

Home / AWS / Guided Lab / SSH into EC2 Instance whose key pair is lost

SSH into EC2 Instance whose key pair is lost

Level: Fundamental

Amazon EC2

Amazon Web Services

English



1h 29m 31s left



End Lab

Open Console

Validation

Lab Credentials

User Name ⓘ

Whiz_User_80425.53874311



Password ⓘ

c84927fc-ae3b-4a9c-9945-4700f152b6d6



Access Key ⓘ

AKIAS2EJVXJBEB5F35H



Secret Key ⓘ

D+PQv2aYIjKihzXkqhwdMAIHDn6rjMXm0+EXyk/T






Lab Resources

No Lab Resources Found

Support Documents

1. [FAQs and Troubleshooting](#)
2. [SSH into EC2 Instance](#)
3. [Labs - Instructions and Guidelines](#)

Need help?

-  How to use Hands on Lab
-  Troubleshooting Lab
-  FAQs

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Lab Steps

Task 1: Sign in to AWS Management Console

1. Click on the **Open Console** button, and you will get redirected to AWS Console in a new browser tab.
2. On the AWS sign-in page,
 - Leave the Account ID as default. Never edit/remove the 12 digit Account ID present in the AWS Console. otherwise, you cannot proceed with the lab.
 - Now copy your **User Name** and **Password** in the Lab Console to the **IAM Username and Password** in AWS Console and click on the **Sign in** button.
3. Once Signed In to the AWS Management Console, Make the default AWS Region as **US East (N. Virginia) us-east-1**.

Task 2: Launching an EC2 Instance


In this task, our goal is to simply launch an EC2 Instance by providing specific details such as the instance name, AMI, instance type, key pair, and other necessary information.

1. Make sure you are in the **N. Virginia(us-east-1)** Region.
2. Navigate to **EC2** by clicking on the **Services** menu in the top left, then click on **EC2** in the **Compute** section.
3. Navigate to **Instances** from the left side menu and click on **Launch Instances** button.
4. Under the **Name and tags** section :
 - Name : **Original_instance**
5. Under the **Application and OS Images (Amazon Machine Image)** section :
 - Select **Quick Start** tab and **Amazon Linux** under it
 - Amazon Machine Image (AMI) : select **Amazon Linux 2 AMI**
 - **Note: if there are two AMI's present for Amazon Linux 2 AMI, choose any of them.**


▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

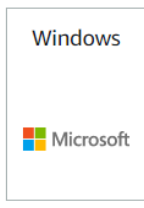
Quick Start




Amazon Linux




Ubuntu



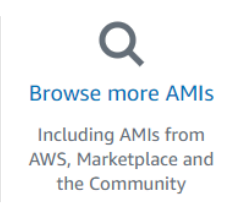
Windows



Red Hat



SUSE Linux



Browse more AMIs

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type

ami-0cff7528ff583bf9a (64-bit (x86)) / ami-00bf5f1c358708486 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20220606.1 x86_64 HVM gp2

Architecture	AMI ID
64-bit (x86)	ami-0cff7528ff583bf9a

6. Under the **Instance Type** section :

- Instance Type : Select **t2.micro**

<https://www.whizlabs.com/labs/ssh-into-ec2-instance-whose-key-pair-is-lost>

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▼ Instance type [Info](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory

On-Demand Linux pricing: 0.0116 USD per Hour

On-Demand Windows pricing: 0.0162 USD per Hour

Free tier eligible

[Compare instance types](#)

7. Under the **Key Pair (login)** section :

- Click on **Create new key pair** hyperlink
- Key pair name: **MyWebserverKey**
- Key pair type: **RSA**
- Private key file format: **.pem** or **.ppk**
- Click on **Create key pair** and select the created key pair.

Create key pair

Key pair name

Key pairs allow you to connect to your instance securely.

MyWebserverKey

The name can include upto 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

☒ RSA

RSA encrypted private and public key pair

☐ ED25519

ED25519 encrypted private and public key pair

Private key file format

☒ .pem

For use with OpenSSH

☐ .ppk

For use with PuTTY

⚠ When prompted, store the private key in a secure and accessible location on your computer. **You will need it later to connect to your instance.** [Learn more](#)

Cancel

Create key pair

8. Under the **Network Settings** section :

- Click on **Edit** button
- Subnet: Select the Subnet having Availability zone **us-east-1a**
- Auto-assign public IP: select **Enable**
- Firewall (security groups) : Select **Create a new security group**
- Security group name : Enter **MyEC2Server_SG**
- Description : Enter **Security Group to allow traffic to EC2**
- To add **SSH**:
 - Choose Type: **SSH**
 - Source: **Anywhere** (From ALL IP addresses accessible)

9. Keep everything else as default and click on the **Launch instance** button.

10. **Launch Status:** Your instance is now launching, Navigate to **Instances** page from the left menu and wait until the status of the EC2 Instance changes to **running**.

Filter instances						
search: i-0e7c65791fd37c46b X		Clear filters				
<input type="checkbox"/>	Name ▼	Instance ID	Instance state ▼	Instance type ▼	Status check	Alarm status
<input type="checkbox"/>		i-0e7c65791fd37c46b	Running	t2.micro	Initializing	No alarms

Task 3: Stop the Original Instance

In this task, we are going to stop the created instance considering that it's key pair is lost.

1. Suppose your key pair is lost. And, you want to SSH.
2. Stop the Instance first to detach the root volume.
3. To stop the instance follow the below steps:
 - **Select** the present instance.
 - Click on the **Instance state** present on the top.
 - Select **Stop instance** button.

The screenshot shows the AWS Management Console 'Instances' page. At the top, there are buttons for 'Refresh', 'Connect', 'Instance state' (which is open), 'Actions', and 'Launch instances'. Below these is a search bar 'Filter instances'. The main table lists two instances: 'Temporary_In...' and 'Original_insta...'. The 'Original_insta...' instance is selected with a checkbox. The 'Instance state' dropdown menu is open, showing options: 'Start instance', 'Reboot instance', 'Hibernate instance', and 'Terminate instance'.

Name	Instance ID	Instance state	Instance type	Check	Alarm status	Availability Zone
Temporary_In...	i-0c58d216c13c6c9f5	Running	t2.micro	<input type="checkbox"/>	Checks passed	No alarms + us-east-1a
Original_insta...	i-030fc0579be74aecd	Running	t2.micro	<input checked="" type="checkbox"/>	Checks passed	No alarms + us-east-1a

Task 4: Launch a temporary instance

In this task, we are going to launch a temporary instance similar to the original instance.

1. Make sure you are in the **N. Virginia(us-east-1)** Region.
2. Navigate to **EC2** by clicking on the **Services** menu in the top left, then click on **EC2** in the **Compute** section.
3. Navigate to **Instances** from the left side menu and click on **Launch Instances** button.
4. Under the **Name and tags** section :
 - Name : **Temporary_Instance**
5. Under the **Application and OS Images (Amazon Machine Image)** section :
 - Select **Quick Start** tab and **Amazon Linux** under it
 - Amazon Machine Image (AMI) : Select **Amazon Linux 2 AMI**
 - **Note: if there are two AMI's present for Amazon Linux 2 AMI, choose any of them.**

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

Quick Start

Amazon Linux

aws

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Linux

SUSE

Search

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type
ami-0cff7528ff583bf9a (64-bit (x86)) / ami-00bf5f1c358708486 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible ▼

Description

Amazon Linux 2 Kernel 5.10 AMI 2.0.20220606.1 x86_64 HVM gp2

Architecture

AMI ID

64-bit (x86) ▼

ami-0cff7528ff583bf9a

6. Under the **Instance Type** section :

- Instance Type : Select **t2.micro**

▼ **Instance type** [Info](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0116 USD per Hour
On-Demand Windows pricing: 0.0162 USD per Hour

Free tier eligible ▼

[Compare instance types](#)

7. Under the **Key Pair (login)** section :

- Click on **Create new key pair** hyperlink
- Key pair name: Enter **Temp_key**
- Key pair type: **RSA**
- Private key file format: **.pem** or **.ppk**
- Click on **Create key pair** and select the created key pair.

<https://www.whizlabs.com/labs/ssh-into-ec2-instance-whose-key-pair-is-lost>

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8. Under the **Network Settings** section :

- Click on **Edit** button.
- **Subnet:** Select the Subnet having Availability zone **us-east-1a**
- Auto-assign public IP: Select **Enable**
- Firewall (security groups) : Select **Select an existing security group**
- Common security groups : Select Security group with name **MyEC2Server_SG**

9. Keep everything else as default and click on the **Launch instance** button.

10. **Launch Status:** Your instance is now launching, Navigate to **Instances** page from the left menu and wait until the status of the EC2 Instance changes to **running**.

Task 5: Detach the root volume of the first instance and attach it to the temporary instance

1. In the navigation panel, choose **Volumes** present below the **Elastic Block Store**.

2. Select the volume of the Original instance and detach.

3. To detach the volume, follow the steps below:

- **Select the volume of Original_instance**
- Click on the **Actions** button
- Choose the option of **Detach volume**.

The screenshot shows the AWS Management Console 'Volumes' page. A table lists two volumes: 'Original_inst...' and 'Temporary_I...'. The 'Original_inst...' volume is selected with a checkbox. The 'Actions' button for this volume is clicked, opening a dropdown menu. The 'Detach volume' option is highlighted in the menu.

Name	Volume ID	Type	Size	IO
Original_inst...	vol-02569f44d0460d2d6	gp2	8 GiB	10
Temporary_I...	vol-06f099869fb2d101c	gp2	8 GiB	10

- Click on **Detach** button.

4. If you are getting errors like this, this means you have not stopped the Instance.

Failed to detach volume.

- vol-02569f44d0460d2d6: Unable to detach root volume 'vol-02569f44d0460d2d6' from instance 'i-030fc0579be74aecdd'

5. If the instance is stopped, then the volume will be detached immediately.

6. Volume state has been changed to **Available** now and In the Attached Instance option, there will be **no instance ID**. Scroll towards the right side to see.

✔ Successfully detached volume. ✕

Volumes (1/2) ↻ Actions ▾ Create volume

Availability Zone ▾	Volume state ▾	Alarm status	Attached Instances ▾	Volume st... ▾	Encryption ▾
us-east-1a	✔ Available	No alarms	+	-	✔ Okay
us-east-1a	✔ In-use	No alarms	+	i-0c58d216c13c6c9f5	✔ Okay

7. Once the instance volume is in an Available state, it means it can be attached with any instance.

8. Select the same volume and attach it with the **Temporary_instance**.

9. To attach follow the steps mentioned below.

- Select the volume of **Original_instance**
- Click on the **Actions** button
- Choose the option of **Attach volume**.

Volumes (1/2) ↻ Actions ▴ Create volume

Name ▾	Volume ID ▾	Type ▾	Size ▾	IOPS ▾	Created
<input checked="" type="checkbox"/> Origin...	vol-02569f4...	gp2	8 GiB	100	2021/10/22 17:11
<input type="checkbox"/> Tempo...	vol-06f0998...	gp2	8 GiB	100	2021/10/22 17:12

Modify volume

Create snapshot

Create snapshot lifecycle policy

Delete volume

Attach volume

Detach volume

Force detach volume

Manage auto-enabled I/O

Manage tags

10. In the next menu, select the Instance as **Temporary_instance** having **running** as a state.

Instance Info

i-0c58d216c13c6c9f5

i-030fc0579be74aec

(Original_instance) (stopped)

11. Let the device name be the same as the default and click on the **Attach volume** button.
12. The volume will be attached to the temporary instance.
13. Go to the instance page, and click on the Temporary instance's instance-id. The instance will be running state.
14. Confirm that volume is attached to the **temporary_instance** by clicking on the **Storage** tab below.

Details

Security

Networking

Storage


Status checks

Monitoring

Tags

▼ Root device details

Root device name

 /dev/xvda

Root device type

EBS



EBS optimization

disabled

▼ Block devices

Q

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted
vol-06f099869fb2d101c	/dev/xvda	8	 Attached	Fri Oct 22 2021 17:12:29 G...	No
vol-02569f44d0460d2d6	/dev/sdf	8	 Attached	Fri Oct 22 2021 18:06:59 G...	No

Task 6: Add the new public key information to the Original_instance

1. Suppose your key pair is lost. And, you want to SSH.
2. SSH into the temporary instance using the new key pair, Temp_key.
3. Mount the new volume to access the file system.
4. The name of the new volume is /dev/sdf, and you will mount it on /mnt/newvol.
5. To determine the name of all the partitioned, run the below command:

```
lsblk
```

```
[ec2-user@ip-172-31-88-125 ~]$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda         202:0    0   8G  0 disk
└─xvda1      202:1    0   8G  0 part /
xvdf         202:80    0   8G  0 disk
└─xvdf1      202:81    0   8G  0 part
[ec2-user@ip-172-31-88-125 ~]$
```

6. Create a temporary directory for the new volume to mount using the below command.

```
sudo mkdir /mnt/newvol
```

7. Mount the volume at the temporary mount point.

```
sudo mount -o nouuid /dev/xvdf1 /mnt/newvol
```



- Copy the new SSH key information from root device of temporary_instance to new volume

```
cp .ssh/authorized_keys /mnt/newvol/home/ec2-user/.ssh/authorized_keys
```



Task 7: Unmount and detach temporary volume and attach to the original instance

- To Unmount, run the following command:

```
sudo umount /mnt/newvol
```



- Detach the volume from the temporary instance and attach it to the original instance.
- To detach the volume, In the navigation panel, choose **Volumes** present below the **Elastic Block Store**.
- Select the volume of the Original instance and detach by following the below steps.
 - Select the volume of **Original_instance**
 - Click on the **Actions** button
 - Choose the option of **Detach volume**.

The screenshot shows the AWS Management Console 'Volumes' page. A table lists two volumes: 'Original_inst...' (vol-02569f44d0460d2d6) and 'Temporary_I...' (vol-06f099869fb2d101c). The 'Original_inst...' volume is selected. The 'Actions' button is highlighted, and a dropdown menu is open, showing the 'Detach volume' option selected.

Name	Volume ID	Type	Size	IO
Original_inst...	vol-02569f44d0460d2d6	gp2	8 GiB	10
Temporary_I...	vol-06f099869fb2d101c	gp2	8 GiB	10

- If you are getting errors like this, this means you have not stopped the Instance.

Failed to detach volume.

- vol-02569f44d0460d2d6: Unable to detach root volume 'vol-02569f44d0460d2d6' from instance 'i-030fc0579be74aecd'

- If the instance is stopped, then the volume will be detached immediately.

- Volume state has been changed to **Available** now and In the Attached Instance option, there will be **no instance ID**. Scroll towards the right side to see

Successfully detached volume.

Volumes (1/2)

Filter volumes

Availability Zone	Volume state	Alarm status	Attached Instances	Volume st...	Encryption
us-east-1a	Available	No alarms	+	-	Not encrypted
us-east-1a	In-use	No alarms	+	i-0c58d216c13c6c9f5	Not encrypted

8. Once the volume is in an Available state, it can be attached to any instance.

9. Let's attach it with the Original_instance, which is in a Stopped state.

10. To attach follow the steps mentioned below.

- Select the volume of **Original_instance**
- Click on the **Actions** button
- Choose the option of **Attach volume**.

Volumes (1/2)

Filter volumes

Name	Volume ID	Type	Size	IOPS	Created
Origin...	vol-02569f4...	gp2	8 GiB	100	2021/10/22 17:11
Tempo...	vol-06f0998...	gp2	8 GiB	100	2021/10/22 17:12

Actions

- Modify volume
- Create snapshot
- Create snapshot lifecycle policy
- Delete volume
- Attach volume
- Detach volume
- Force detach volume
- Manage auto-enabled I/O
- Manage tags

11. In the next menu, select the Instance as **Original_instance** having **running** as a state.

12. Change the device name to **/dev/xvda** and click on the **Attach volume** button.

Instance Info

i-030fc0579be74aecdd

Only instances in the same Availability Zone as the selected volume are displayed.

Device name Info

/dev/xvda

Linux device names: /dev/sdf through /dev/sdp

ⓘ Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvdp internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel Attach volume

13. The volume will be attached to the original instance.

14. Go to the instance page, and click on the Original instance's instance-id.

15. Confirm that volume is attached to the Original_instance by clicking on the **Storage** tab below.

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

▼ Root device details

Root device name

/dev/xvda

Root device type

EBS

EBS optimization

disabled

▼ Block devices

Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time
vol-02569f44d0460d2d6	/dev/xvda	8	Attached	Mon Oct 25 2021 08:33:28 ...

Task 8: SSH into Original_instance using Temp key pair

1. Start the Instance first.
2. To start the instance, follow the steps listed below:
 - **Select** the Original EC2 Instance
 - Click on the **Instance state**
 - Choose the **Start instance** option.
3. Wait for the Instance to be in the Running state. Remember to SSH into the Original Instance using **Temp_key** which we have created for the temporary instance.

Example: `ssh -i "Temp_key.pem" ec2-user@<original instance public IP address>`

Note: because we have copied the temporary instance public key to the original instance, so we can only able to SSH only using the **Temp_key**.

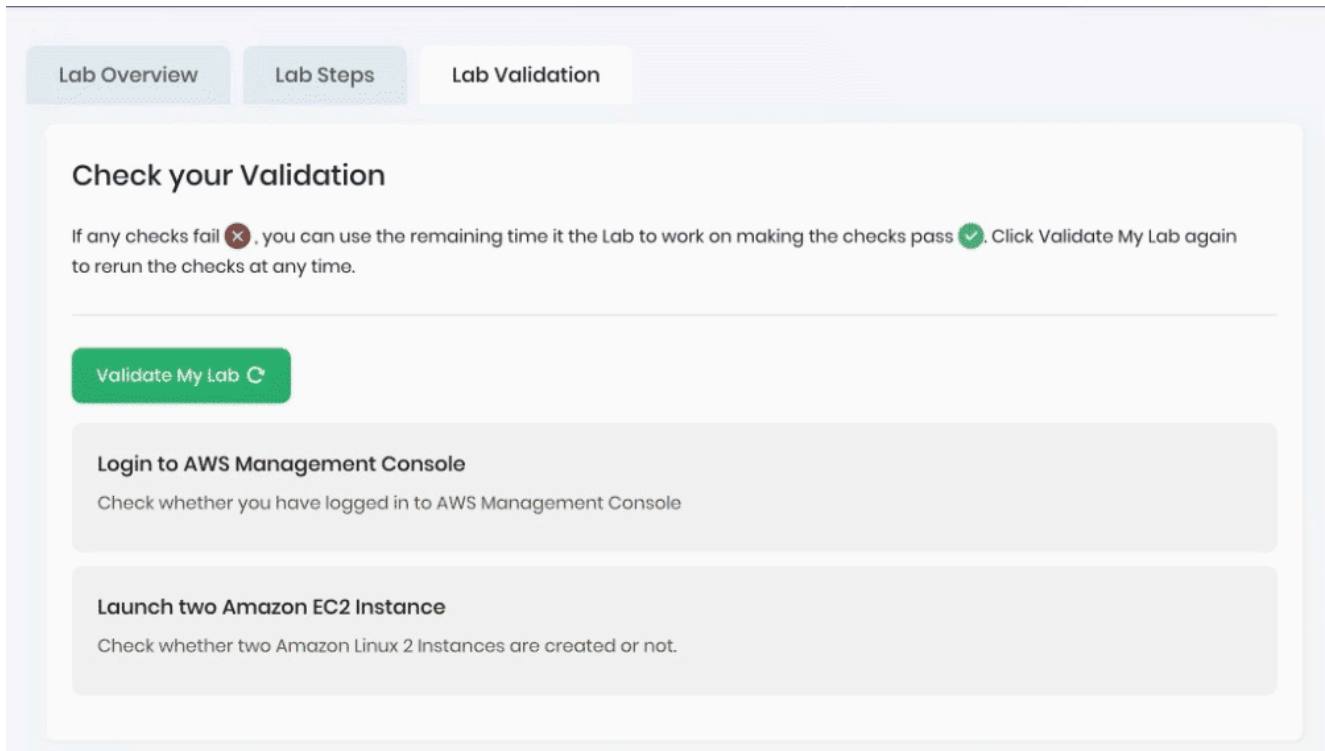
4. To SSH use the key pair of the 2nd instance, follow the guide [/labs/support-document/ssh-into-ec-instance](#)

Do You Know?

AWS key pairs use public key cryptography for secure communication. The public key is used for encryption, and the private key is used for decryption.

Task 9 : Validation of the Lab


1. Once the lab steps are completed, please click on the **Validation** button on the left side panel.
2. This will validate the resources in the AWS account and displays whether you have completed this lab successfully or not.
3. Sample output :





Task 10: Delete the AWS Resources

1. Navigate to **EC2** by clicking on the **Services** menu in the top left, then click on **EC2** in the **Compute** section.
2. Navigate to **Instances** on the left panel.
3. To terminate both the EC2 Instances, perform the below steps
 - Select both the Instances
 - Click on the **Instance state**
 - Choose the option of **Terminate Instance**
 - Click on the **Terminate** button in the pop-up menu. The instance will be terminated in a few minutes.

Terminate instances?

 On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.

Are you sure you want to terminate these instances?

-  i-030fc0579be74aecb (Original_instance)
-  i-0c58d216c13c6c9f5 (Temporary_Instance)

Clean up associated resources
Associated resources may incur costs after these instances are terminated.

► **Delete EBS volumes**

To confirm that you want to terminate the instances, choose the terminate button below. Terminating the instance cannot be undone.

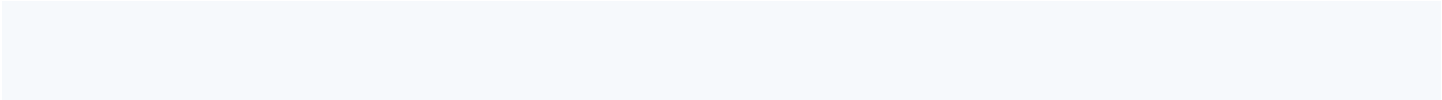
Cancel **Terminate**

Completion and Conclusion

1. You have successfully created and launched 2 Amazon EC2 instances.
2. You have successfully detached the volume from the Original instance which is in a stopped state and attached it with the temporary instance.
3. You have successfully mounted the new volume into the temporary instance and copied the key pair information.
4. You have successfully unmounted the new volume and detached it from the temporary instance and attached it with the original instance.
5. You have successfully accessed the EC2 instance by SSH using new key pair.

End Lab

1. Sign out of AWS Account.
2. You have successfully completed the lab.
3. Once you have completed the steps, click on **End Lab** from your whizlabs dashboard.



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