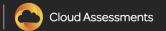# Docker Swarm – Service Troubleshooting

Whenever you are having issues with a service not deploying, there are several steps you can try (all of which you have seen throughout this course at one time or another):

- Docker node ls

  - Are all the nodes available and show that way in your cluster?

- Docker service ps [servicename]

  - Is the service partially running? Is the problem specific to the number of replicas?

- Docker service inspect [servicename] (with/without –format for output)

  - Did you apply labels and do they show? Did you deploy your service with a constraint but you mismatched the value with the one used on launch?
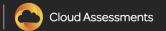
Docker Swarm – Service Troubleshooting

Whenever you are having issues with a service not deploying, there are several steps you can try (all of which you have seen throughout this course at one time or another):

- Docker ps

  - Is your cluster a 'locked' cluster that needs a key for operation (on restart)?

- Did you recently restore a swarm configuration and the expected service is not starting?

  - Make sure you re-initialize the new manager you restored to with the –force-new-cluster so that it is not attempting to contact previous nodes.

- Have you recently updated Docker?

  - Make sure you are using the official Docker repositories OR the setup script from Docker.com to avoid version issues or feature unavailability.

Troubleshooting Requires Experience

As in every technology, the ability to troubleshoot problems will rely on your experience with how the software behaves normally. In addition to Docker related issues, be sure you can rule out:

- SELinux issues – try 'setenforce 0' to put SELinux into 'Passive' mode and retry your task.

- Permissions – if you are launching a service as an unprivileged user, be sure resources (like volumes/mounts) that you may be using are available to your UID/GID.

- CPU/Mem – when constraining your containers to a host, be sure it has the necessary resources to meet the needs of the service.

- Routing – make sure that end points using the service are on the same network segment or have the necessary routing to get there.

- Firewall – be sure the appropriate ports and protocols are enabled to the destination IPs.