

Quick Start Guide | Forsa Cloud Compute™

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## Introduction

Forsa Cloud Compute (FC2) is a first-of-its-kind cloud compute platform that delivers Intel Optane Persistent Memory (PMem) as in-memory storage. FC2 Instances outperform high-end, performance-tuned offerings from leading public cloud providers for I/O-intensive workloads.

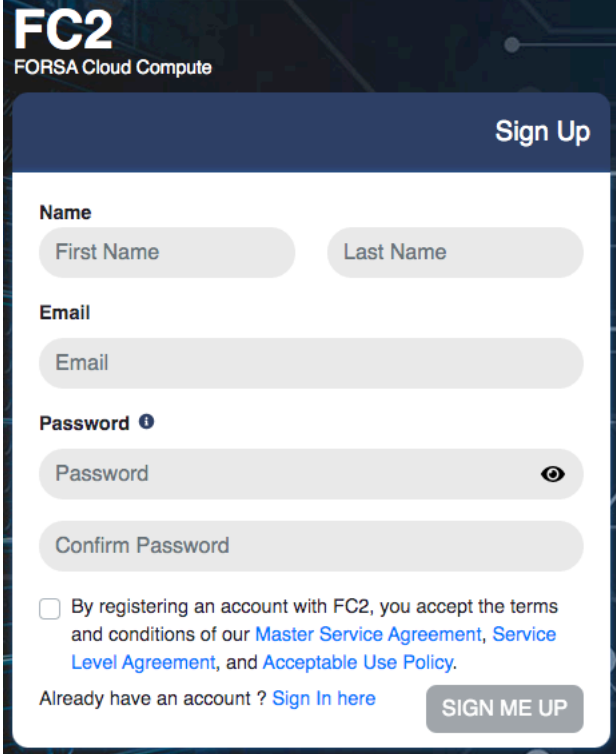
Your FC2 Instances will increase the I/O performance of your database or application (including homegrown) without the need to modify the application or associated APIs.

## Registration – Getting Started for the First Time

To get started deploying FC2 Instances, sign-up with a valid email address.

Registration Procedure:

1. Navigate to [fc2.formulusblack.com](https://fc2.formulusblack.com) and click on SIGN UP
2. Fill in all fields and submit. An email will be sent to the email address used during the Sign-Up with additional instructions.



The image shows a screenshot of the FC2 (Forsa Cloud Compute) registration page. The page has a dark blue header with the FC2 logo and the text 'Forsa Cloud Compute'. Below the header is a 'Sign Up' button. The main form area is white and contains the following fields and elements:

- Name:** Two input fields for 'First Name' and 'Last Name'.
- Email:** One input field for 'Email'.
- Password:** Two input fields for 'Password' and 'Confirm Password'. The 'Password' field has a toggle icon (an eye) to show or hide the password.
- Terms and Conditions:** A checkbox followed by the text: 'By registering an account with FC2, you accept the terms and conditions of our [Master Service Agreement](#), [Service Level Agreement](#), and [Acceptable Use Policy](#).'
- Sign In:** A link that says 'Already have an account? [Sign In here](#)'.
- Submit:** A button labeled 'SIGN ME UP'.

3. Open the email and click on the VERIFY REGISTRATION button to complete the registration process.

## Preparation

### SSH Key Management

SSH Keys is how you connect to your FC2 Instance without requiring any password. Before deploying an FC2 Instance, create or import a public SSH Key to make it available for selection within the FC2 Launch Instance wizard. All SSH Keys that are created by the registered FC2 User will be listed on the SSH Key Management page.

If you would like to add/remove SSH Keys after an FC2 Instance has been deployed, please do so directly on the Instance.

### Creating an SSH Key Using FC2

1. Navigate to the SSH Key MGMT page, click on CREATE SSH KEY



The screenshot shows a dialog box titled "SSH Key". It contains the following text: "An SSH Key is a set of security credentials that are utilized for identity purposes when connecting to an instance." Below this is a label "Name" and a text input field with the placeholder text "Enter SSH key name". At the bottom right of the dialog are two buttons: "Cancel" and "Create".

2. Enter a name for the SSH Key to be able to identify it later on.
3. Click on CREATE.
4. On your local host, save the SSH Key and take note of the target directory.
5. On your local host, extract the SSH key zip file and modify the file attributes to be full read and write access (for owner only).
  - a. On MAC/Linux, change attributes by running:  
`#chmod 600 <SSH_KEY_NAME>*`
  - b. On Windows, right click on file and go to properties.

### Importing an SSH Key

1. Navigate to the SSH Key MGMT page, click on IMPORT SSH KEY

2. Enter a name for the SSH Key to be able to identify it later on.
3. Browse for the public SSH Key file OR paste the public SSH Key in the text input field.
4. Click on IMPORT.

### Deleting an SSH Key

1. Navigate to the SSH Key MGMT page.
2. Locate the SSH Key that is to be deleted and click on the *TRASH* icon to the right of the table.

### Subscription & Billing

The FC2 Billing page is where to go to setup your payment method and billing address. A payment method is required to be on file before launching an instance.

#### Adding a Payment Method

1. Navigate to the Billing page, click on BILLING.
2. On the popup window, click on ADD PAYMENT METHOD and enter valid information.
3. On the popup window under BILLING ADDRESS, click on the EDIT button and enter valid information. Select SAVE ADDRESS.
4. (Optional) If more than one payment method is on file, select which payment method you wish to set as Default. (*Note: The payment method that does NOT have a MAKE DEFAULT button next to is the current card set to Default.*)

5. Close the popup window.

### Change/Delete a Payment Method

*Note: In order to change/delete a payment method another needs to be on file first.*

1. Navigate to the Billing page, click on BILLING.
2. On the popup window, click on ADD PAYMENT METHOD and enter valid information.
3. On the popup window, under BILLING ADDRESS, click on the EDIT button and enter valid information. Select SAVE ADDRESS.
4. (Optional) On the popup window, select which payment method you wish to set as Default. *(Note: The payment method that does NOT have a MAKE DEFAULT button next to is the current card set to Default).*
5. (Optional) On the popup window, delete any payment method on file by clicking on the DELETE button next to it.
6. Close the popup window.

## Getting Started

### FC2 Instance Management

FC2 offers several types of instances: fc2.small, fc2.medium, fc2.large. Each type of instance has different number of vCPUs, Memory, and Storage. Before deploying an instance, decide which instance type best satisfies your needs.

All FC2 Instances that are created by the registered FC2 User will be listed on Dashboard page. Each registered FC2 User will have the ability to deploy a single FC2 Instance.

Selecting on an FC2 Instance and navigating through the DESCRIPTION, MONITORING, and EVENT LOG tabs at the bottom of the table will provide additional details for its respective instance.

### Deploy an FC2 Instance

1. Navigate to the Dashboard page, click on LAUNCH INSTANCE
  - a. Select Operating System.
  - b. Select Instance Type.

- c. Input the name of your Instance and select SSH Key to use to access the FC2 Instance once deployed.
  - d. Review selections and click on LAUNCH.
2. View the dashboard to obtain details of the FC2 Instance.
3. Create and apply a Security Group to your FC2 Instance. For more information, see Security Group Management.
4. Connect to your FC2 Instance. For more information, see Connect to an FC2 Instance.

### Connect to an FC2 Instance

Before proceeding with this section, please ensure you have properly added your security group rules. See Security Group Management.

#### For Linux Instances

For Ubuntu OS distributions, username is “ubuntu”. For CentOS distributions, username is “centos”.

*Note: You will not be able to connect to your instance unless the correct security group rule has been set.*

If your local host is MacOS or Linux, you can use an SSH Client. Before proceeding with the next steps, Install the SSH client on your local host if not installed by default or done so already. Choose from either of the options below.

Option #1: Using SSH key without storing to your config

1. Launch terminal on your local host, and connect to your FC2 Instance using SSH
  - a. On MAC/Linux, SSH to your instance.  

```
#ssh -i /path/<key-pair>.pem <username>@<public ip address>
```

Option #2: Using SSH key and storing to your config

1. On your local host, copy the SSH Key to your SSH configuration directory.
  - a. On MAC/Linux local host, copy the SSH key to your ~/.ssh/ directory  

```
#cp /<download_path>/<key-pair>* ~/.ssh/
```
2. On your local host, add the SSH Key to your SSH configuration
  - a. On MAC/Linux local host, add SSH Key by running:



```
#ssh-add ~/.ssh/<key-pair>.pem
```

3. Launch terminal on your local host, and connect to your FC2 Instance using SSH
  - a. On MAC/LINUX local host, SSH to your instance
 

```
#ssh <username>@<public ip address>
```

If your local host is Windows, you can use PuTTY. Before proceeding with the next steps, install the Putty application on your local host if not done so already.

PuTTY:

1. Launch Putty application.
2. In the Category left pane, choose Session and do the following:
  - a. In the Host Name field, enter `ubuntu@<public_ip_address>` OR `centos@<public_ip_address>`
  - b. In the Port field, enter 22.
  - c. Under Connection type, select SSH
3. In the Category left pane, choose Connection and do the following:
  - a. Navigate to SSH → Auth, select the .ppk file generated OR imported prior for your key pair.
4. After above settings, are made open the PuTTY session by choosing Open.

#### *For Windows Instances*

For Windows OS distributions, username is “Admin” and default password is “FC2W1nPa\$\$w0rd”. Upon first time login, it is required to change password.

\*For Windows Users, you can use the RDP client that is included with windows by default.

\*For MacOS, you can download a remote desktop client. Microsoft Remote Desktop app is available from the Mac App Store for MacOS.

\*For Linux Users, Applications such as FreeRDP, Remmina, etc. are available for Linux.

1. Launch Remote Desktop application.

2. For Computer field, enter public ip address of your instance and login using default credentials

*TechNote: Ensure that a domain name is not being used, otherwise may result in failure to connect.*

3. Upon first-time login, change and set your desired password.

### Terminating an FC2 Instance

1. Navigate to the Dashboard page.
2. Select the FC2 Instance that is to be terminated and click on ACTIONS → DELETE

### FC2 Instance Monitoring

1. Navigate to the Dashboard page.
2. Select the FC2 Instance that is to be monitored.
3. Click on the MONITORING tab at the bottom of the page.

### Security Group Management

Setting security groups by means of rules is how to control inbound traffic for specified FC2 instances. Proper rules need to be added depending on the type of accessibility and/or application access required.

### Creating a Security Group

1. Navigate to Security Groups page, click on CREATE SECURITY GROUPS
  - a. Enter Security Group Name
  - b. Enter Description
  - c. Select the FC2 Instance the Security Group should be applied to.
2. Click on ADD RULE
  - a. Select Type
  - b. Input Source
  - c. Enter Description

*NOTE: For initial deployments, you will need to add rules for your access connection (Ex. SSH or RDP) to properly access your FC2 Instance.*

3. Click on CREATE SECURITY GROUP

### Edit a Security Group

1. Navigate to the Security Groups page.
2. Locate the Security Group that is to be deleted and click on the *EDIT* icon to the right of the table.

### Delete a Security Group

1. Navigate to the Security Groups page.
2. Locate the Security Group that is to be deleted and click on the *TRASH* icon to the right of the table.