Add nodes to the swarm

Estimated reading time: 2 minutes

Once you've created a swarm (/engine/swarm/swarm-tutorial/create-swarm/) with a manager node, you're ready to add worker nodes.

1. Open a terminal and ssh into the machine where you want to run a worker node. This tutorial uses the name `worker1`.
2. Run the command produced by the `docker swarm init` output from the Create a swarm (/engine/swarm/swarm-tutorial/create-swarm/) tutorial step to create a worker node joined to the existing swarm:

   ```
   $ docker swarm join \
     --token  SWMTKN-1-49nj1cmql0jkz5s954yi3oex3nedyz0fb0xx14ie39trti4wxv-8vxv8r
     192.168.99.100:2377

   This node joined a swarm as a worker.
   ```

   If you don't have the command available, you can run the following command on a manager node to retrieve the join command for a worker:

   ```
   $ docker swarm join-token worker

   To add a worker to this swarm, run the following command:

       docker swarm join \
       --token SWMTKN-1-49nj1cmql0jkz5s954yi3oex3nedyz0fb0xx14ie39trti4wxv-8vxv8
       192.168.99.100:2377
   ```

3. Open a terminal and ssh into the machine where you want to run a second worker node. This tutorial uses the name `worker2`.
4. Run the command produced by the `docker swarm init` output from the Create a swarm (/engine/swarm/swarm-tutorial/create-swarm/) tutorial step to create a second worker node joined to the existing swarm:

```
$ docker swarm join \
  --token SWMTKN-1-49nj1cmql0jkz5s954yi3oex3nedyz0fb0xx14ie39trti4wxv-8vxv8rs
  192.168.99.100:2377

This node joined a swarm as a worker.
```

5. Open a terminal and ssh into the machine where the manager node runs and run the `docker node ls` command to see the worker nodes:

```
ID                            HOSTNAME  STATUS  AVAILABILITY  MANAGER STATUS
03g1y59jwfg7cf99w4lt0f662     worker2   Ready   Active
9j68exjopxe7wfl6yuxml7a7j     worker1   Ready   Active
dxn1zf6l61qsb1josjja83ngz *   manager1  Ready   Active        Leader
```

   The `MANAGER` column identifies the manager nodes in the swarm. The empty status in this column for `worker1` and `worker2` identifies them as worker nodes.

   Swarm management commands like `docker node ls` only work on manager nodes.

What's next?

Now your swarm consists of a manager and two worker nodes. In the next step of the tutorial, you deploy a service (/engine/swarm/swarm-tutorial/deploy-service/) to the swarm.

tutorial (/search/?q=tutorial), cluster management (/search/?q=cluster management), swarm (/search/?q=swarm)