

# **Tavaxy over the cloud**

## **User Guide**

June 2011

Tavaxy allows users and organizations to run the whole system on Amazon EC2 Cloud. This is a good solution as

1. There is no upfront cost for purchasing computational infrastructure.
2. Infra-structure size is elastic and new machines can be added on demand.
3. Low technicality level is required.

Using Tavaxy for the cloud:

Currently, Tavaxy is only supporting Amazon Web Services. There is Tavaxy images in EU West (Ireland) and US East (N. Virginia)

1. Go to <http://console.aws.amazon.com> and sign in by your amazon account.
2. Go to your desired region (EU West or US West)
3. Select 'Launch Instance' from EC2 Dashboard.
4. Search for Tavaxy Amazon Image (ami-ID), most recent images are
  - a. **EU West:** ##### ***Put Final ami-ID here***
  - b. **US West:** ##### ***Put Final ami-ID here***
5. Select the AMI
6. Select the instance type (small,large,x-large).

Note:

- o Remaining machines will be from the same type.
- o To know more about the instances specification go to <http://aws.amazon.com/ec2/instance-types/>

7. Click 'Continue'
8. Choose the default Kernal ID and RAM Disk ID
9. Click 'Continue'.
10. Name the instance if you want
11. Choose or Create a KeyPair to use, this is important to able to access the machine remotely through SSH.
12. Click 'Continue'
13. For Firewall configuration: choose 'create a new security group'
  - a. Set Name as you like we suggest Tavaxy
  - b. Description: Tavaxy Firewall Configuration
  - c. Allow the following ports:
    - HTTP (80)
    - HTTPS (443)
    - SSH (22)
    - My SQL (3306)
    - Custom TCP rule: 5000 for Tavaxy communication
    - Custom TCP rule: 15000-15999 for PBS Torque
    - Custom UDP rule: 15000-15999 for PBS Torque
14. Click 'Continue'
15. Review the information
16. Click 'Launch'

A new instance will start, you will find a new row in your console. The machine initially will have a pending state. Wait till the state is change to 'running'.

17. After the machine is running, click on the machine to select it. From the information panel

below, find 'public DNS' and copy it as in Fig. 1

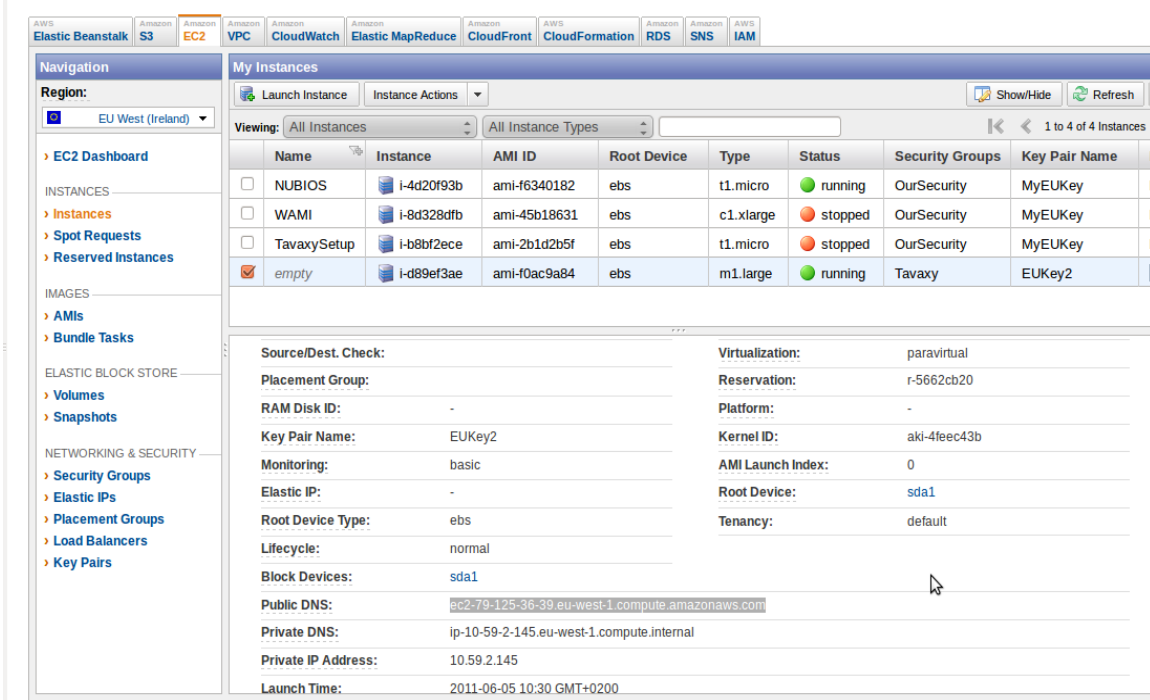


Fig. 1: Get the public DNS value

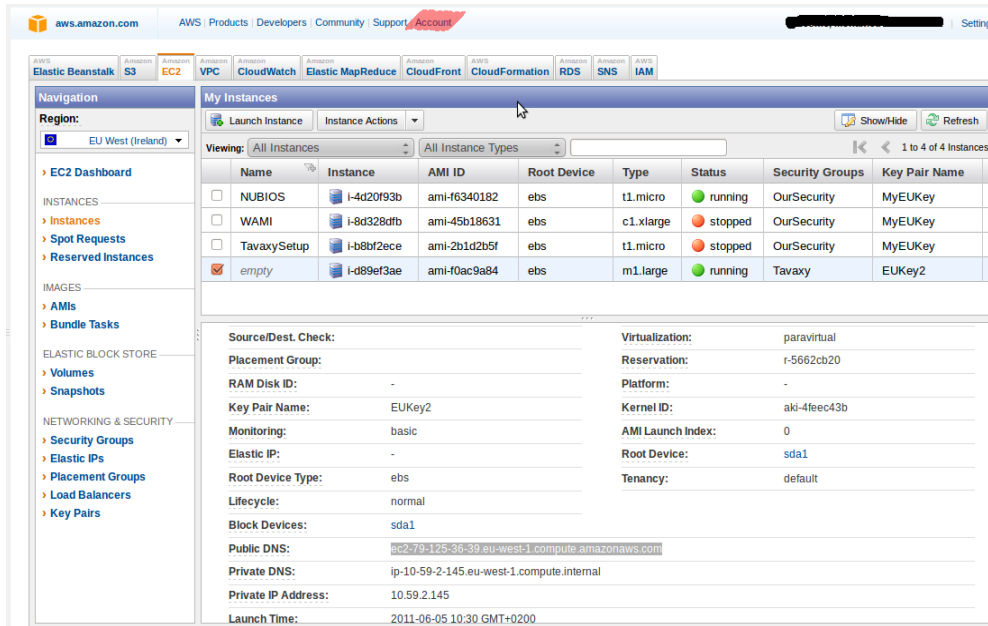
18. open a new window or a new tab in your browser and go to '[https://PUBLIC\\_DNS](https://PUBLIC_DNS)' in the above example '<https://ec2-79-125-36-39.eu-west-1.compute.amazonaws.com>'
19. Confirm the warning message by accepting the certificate.
20. Click on 'Tavaxy Cloud Setup'

The screenshot shows a web form titled 'Required Setup information'. The form contains several input fields and buttons:

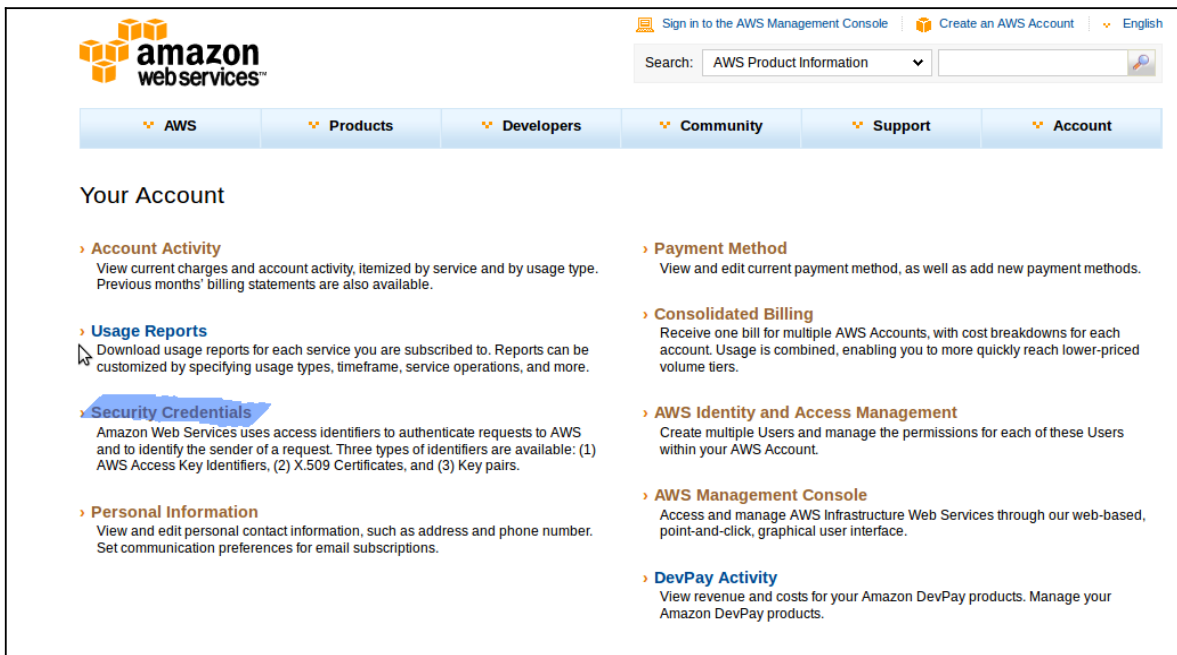
- Private Key:
- X. 509 Certificate:
- Total Machines Count:
- Access Key ID:
- Secret Access Key:
- 
- Key Pair:
- Security:
- 

Fig. 2: Required Setup information`

21. You have supply the required information to able to start your cluster to be to find these information,
- i. Click on Account from Console bar as shown in figure below:



- ii. from the Account Page, choose 'Security Credentials'



a. to get Private Key and X.509 certificate (required to start/terminate machines) are file found:

i. From X509 Certificate tab, click on create new certificate file

### Access Credentials

There are three types of access credentials used to authenticate your requests to AWS services: (a) access keys, (b) X.509 certificates, and (c) key pairs. Each access credential type is explained below.

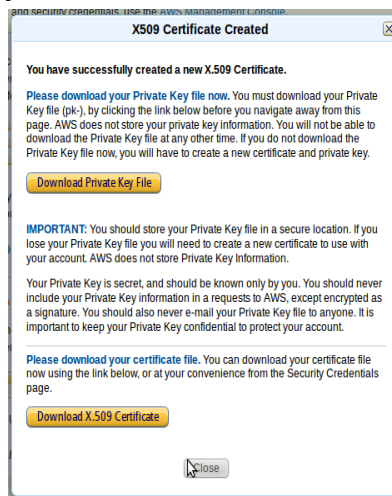
Use X.509 certificates to make secure SOAP protocol requests to AWS service APIs.

*Exceptions:* Amazon S3 and Amazon Mechanical Turk instead require your [Access Keys](#) for SOAP requests.

Created	X.509 Certificate	Status
February 21, 2011	cert-P6PT3F2BYETAHTAQHQXBZYI7EZZ6XYV6.pem (Download)	Active (Make Inactive)

[Create a new Certificate](#) | [Upload Your Own Certificate](#)

ii. Download 'Private Key' and 'X. 509 Certificate'.



b. Access Key ID and secret Access Key (required for S3):

i. Go to 'Access Keys' tab

ii. Copy your 'Access Key ID' or create a new one.

iii. Click the 'show' under 'Secret Access Key' to get the Access Key

### Access Credentials

There are three types of access credentials used to authenticate your requests to AWS services: (a) access keys, (b) X.509 certificates, and (c) key pairs. Each access credential type is explained below.

Use access keys to make secure REST or Query protocol requests to any AWS service API. We create one for you when your account is created — see your access key below.

**Your Access Keys**

Created	Access Key ID	Secret Access Key	Status
December 5, 2010	AKIAJA47K6VIFCTHGNQA	<a href="#">Show</a>	Active <a href="#">(Make Inactive)</a>
March 21, 2011	AKIAJ3MRXRVN7EJTJYWA	<a href="#">Show</a>	Active <a href="#">(Make Inactive)</a>

22. Copy and paste the information to its respective place
23. After you paste your Access Key ID and Secret Access Key, Click 'Fetch S3 Buckets'
  - a. You can choose the bucket to use.
  - b. Or create a new bucket, **the bucket name has to be unique**
24. Enter the name of the security Group and SSH Key to use, we prefer the same group and key n the main machine
25. Click 'start' after you finish.
26. You will be redirected to a new page, showing the status of cluster creation
27. Click 'Access Tavaxy' when the cluster setup is done.

```
Access Tavaxy
Completed Successfully
Starting nodes daemon.....
Starting daemon.....
Machines Configuration...Done
Compute No. 2 installation ..... Done
Installing Compute No. 2 .....
Compute No. 1 installation ..... Done
Installing Compute No. 1 .....
Configuring Extra Machines.
Extra Machines Started
Starting 2 more nodes..... May take up to 3 minutes
Checking if extra nodes are needed.....
Installing main server.....Done
Installing main server.....
```

You are done and system is ready for use.