	\$48.00	\$15.00/month+\$0.34/hour
	2 vCPU, 4 GB Memory	175 GB	100 GB	\$52.00	\$21.00/month+\$0.34/hour
Performance	2 vCPU, 8 GB Memory	80 GB	10 GB	\$53.00	\$9.00/month+\$0.55/hour
	2 vCPU, 8 GB Memory	80 GB	50 GB	\$56.00	\$12.00/month+\$0.55/hour
	2 vCPU, 8 GB Memory	80 GB	100 GB	\$58.00	\$15.00/month+\$0.55/hour
	2 vCPU, 8 GB Memory	175 GB	100 GB	\$64.00	\$21.00/month+\$0.55/hour
Power	4 vCPU, 16 GB Memory	80 GB	10 GB	\$85.00	\$9.00/month+\$0.78/hour
	4 vCPU, 16 GB Memory	80 GB	50 GB	\$87.00	\$12.00/month+\$0.78/hour
	4 vCPU, 16 GB Memory	80 GB	100 GB	\$89.00	\$15.00/month+\$0.78/hour
	4 vCPU, 16 GB Memory	175 GB	100 GB	\$94.00	\$21.00/month+\$0.78/hour
PowerPro	8 vCPU, 32 GB Memory	80 GB	10 GB	\$149.00	\$9.00/month+\$1.70/hour
	8 vCPU, 32 GB Memory	80 GB	50 GB	\$153.00	\$12.00/month+\$1.70/hour
	8 vCPU, 32 GB Memory	80 GB	100 GB	\$157.00	\$15.00/month+\$1.70/hour
	8 vCPU, 32 GB Memory	175 GB	100 GB	\$165.00	\$21.00/month+\$1.70/hour

## 13. SUPPORT AND CONSULTING

If you have a problem with your Amazon WorkSpace, you always can contact EPAM Cloud Support team for assistance. To do this please perform the following steps:

1. Create a screenshot with error.
2. Describe what actions were performed before the error and clarify when you used your WorkSpace last time. Provide the Support team with the detailed information and be ready to answer some additional questions.
3. Submit [a respective service request](#) with the information stated above.

Availability of Amazon WorkSpaces is covered by the respective Support Teams. If any issue arises with a service component stated below, EPAM Cloud Support team will contact the responsible persons.

- **AWS Support Team** - responsible for Amazon WorkSpaces service, AWS global problems, any issues related to WorkSpaces, clients, and detailed investigation.
- **EPAM Network Team** - responsible for network between AWS and EPAM network through site-to-site VPN.
- **EPAM Cloud Support Team** - responsible for first configuration, ticketing, initial investigation and coordinating end-user issues.
- **EPAM Enterprise Administration Team** - responsible for image preparation and AD integration: group policies and domain authorization.

In case you need any clarifications, explanations or tips related to EPAM Cloud, feel free to contact [EPAM Cloud Consulting Team](#).

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## VERSION HISTORY

Version	Date	Summary
1.0	October 5, 2020	First published