DigitalOcean Cloud Server Failure SOP

DigitalOcean Cloud Server Failure – SOP

1 Purpose

1.1 The purpose of this SOP is to outline the steps to take in the event of failure that may occur with the DigitalOcean cloud servers which hosts the GC Knowledge Base.

2 Responsibility

2.1 The responsibility solely relies upon the designated IT Department member or members for handling DigitalOcean cloud server support.

3 Signing On

3.1 Before you can carry out any changes to cloud server configuration, you have to login to DigitalOcean with your user ID and password as allocated by GC IT Project Manager.

4 Overview of DigitalOcean

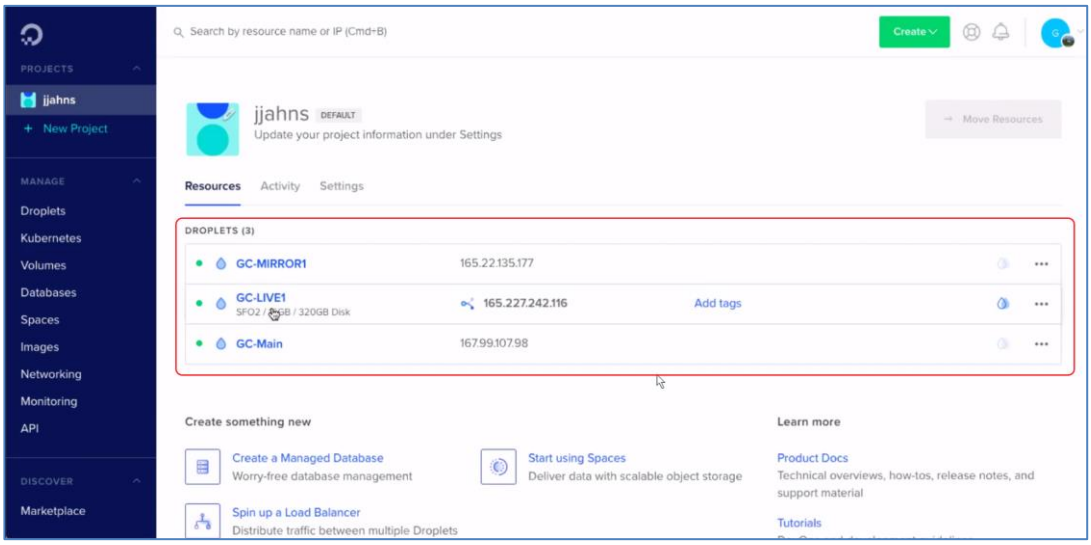

Figure: DigitalOcean Initial screen after logging in.

Points to Note:

- There are currently 3 servers (Droplets) at the moment, which are:
  GC-LIVE1 – contains the live GC Knowledge Base i.e Wordpress installation files and Database + GC data files
  GC-MIRROR1 – contains an exact replica copy of GC-LIVE1
  GC-Main - hosts the old GC company portal

Note: It is planned to take GC Main out of service when all GC data files and documents have been transferred to GC-LIVE1.

- Dropbox is used to create a mirror copy of system and data files between GC-LIVE1 and GC-MIRROR1. Dropbox also provides versioning, retention of deleted files, archives and backup of files.
- MySQL Master-Master replication is used to give extra speed and resilience to the Wordpress MySQL database on both GC-LIVE1 and GC-MIRROR1.

5 Scenario 1 – What to do if the live server crashes and you need to switch manually to the mirror server

5.1 Conditions that must be met before you carry out this scenario:

- GC-Live1 is not responding i.e you cannot use GC Knowledge Base online functions
- Automatic switching to GC-Mirror1 has not occurred.
- IT Support not available from GC IT department or Hondo Software

5.2 Scroll down on main screen above and select option 'Start using Floating IPs'.

It can also be selected from righthand Create dropdown options

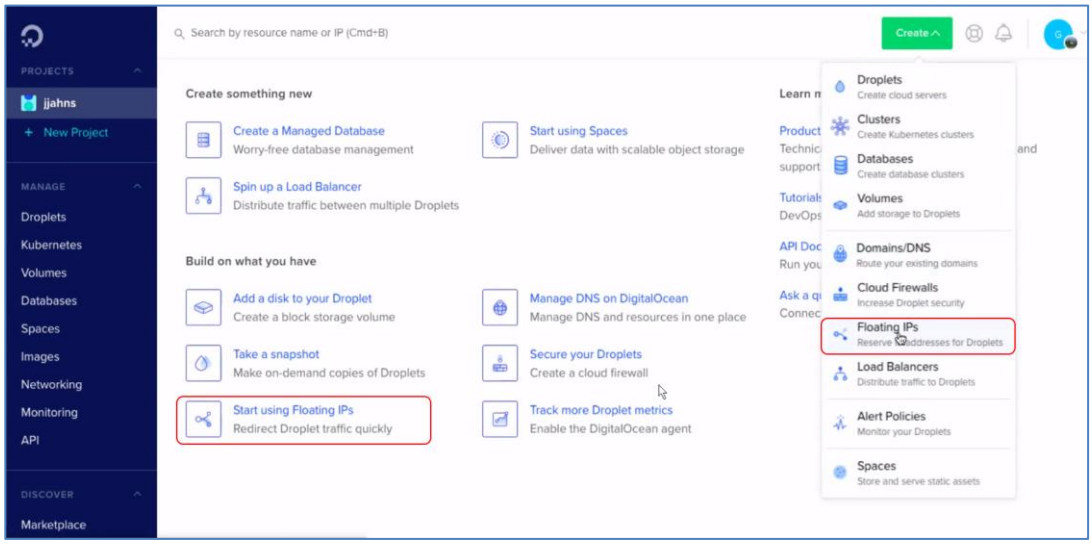

Figure: Main screen with available Floating IP options highlighted

Definition: DigitalOcean floating IPs are publicly-accessible static IP addresses that you can assign to Droplets and instantly remap between other Droplets in the same datacenter.

5.3 When you select the above option, you will be presented with the Floating IPs screen below where you can switch the Floating IP between GC-LIVE1 and GC-MIRROR1

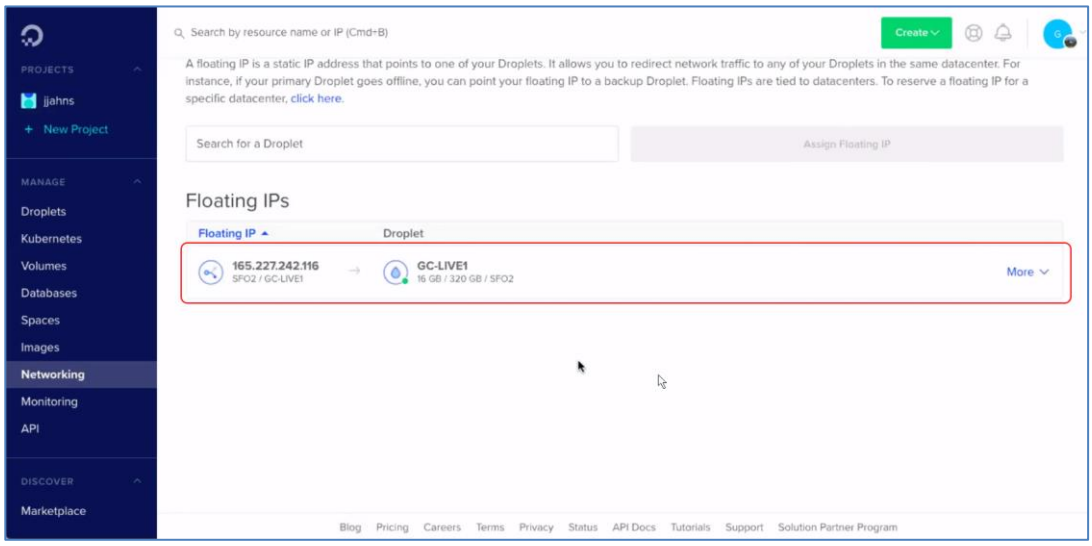

Figure: Floating IP assigned currently to GC-LIVE1

5.4 If you click on GC-LIVE1 on screen above, you will be presented with the option to change server (Droplet) to GC-MIRROR1

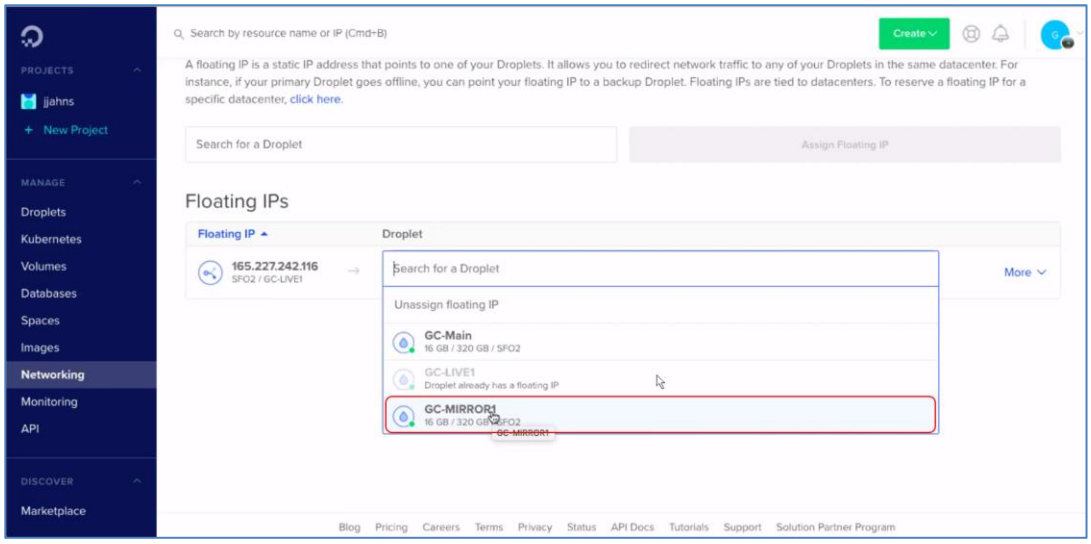

Figure: Assigning Floating IP to GC-MIRROR1 server

Note: On above screen, Floating IP is currently assigned to GC-LIVE1 (Grayed out)

Outcome of this Scenario

The Floating IP address has now been assigned to GC-MIRROR1 which means that the GC Knowledge Base will become online and active again. The incident that

occurred with GC-LIVE1 will have to be investigated by IT Support when they are back on duty.

6 Scenario 2 – GC Knowledge base fails and you need to restore live server to latest backup

6.1 Conditions that must be met before you carry out this scenario:

- The GC Knowledge Base is still not responding after carrying out Scenario 1 above.
- IT Support not available from GC IT department or Hondo Software
- It is assumed at this point that Wordpress system files or Database are damaged on both servers (Droplets).

6.2 Return to main screen by clicking on User ID, and then click on GC-MIRROR1

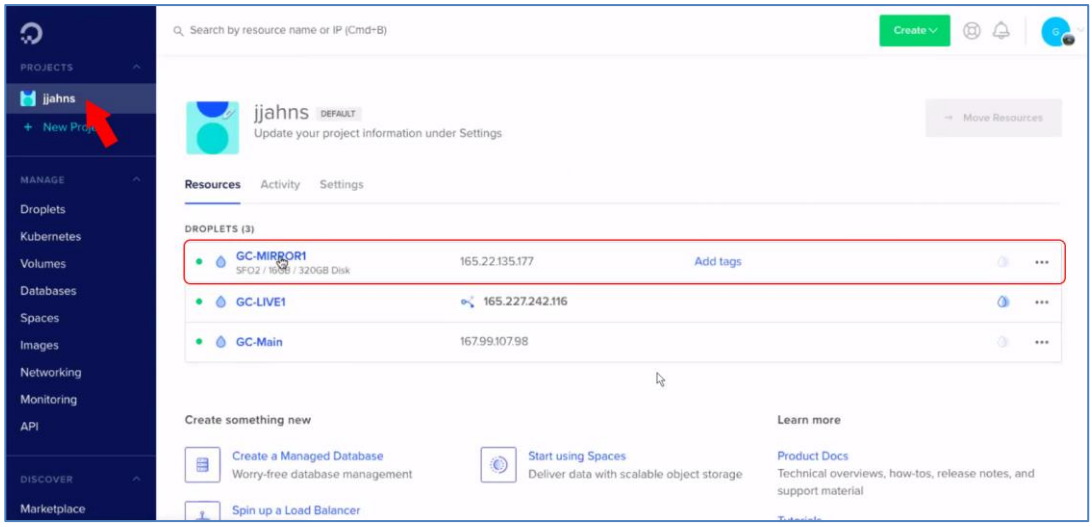

Figure: DigitalOcean main screen

6.3 With GC-MIRROR1 now selected, click on **Power**

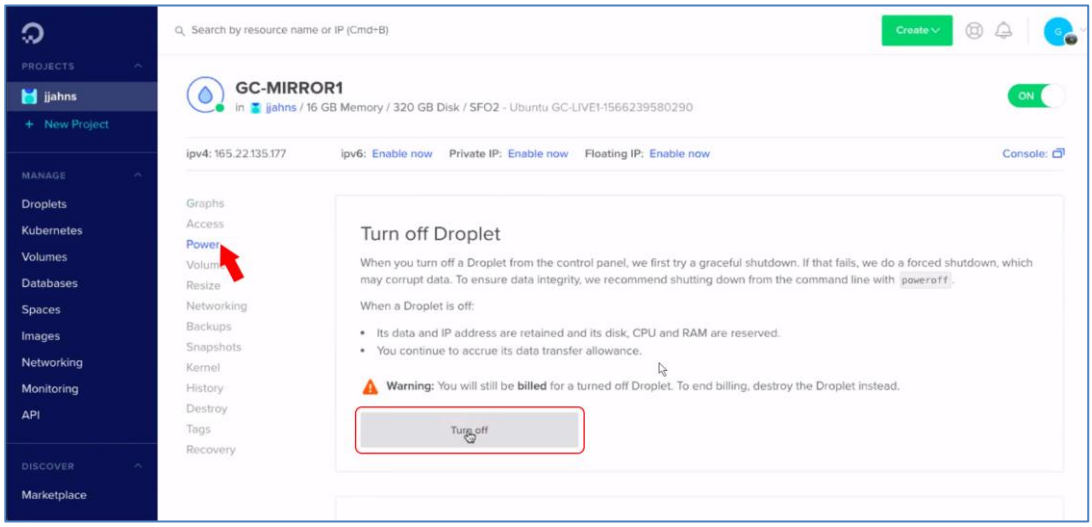

Figure: Power screen with option to Turn Off power on GC-MIRROR1 server

Note: By turning off the power on GC-MIRROR1, it prevents the mirroring software from syncing GC-LIVE1 to GC-MIRROR1, as the next step involves restoring GC-LIVE1 from backup. We are in effect preserving GC-MIRROR1 at the point of failure so it can be investigated offline by IT support.

6.4 Return to main screen by clicking on User ID, and then click on GC-LIVE1

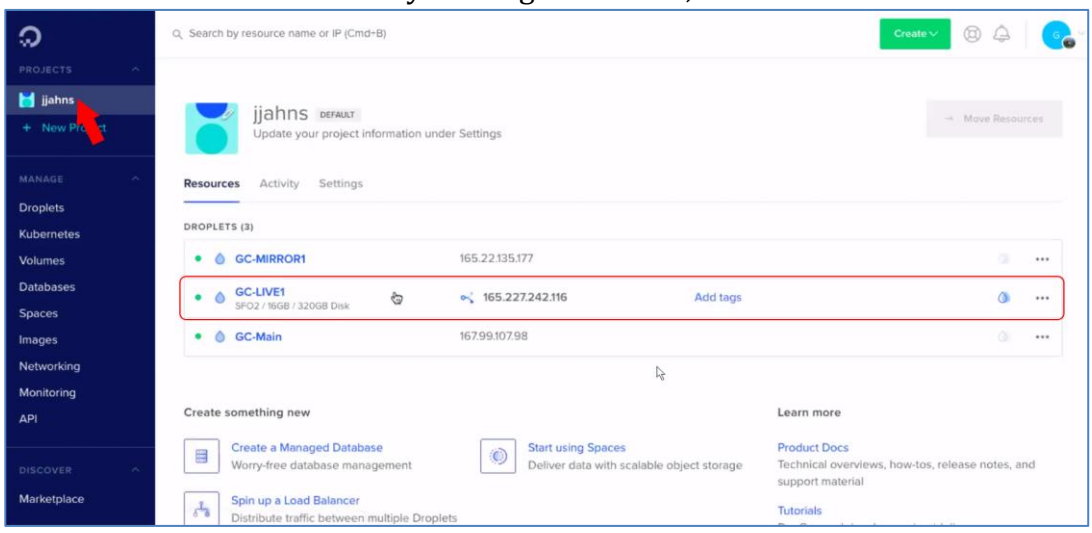

Figure: DigitalOcean main screen

6.5 With GC-LIVE1 now selected, click on **Backups**

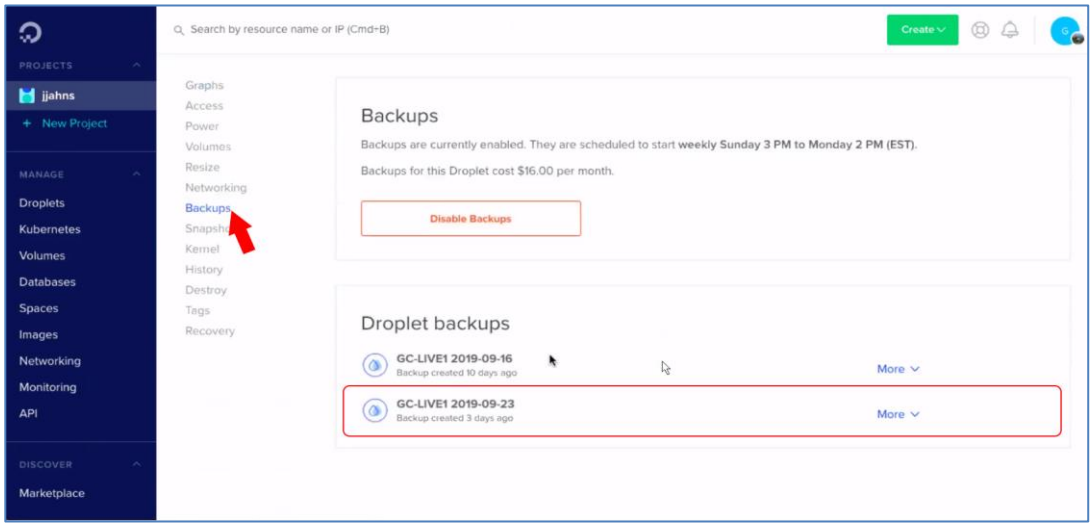

Figure: Backups screen for GC-LIVE1 server (Droplet)

6.6 Click on **Restore Dropbox** option for the latest server backup

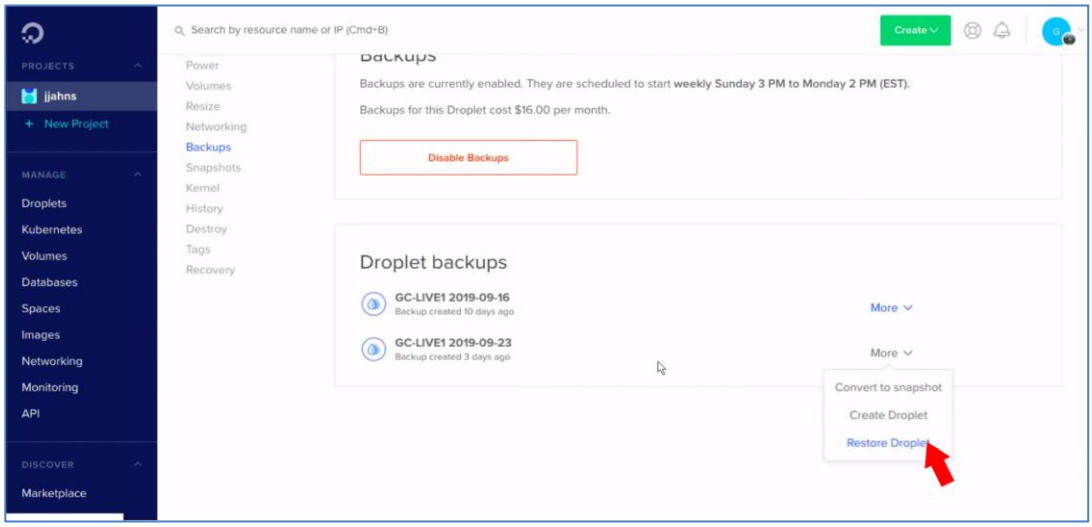

Figure: Backups screen for GC-LIVE1 – at point of restoring backup

Outcome of this Scenario
After the backup completes, the GC Knowledge Base will become online and active once again but the system will have been rolled back to date of backup, which in this case is 3 days ago.

Note1: GC Knowledge Base users should be informed that the system is only for **Read-Only Access** until the incident is resolved. This is because, when the fault on GC-MIRROR1 is fixed, it will then be synced with GC-LIVE1, which would overwrite any interim updates applied.

Note2: Backups of the GC Knowledge Base are taken every 7 days, so this means that the backup to be restored above could be up to 6 days old.