TeamLab Amazon Machine Image Usage

User Guide

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Introduction

This guide describes the Amazon Machine Image (AMI) with the TeamLab portal preinstalled. The TeamLab AMI launch procedure, its structure and configuration will be covered here in detail.

If you have never used Amazon Web Services and EC2 before, we recommend you to read the following materials first:

- What is Amazon Web Services?
- Amazon Elastic Compute Cloud
- AWS Management Console
- AMI and Instance Concepts

General Information

Image Name: teamlab-portal-v2.0.3-x86
AMI includes:

- Microsoft Windows 2008 R1 SP2 Datacenter edition 32-bit architecture
- two EBS volumes: a 30Gb volume and a 10Gb volume

Instance Launch

To launch an image instance please follow these steps:

Step 1. Create an account at AWS EC2

Sign up for Amazon Web Services here:
https://aws-portal.amazon.com/gp/aws/developer/registration/index.html

Sign up for EC2 here:
http://docs.amazonwebservices.com/AWSEC2/latest/GettingStartedGuide/

Subscribe to Amazon Elastic Compute Cloud product here:
http://aws-portal.amazon.com/gp/aws/developer/subscription/index.html?productCode=AmazonEC2

Learn more about the product here:
http://aws.amazon.com/ec2/faqs/

Step 2. Log in to AWS Management Console

At the moment AMI is created only for N. Virginia, USA.

Step 3. Launch the instance and follow the steps of the **Request Instance Wizard**:

1. *Choose an AMI*

- Select Community AMI >> All Images
- Type *teamlab* in the **Search** filed.
- Select an AMI with the following name: **teamlab-portal-v2.0.3-x86**

2. *Instance Details*

Select the appropriate instance type. See Instance Type Selection for details.

3. *Advanced Instance Options*

Leave default settings.

4. *Create a key pair*

Don't create anything here as the administrator password is already set.

5. *Configure Firewall*

Configure the instance external Firewall in EC2.

Create a new **Security Group**, enter the name of the group (for example, **Teamlab Portal**), next add the following rules:

- HTTP. Set port to 80 for access from anywhere.
- RDP. This is the port for Windows Remote Desktop Protocol. Set port to 3389. For security reasons it is recommended to create a pattern for your external IP address in the **Source Network (IPv4 CIDR)** field, so that only this IP address can be used to login remotedly to your computer.

6. *Launch Instance*

Step 4. Launch the portal

- Wait for the instance to change its status from pending to running.

- Wait some 4-5 mitutes for your computer to become completely functional. http://aws.amazon.com/ec2/faqs/#How_quickly_will_systems_be_running
- In the running instance find the **Public DNS** field and copy the following address to your browser:
  http://ec2-75-101-243-204.compute-1.amazonaws.com
- This will open the **Getting Started** page. Follow the steps of the wizard to enter your personal details.

  Note: when you access the portal for the first time, its pages might load quite slowly. This will happen only during your first visit.

5. Your portal is now ready. See **Additional Settings** for more information about the additional portal settings you might need.

Instance Type Selection

The instance has a 32-bit architecture, so it can be deployed on one of the following three instance types:

- **t1.micro** - Micro Instance - 613 MB of memory, up to 2 ECUs (for short periodic bursts)
- **m1.small** - Small Instance - 1.7 GB of memory, 1 EC2 Compute Unit
- **c1.medium** - High-CPU Medium Instance 1.7 GB of memory, 5 EC2 Compute Units

For details about instance types please follow this link http://aws.amazon.com/ec2/#instance

Micro Instance

This is a new type of instance which is not so expensive, but has little RAM and provides quite slow performance. See Micro Instance Concepts for details about this instance type.

We recommend using this type of instance for testing or running a small portal with 20-30 users.

Small Instance

This instance type has enough RAM and CPU resources to run a TeamLab portal.

We recommend using this type of instance for running a portal with 50 or more users.

High-CPU Medium Instance

As a rule, this instance type has excessive CPU resources for TeamLab use.

We recommend selecting this type of instance only if the portal is used very intensively, otherwise it will not be cost-effective.

Pricing

The table below displays the approximate monthly cost of the portal usage for various types of instances. Prices are shown for September 2010 in N. Virginia, USA:

	General Conditions	One-Year Reservation
Micro Instance	27-35$	18-25$
Small Instance	90-100$	60-70$
High-CPU Medium Instance	215-230$	135-150$

* prices are calculated based on the average portal usage
** prices are calculated for a 40Gb EBS
*** prices for reserved intances include one-time payment required upon reservation

- http://aws.amazon.com/ec2/purchasing-options/
- More about pricing: http://aws.amazon.com/ec2/#pricing
- More about reservations: http://aws.amazon.com/ec2/reserved-instances/
- Price calculator: http://aws.amazon.com/calculator

Changing Instance Type

If for any reason you feel that the selected type of instance doesn't suit you (you need a more powerful or a cheaper solution), you may easily change it. This can be done in a few steps:

- create backup. See Backup
- launch the instance of the needed type from TeamLab AMI
- restore backup

Additional Settings

Elastic IP and DNS Settings

Apart from the DNS address of type ec2-75-101-243-204.compute-1.amazonaws.com, EC2 also has Elastic IP available. This means you have a possibility to set a static IP address and attach it to the instance.

You may also create a DNS entry with your provider:
intranet.mycompany.com

When you select a public address which will be used to access the portal, be it Amazon Public DNS, IP or your own DNS entry, you´ll need to specify it in the portal settings. It is necessary for the correct functioning of TM Talk and notification links.

TM Talk Desktop Clients Port

TM Talk is based on an open XMPP(Jabber) architecture, so many desktop clients may be used as TM Talk clients. For the correct functioning of these clients it is necesarry to open the standard Jabber protocol port. To do this, in the **Security Group** where the instance is located add a rule that opens port 5222 for all IP addresses.

Inner Structure

Administrator

To access the OS, the only user account with the following data is created:

User name: **Administrator**
Password:**TeamlabRoot**

After the instance has been created, it is recommended to change this password.

EBS

The image includes two EBS volumes – a 30Gb volume and a 10Gb volume. The first volume (30Gb) is logical disk C, the second volume (10Gb) is logical disk D. Disk C is a system disk where the operating system and all the needed software, including TeamLab binary files, is installed. Disk D contains all the portal data such as databases and uploaded content.

EBS storage has been divided in two volumes for easier update and backup operations. The volume corresponding to disk C is bootable and will be deleted automatically upon deleting the instance. That´s why it is not recommended to store data on disk C. You may use disk D for this purpose.

Service Management

To launch or stop the portal services, use the **start.bat** and **stop.bat** files located in the following directory: **C:\teamlab_control**

MySQL

TeamLab uses MySQL as database management system. MySQL v. 5 is installed on disk C, DataDirectory is located on disk D.

There is a user account named **tm-usr** on the server. This account is used to access the portal. MySQL user passwords are located in the following directory: **C:\teamlab_deploy\db\pass**

FTP

The Filezilla FTP server is installed on the machine. It has the only user account with the following data:

Name: **root**
Password: **TeamlabRoot**
User Home Directory: D:\ftproot

To access the instance via FTP protocol you'll also need to additionally configure the instance **SecurityGroup** by adding the following 2 rules:

- TCP port 21 – the main port of the protocol

- TCP port range 1024 to 1028 – ports for passive mode in FTP

After the group has been created, it is recommended to change user password to avoid unauthorized access.

Security

After the instance has been launched, it is strongly recommended to change all passwords. It especially concerns the Windows Administrator account and MySQL root account.

Here are some articles about EC2 security:

- Amazon Web Services: Overview of Security Processes
- Windows on Amazon EC2 Security Guide

Backup

You may easily create a full backup of the portal data. This can be done quite easily due to the fact that all the portal data are located on one and the same EBS volume that corresponds to logical disk D in Windows:

- Database directory: D:\mysql
- User data directory: D:\teamlab-data

Amazon

The easiest way is to make a snapshot of the EBS volume that represents disk D. More information on how to perform this task you may find here: How to Create an Amazon EBS Snapshot

The snapshot will be located at Amazon S3 which claims its durability as 99.999999999%.

To restore the portal backup data, you'll need to create a new volume from snapshot, attach it to the instance, stop the Teamlab and MySql services, and replace disk D to the disk that corresponds to the volume restored from snapshot:

- How to Attach the Volume to an Instance
- How to Make an Amazon EBS Volume Available for Use

FTP

You may also perform data backup manually. To do that you'll need to copy and archive the database and user data folders, next download them via FTP and save to a secure directory. To restore such backup you'll need to stop the MySQL and Teamlab services, copy the data from backup folders back to the original folders and run the services.

Resources

1. Amazon Elastic Compute Cloud (EC2) Documentation
    a. Amazon Elastic Compute Cloud - Getting Started Guide
    b. Amazon Elastic Compute Cloud - User Guide
2. Amazon Elastic Block Store (EBS)
    a. Elastic Block Store Concepts
    b. Using Amazon Elastic Block Store