

LINBIT

STORAGE DAY

**LINBIT SDS
for Kubernetes**





LINBIT

**Moritz
Wanzenböck**

Kubernetes Integration
Developer



LINBIT

Gábor Hernádi
LINSTOR Developer

LINBIT SDS

Overview

- LINBIT SDS on K8s
 - Components
 - Demo
 - Deploying Operator v2
 - Backups to S3
- LINSTOR
 - Managing EBS Volumes

Components

Linux Storage Stack



Block Storage Features

Cache
Encryption
Deduplication

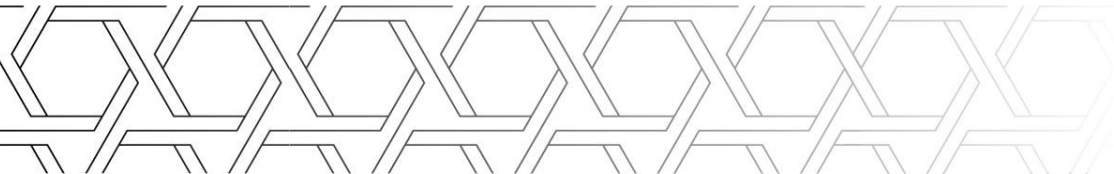
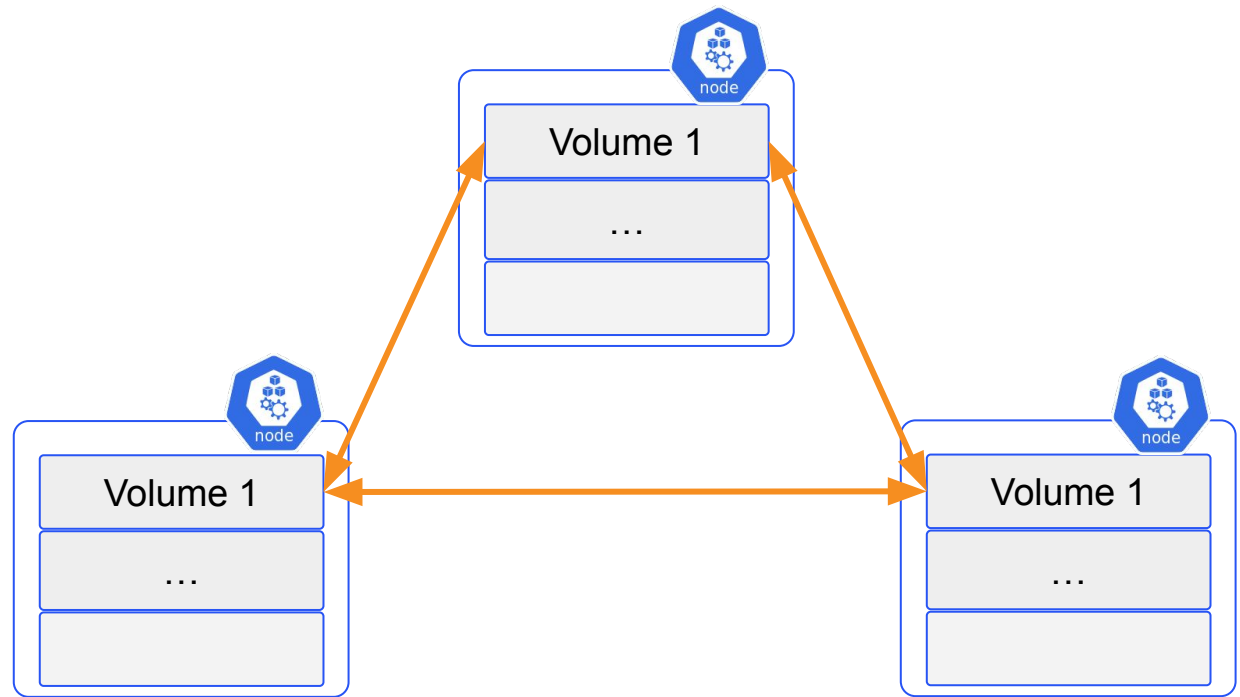
Volume Management

LVM
ZFS

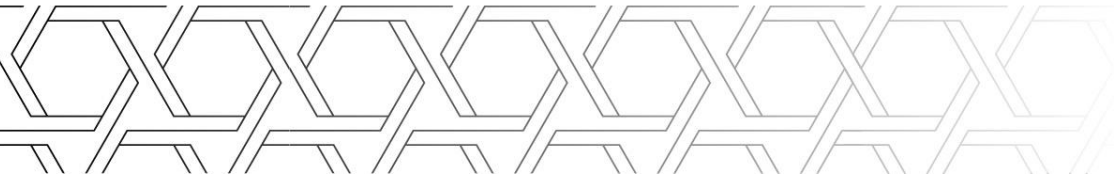
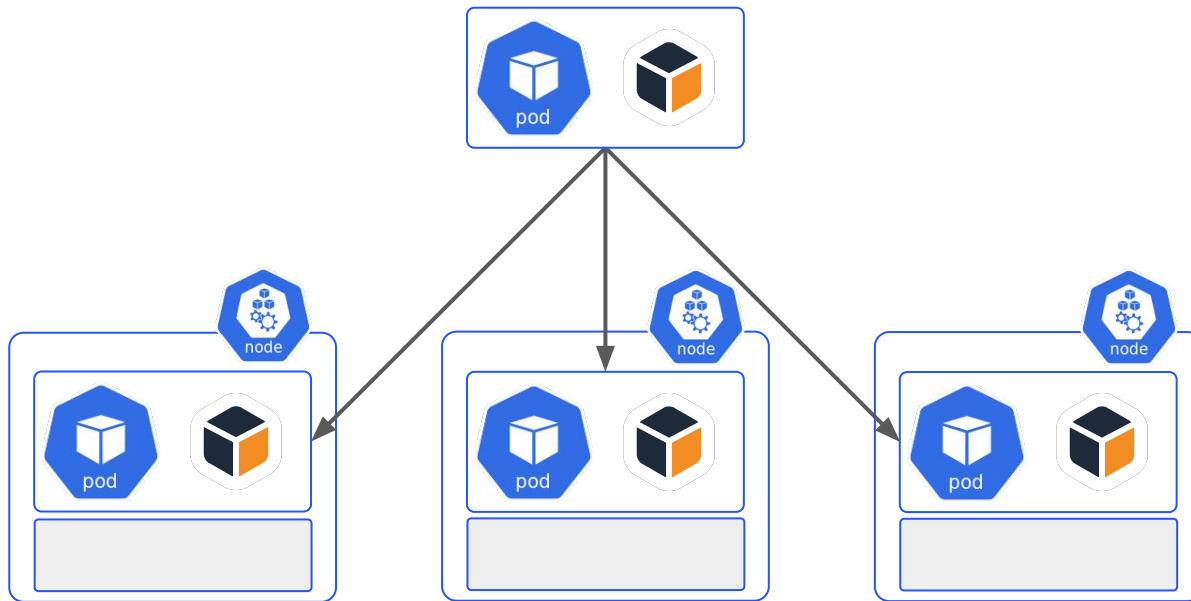
Hardware

SSD
NVMe

Components



Components



Components

LINSTOR Operator

Operator v1

Helm

Host Network

Etcd, SQL, K8s



Operator v2

Helm / Kustomize

Container Network

K8s

Improved Custom.

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- **LINSTOR**
 - **Managing EBS Volumes**

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Managing
EBS Volumes with

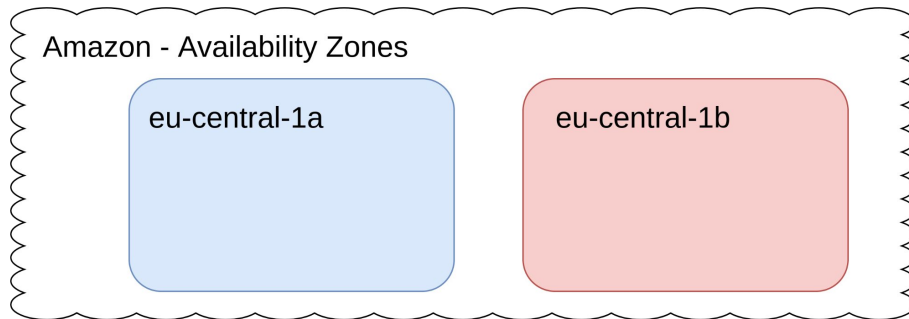
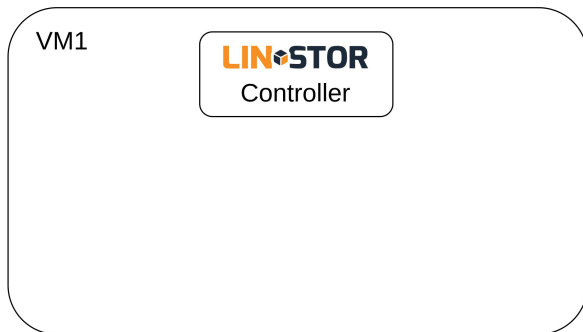
LINSTOR

VM1

LINSTOR
Controller

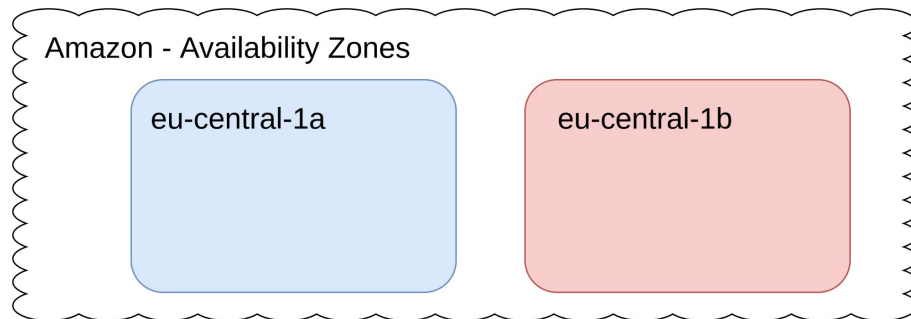
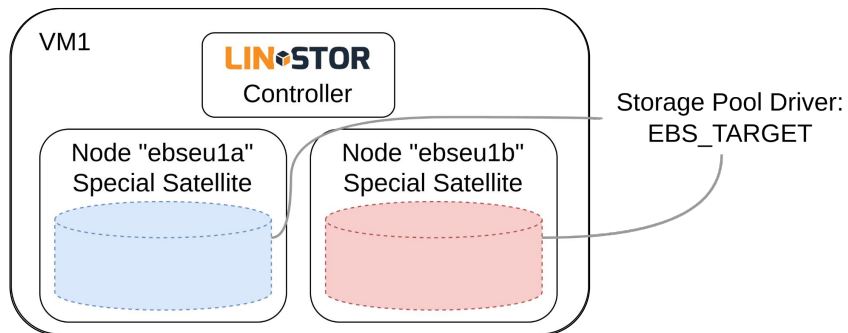
```
$ linstor encryption create-passphrase
```

Managing EBS Volumes with



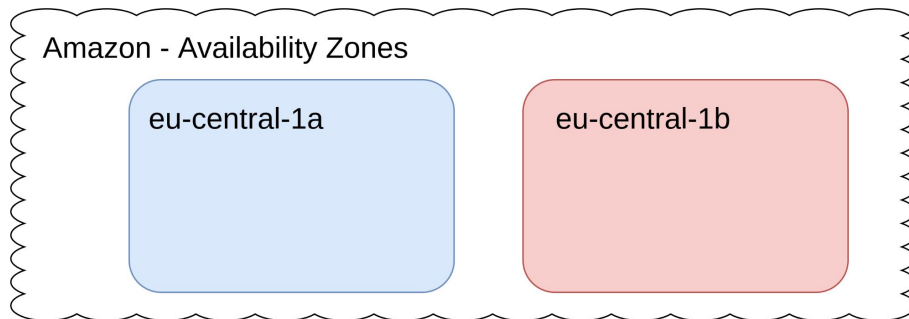
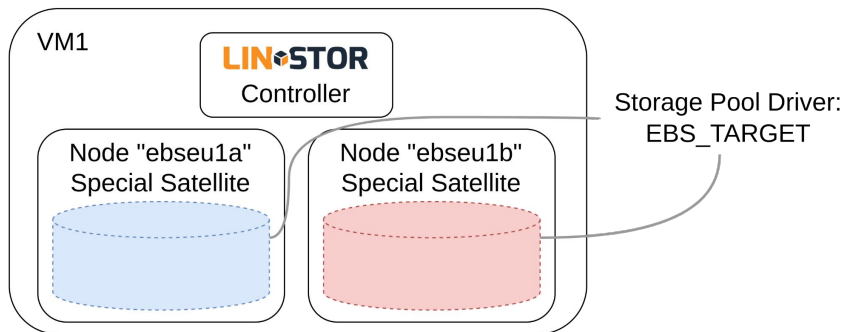
```
$ linstor remote create ebs ebs-euc1a eu-central-1a <access_key>  
$ linstor remote create ebs ebs-euc1b eu-central-1b <access_key>
```

Managing EBS Volumes with



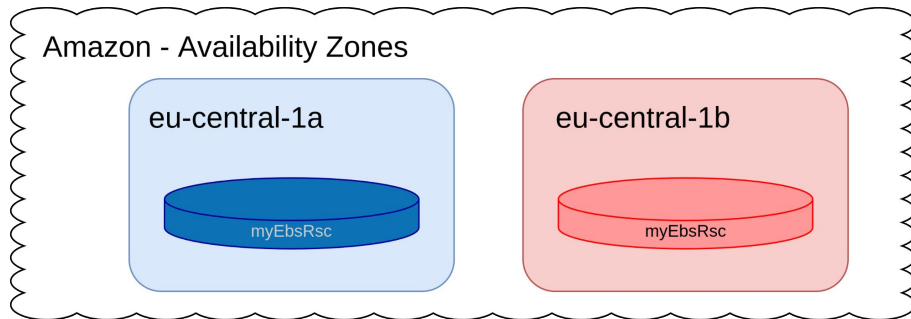
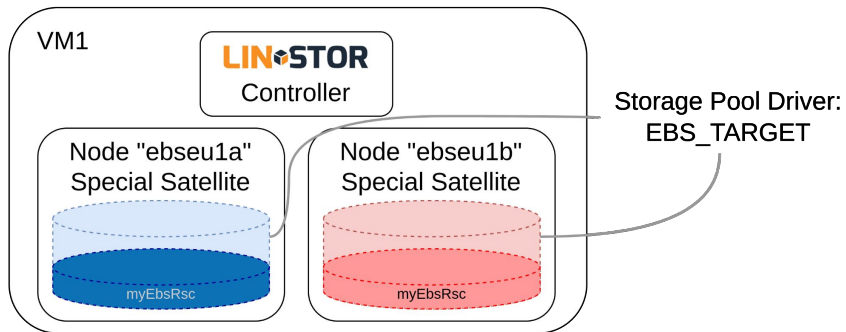
```
$ linstor node create-ebs-target ebseu1a ebs-euc1a  
$ linstor node create-ebs-target ebseu1b ebs-euc1b
```

Managing EBS Volumes with



```
$ linstor resource-group create rg1  
$ linstor volume-group create rg1
```

Managing EBS Volumes with



```
$ linstor resource-group spawn rg1 myEbsRsc 1G
```

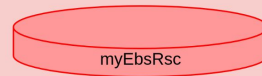
Managing EBS Volumes with

Amazon - Availability Zones

eu-central-1a

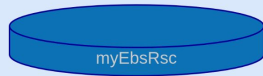


eu-central-1b

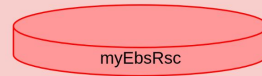


Amazon - Availability Zones

eu-central-1a



eu-central-1b



Managing EBS Volumes with

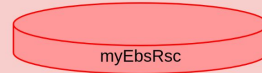
Amazon - Availability Zones

eu-central-1a



myEbsRsc

eu-central-1b



myEbsRsc

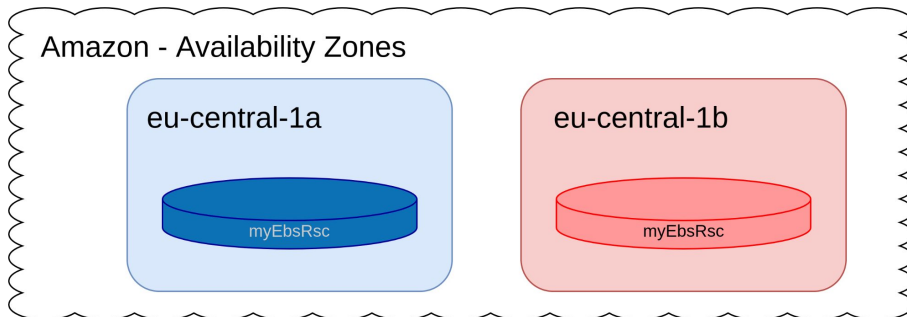
Amazon - EC2 instances

EC2 instance eu-central-1a

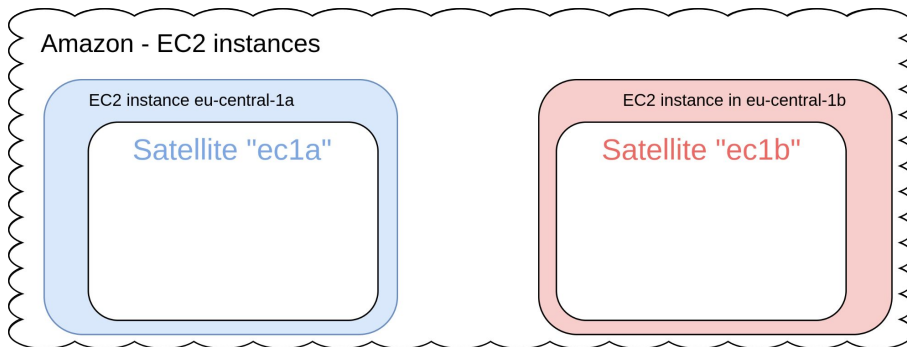
EC2 instance in eu-central-1b

Managing EBS Volumes with

Amazon - Availability Zones



Amazon - EC2 instances



```
$ linstor node create ec1a 18.185.62.181
```

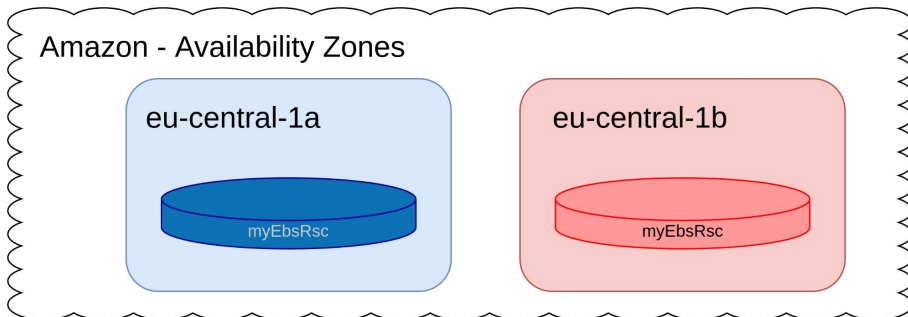
```
$ linstor node create ec1b 3.75.177.178
```

```
# EC2 external IP
```

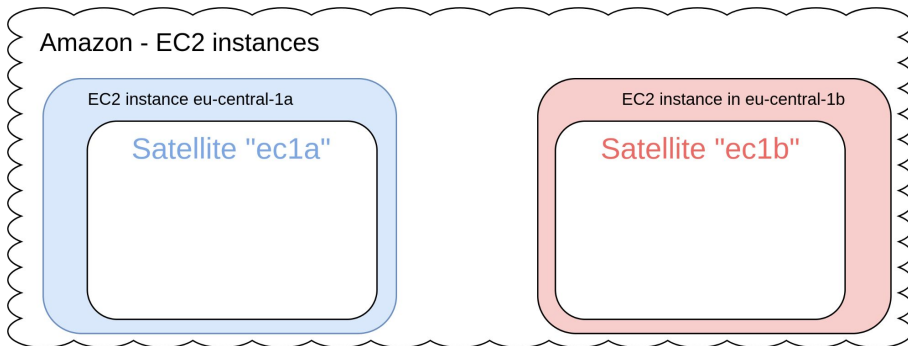
```
# EC2 external IP
```

Managing EBS Volumes with

Amazon - Availability Zones



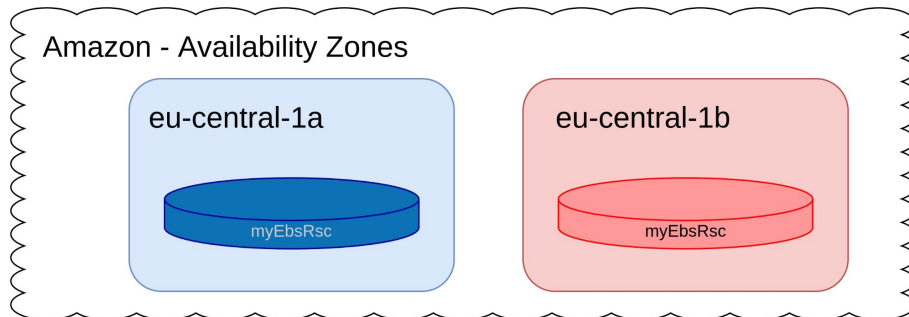
Amazon - EC2 instances



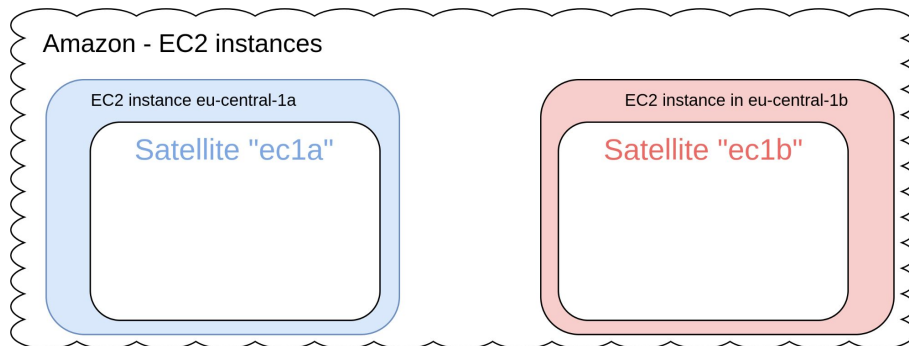
```
$ linstor node interface create ec1a drbdnet 172.31.17.190 # internal IP  
$ linstor node interface create ec1b drbdnet 172.31.41.182 # internal IP
```

Managing EBS Volumes with

Amazon - Availability Zones



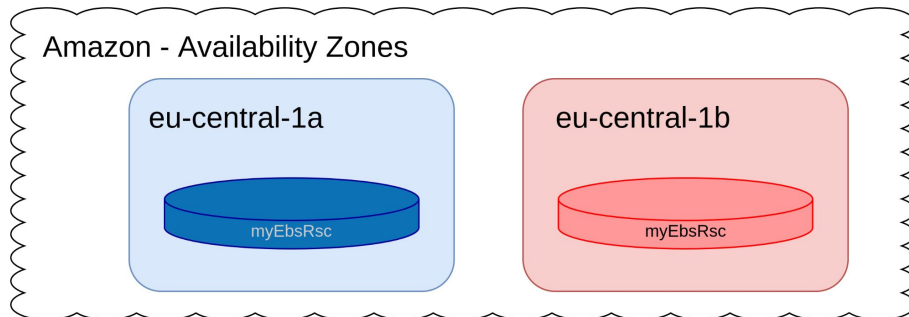
Amazon - EC2 instances



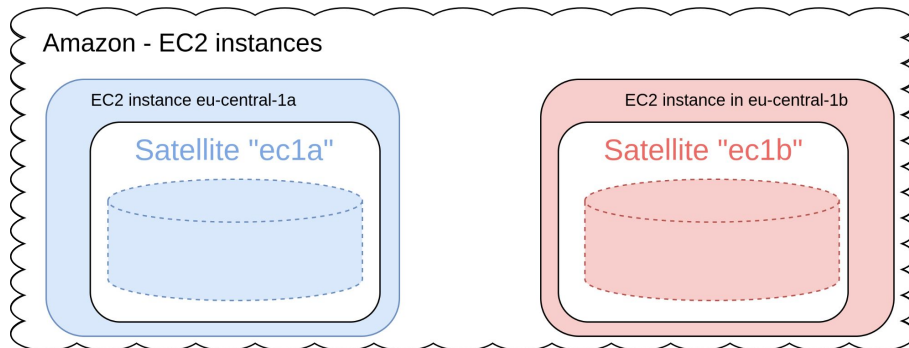
```
$ linstor node set-property ec1a PrefNic drbdnet  
$ linstor node set-property ec1b PrefNic drbdnet
```

Managing EBS Volumes with

Amazon - Availability Zones



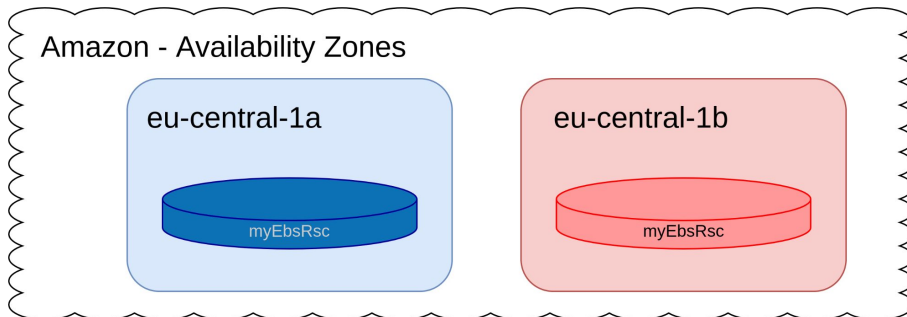
Amazon - EC2 instances



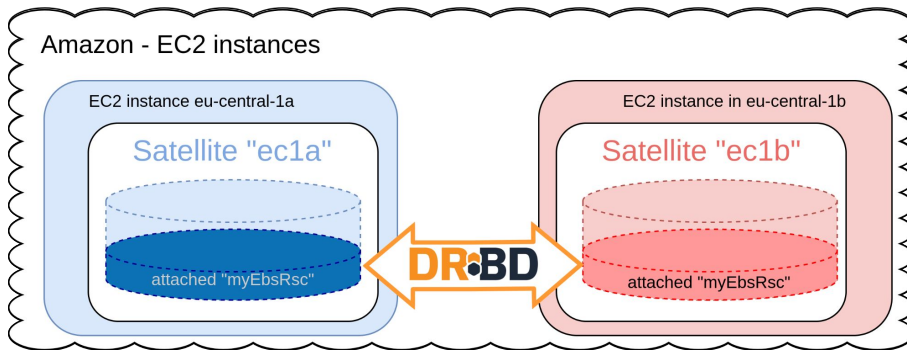
```
$ linstor storage-pool create ebs_init ec1a ebpool ebs-euc1a  
$ linstor storage-pool create ebs_init ec1b ebpool ebs-euc1b
```

Managing EBS Volumes with

Amazon - Availability Zones

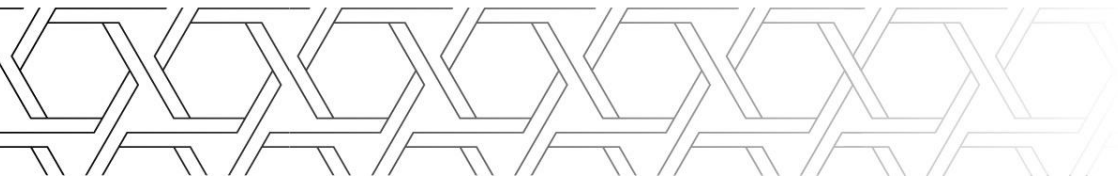


Amazon - EC2 instances



```
$ linstor resource create ec1a ec1b myEbsRsc --ebs-initiator -s ebpool
```

Q&A



CONTACT



LINBIT HA-Solutions Gmbh

Vivenotgasse 48

1120 Vienna, Austria

sales@linbit.com

Moritz Wanzenböck

Kubernetes Integration Developer

—

moritz.wanzenboeck@linbit.com

Gábor Hernádi

LINSTOR Developer

—

gabor.hernadi@linbit.com