

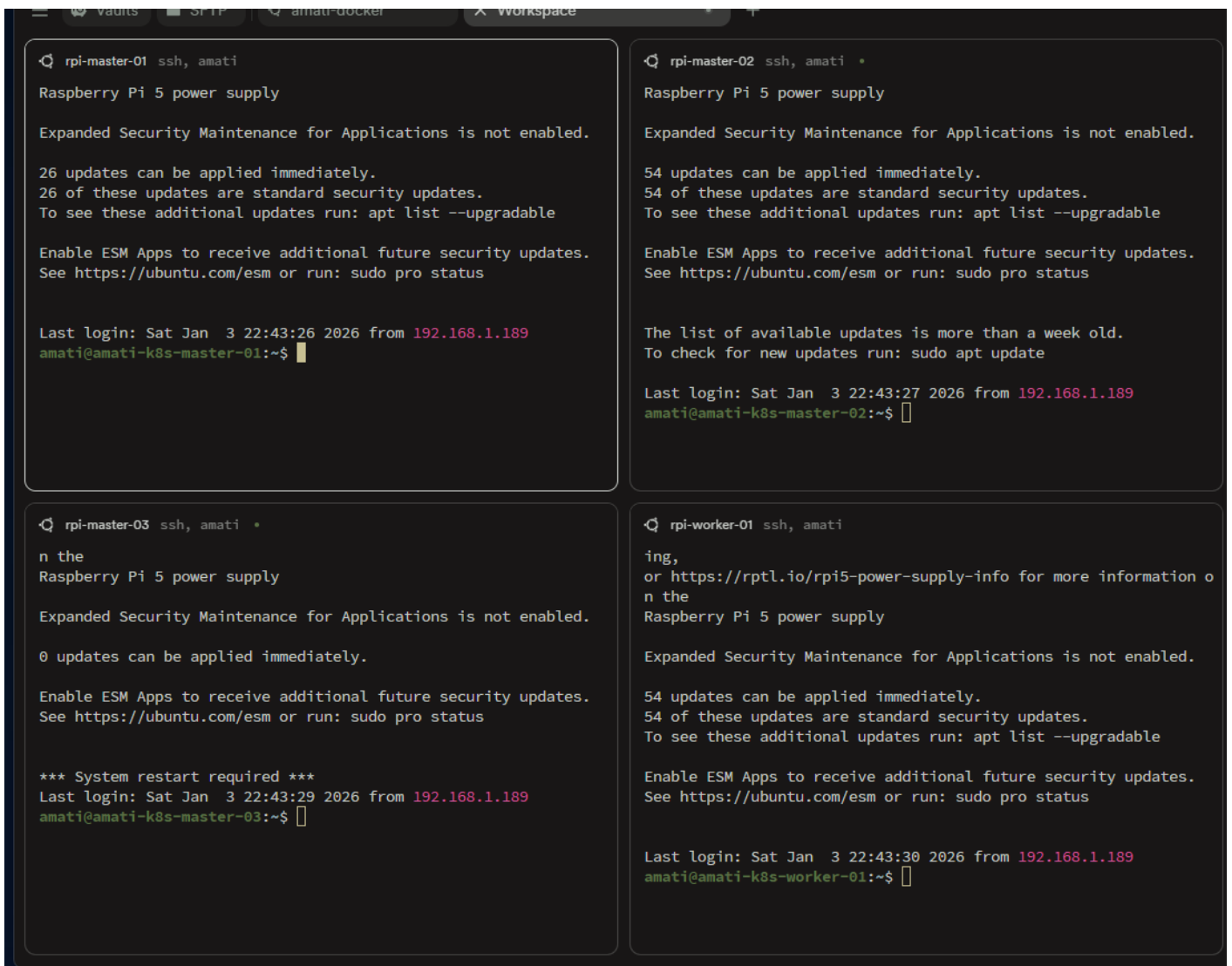
rpi5 cluster

rpi5 cluster microk8s

- 4 rpi5 nodes, 1 master node, 3 worker nodes
- 5 nodes, 1 master node, 4 worker nodes

<https://ubuntu.com/tutorials/how-to-kubernetes-cluster-on-raspberry-pi> ubuntu microk8s

termius



microk8s 安装和配置指南

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```
apt update && apt upgrade
```

ubuntu rpi5 安装 microk8s 指南

```
sudo nano /boot/firmware/cmdline.txt
```

配置 cmdline.txt

```
cgroup_enable=memory cgroup_memory=1
```

安装 microk8s

```
sudo snap install microk8s --classic # 安装
sudo usermod -a -G microk8s $USER # 添加用户组
sudo chown -f -R $USER ~/.kube # 设置权限
su - $USER # 切换用户

microk8s status --wait-ready # 检查状态
```

配置别名和 bashrc

```
{
  echo alias kubect1='microk8s kubect1'
  echo alias kcd='microk8s kubect1 describe'
} >> ~/.bashrc && \
source ~/.bashrc
```

配置 alias 和 addon

```
kubect1 get nodes
kubect1 get pods
kubect1 get services

microk8s enable ha-cluster # 启用高可用性集群
addon ???

microk8s enable dashboard
microk8s enable dns
microk8s enable registry
```

验证安装和配置

```
$ microk8s add-node
```

From the node you wish to join to this cluster, run the following:

```
microk8s join 192.168.1.42:25000/25da722579420c2e724751d3c4be5595/dbf58b806c46
```

Use the '--worker' flag to join a node as a worker not running the control plane, eg:

```
microk8s join 192.168.1.42:25000/25da722579420c2e724751d3c4be5595/dbf58b806c46 --worker
```

If the node you are adding is not reachable through the default interface you can use one of the following:

```
microk8s join 192.168.1.42:25000/25da722579420c2e724751d3c4be5595/dbf58b806c46
```

```
microk8s join
```

```
fd6c:2c0c:b217:3d0b:2ecf:67ff:fe93:8166:25000/25da722579420c2e724751d3c4be5595/dbf58b806c46
```

```
microk8s add-node 25000 vm 25000 .
```

```
2 3 rpi master node --worker join .
```

```
$ microk8s join 192.168.1.42:25000/25da722579420c2e724751d3c4be5595/dbf58b806c46
WARNING: Hostpath storage is enabled and is not suitable for multi node clusters.
```

```
Contacting cluster at 192.168.1.42
```

```
Waiting for this node to finish joining the cluster. . . . .
```

```
Successfully joined the cluster.
```

```
4 rpi worker join --worker .
```

```
3 4 microk8s status ha-cluster .
```

```
$ microk8s status
```

```
microk8s is running
```

```
high-availability: yes
```

```
  datastore master nodes: 192.168.1.42:19001 192.168.1.43:19001 192.168.1.44:19001
```

```
  datastore standby nodes: none
```

```
addons:
```

```
  enabled:
```

```
    dashboard          # (core) The Kubernetes dashboard
```

```
    dns                # (core) CoreDNS
```

```
...
```

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