Instale el paquete de software de tiebreaker

ONTAP MetroCluster

NetApp
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Tabla de contenidos

Instale el paquete de software de tiebreaker

Elija su procedimiento de instalación

El procedimiento de instalación de tiebreaker que siga depende de la versión de tiebreaker que esté instalando.

Versión de tiebreaker	Vaya a…
Desempate 1.7	"Instalar Tiebreaker 1.7"
Desempate 1.6 o 1.6P1	"Instalar Tiebreaker 1.6 o 1.6P1"
Tiebreaker 1,5	"Instale tiebreaker 1,5"
Tiebreaker 1,4	"Instale tiebreaker 1,4"

Instalar MetroCluster Tiebreaker 1.7

Instale o actualice a Tiebreaker 1.7 en su host Linux para monitorear las configuraciones de MetroCluster .

Acerca de esta tarea

- Su sistema de almacenamiento debe ejecutar ONTAP 9.12.1 o una versión posterior.
- Solo puedes actualizar a Tiebreaker 1.7 desde Tiebreaker 1.6P1. Referirse a"Instalar Tiebreaker 1.6 o 1.6P1" .
- Puede instalar MetroCluster tiebreaker como usuario no root con suficientes privilegios administrativos para realizar la instalación de tiebreaker, crear tablas y usuarios y definir la contraseña de usuario.

Pasos

1. Descargue el software MetroCluster Tiebreaker 1.7.

   "MetroCluster tiebreaker (descargas) - Sitio de soporte de NetApp"

2. Inicie sesión en el host como usuario raíz.

3. Si está actualizando, verifique qué versión de Tiebreaker está ejecutando:

   El siguiente ejemplo muestra el desempate 1.6P1

   ```
   [root@mcctb ~] # netapp-metrocluster-tiebreaker-software-cli
   NetApp MetroCluster Tiebreaker :> version show
   NetApp MetroCluster Tiebreaker 1.6P1: Sun Mar 13 09:59:02 IST 2022
   NetApp MetroCluster Tiebreaker :> exit
   ```

4. Instale o actualice el software tiebreaker.

Instalar Tiebreaker 1.7

Utilice los siguientes pasos para una nueva instalación de Tiebreaker 1.7.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar que comience la instalación:

```
sh MetroClusterTiebreakerInstall-1.7
```

El sistema muestra el siguiente resultado para una instalación correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
Enter unix user account to use for the installation:
mcctbadminuser
Unix user account "mcctbadminuser" doesn't exist. Do you wish
to create "mcctbadminuser" user account? [Y/N]: y
useradd: warning: the home directory already exists.
Not copying any file from skel directory into it.
Creating mailbox file: File exists
Unix account "mcctbadminuser" created.
Changing password for user mcctbadminuser.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
MetroCluster Tiebreaker requires unix user account
"mcctbadminuser" to be added to the group "mcctbgrp" for admin
access.
Do you wish to add ? [Y/N]: y
Unix user account "mcctbadminuser" added to "mcctbgrp".
Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
Starting vault server...
==> Vault server configuration:

             Api Address: <api_address>
                     Cgo: disabled
         Cluster Address: <cluster_address>
   Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
              Go Version: go1.20.5
              Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
               Log Level:
```

```
                    Mlock: supported: true, enabled: true
           Recovery Mode: false
                  Storage: file
                  Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
              Version Sha:
13a649f860186dffe3f3a4459814d87191efc321


==> Vault server started! Log data will stream in below:


2023-11-23T15:14:28.532+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-11-23T15:14:28.577+0530 [INFO]  core: Initializing
version history cache for core
2023-11-23T15:14:38.552+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.552+0530 [INFO]  core: seal configuration
missing, not initialized
2023-11-23T15:14:38.554+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.555+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-11-23T15:14:38.556+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:38.577+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:38.577+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:38.577+0530 [INFO]  core: no mounts; adding
default mount table
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:38.581+0530 [INFO]  core: restoring leases
2023-11-23T15:14:38.582+0530 [INFO]  expiration: lease restore
```

```
complete
2023-11-23T15:14:38.582+0530 [INFO]  identity: entities
restored
2023-11-23T15:14:38.582+0530 [INFO]  identity: groups restored
2023-11-23T15:14:38.583+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-11-23
09:44:38.582881162 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-11-23T15:14:38.583+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:38.998+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:38.999+0530 [INFO]  core: root token
generated
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
starting
2023-11-23T15:14:38.999+0530 [INFO]  rollback: stopping
rollback manager
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
complete
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-11-23T15:14:39.312+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:39.312+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:39.312+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:39.314+0530 [INFO]  core: restoring leases
2023-11-23T15:14:39.314+0530 [INFO]  identity: entities
restored
```

```
2023-11-23T15:14:39.314+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:14:39.314+0530 [INFO]  identity: groups restored
2023-11-23T15:14:39.315+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:39.316+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:39.316+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-11-23T15:14:39.795+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-11-23T15:14:39.885+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Installing the NetApp-MetroCluster-Tiebreaker-Software-1.7-
1.x86_64.rpm
Preparing...                          #
############################## # [100%]

Updating / installing...

1:NetApp-MetroCluster-Tiebreaker-So#
############################## # [100%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
```

```
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
```

```
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software
Created symlink /etc/systemd/system/multi-
user.target.wants/netapp-metrocluster-tiebreaker-
software.service → /etc/systemd/system/netapp-metrocluster-
tiebreaker-software.service.

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully installed NetApp MetroCluster Tiebreaker software
version 1.7.
```

Actualizar 1.6P1 a 1.7

Utilice los siguientes pasos para actualizar la versión del software Tiebreaker 1.6P1 a Tiebreaker 1.7.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.7
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
NetApp-MetroCluster-Tiebreaker-Software-1.6P1-1.x86_64
Upgrading... to NetApp-MetroCluster-Tiebreaker-Software-1.7-
1.x86_64.rpm
Preparing...
################################# [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.19.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
```

```
opt/netapp/mcctb/lib/common/jakarta.mail-2.0.1.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/


Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
```

```
  to version 1.7.
  Cleaning up / removing...
    2:NetApp-MetroCluster-Tiebreaker-
So############################## [100%]
```

> (i) Si su actualización falla con un error debido a certificados faltantes,
> consulte"Certificados de importación" . Después de importar sus certificados, puede
> intentar actualizar nuevamente.

Instalar Tiebreaker 1.6 o 1.6P1

Realice una nueva instalación o actualización a tiebreaker 1,6 o tiebreaker 1.6P1 en el
sistema operativo Linux del host para supervisar las configuraciones de MetroCluster.

Acerca de esta tarea

- Su sistema de almacenamiento debe ejecutar ONTAP 9.12.1 o una versión posterior.
- Puede instalar MetroCluster tiebreaker como usuario no root con suficientes privilegios administrativos
  para realizar la instalación de tiebreaker, crear tablas y usuarios y definir la contraseña de usuario.

Instale o actualice a tiebreaker 1.6P1

Puede instalar tiebreaker 1.6P1 o actualizar a tiebreaker 1.6P1 desde tiebreaker 1,6, 1,5 o 1,4.

Pasos

1. Descargue el software MetroCluster tiebreaker 1.6P1.

   "MetroCluster tiebreaker (descargas) - Sitio de soporte de NetApp"

2. Inicie sesión en el host como usuario raíz.

3. Si está realizando una actualización, compruebe la versión de tiebreaker que está ejecutando:

   En el siguiente ejemplo, se muestra tiebreaker 1,5.

   ```
   [root@mcctb ~] # netapp-metrocluster-tiebreaker-software-cli
   NetApp MetroCluster Tiebreaker :> version show
   NetApp MetroCluster Tiebreaker 1.5: Sun Mar 13 09:59:02 IST 2022
   NetApp MetroCluster Tiebreaker :> exit
   ```

4. Instale o actualice el software tiebreaker.

Instale tiebreaker 1.6P1

Siga estos pasos para una nueva instalación de tiebreaker 1.6P1.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~] #` solicitar que comience la instalación:

```
sh MetroClusterTiebreakerInstall-1.6P1
```

El sistema muestra el siguiente resultado para una instalación correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
Enter unix user account to use for the installation:
mcctbadminuser
Unix user account "mcctbadminuser" doesn't exist. Do you wish
to create "mcctbadminuser" user account? [Y/N]: y
useradd: warning: the home directory already exists.
Not copying any file from skel directory into it.
Creating mailbox file: File exists
Unix account "mcctbadminuser" created.
Changing password for user mcctbadminuser.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
MetroCluster Tiebreaker requires unix user account
"mcctbadminuser" to be added to the group "mcctbgrp" for admin
access.
Do you wish to add ? [Y/N]: y
Unix user account "mcctbadminuser" added to "mcctbgrp".
Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
Starting vault server...
==> Vault server configuration:

             Api Address: <api_address>
                     Cgo: disabled
         Cluster Address: <cluster_address>
   Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
              Go Version: go1.20.5
              Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
               Log Level:
```

```
                     Mlock: supported: true, enabled: true
             Recovery Mode: false
                    Storage: file
                    Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
              Version Sha:
13a649f860186dffe3f3a4459814d87191efc321

==> Vault server started! Log data will stream in below:

2023-11-23T15:14:28.532+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-11-23T15:14:28.577+0530 [INFO]  core: Initializing
version history cache for core
2023-11-23T15:14:38.552+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.552+0530 [INFO]  core: seal configuration
missing, not initialized
2023-11-23T15:14:38.554+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.555+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-11-23T15:14:38.556+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:38.577+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:38.577+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:38.577+0530 [INFO]  core: no mounts; adding
default mount table
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:38.581+0530 [INFO]  core: restoring leases
2023-11-23T15:14:38.582+0530 [INFO]  expiration: lease restore
```

```
complete
2023-11-23T15:14:38.582+0530 [INFO]  identity: entities
restored
2023-11-23T15:14:38.582+0530 [INFO]  identity: groups restored
2023-11-23T15:14:38.583+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-11-23
09:44:38.582881162 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-11-23T15:14:38.583+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:38.998+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:38.999+0530 [INFO]  core: root token
generated
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
starting
2023-11-23T15:14:38.999+0530 [INFO]  rollback: stopping
rollback manager
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
complete
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-11-23T15:14:39.312+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:39.312+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:39.312+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:39.314+0530 [INFO]  core: restoring leases
2023-11-23T15:14:39.314+0530 [INFO]  identity: entities
restored
```

```
2023-11-23T15:14:39.314+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:14:39.314+0530 [INFO]  identity: groups restored
2023-11-23T15:14:39.315+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:39.316+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:39.316+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-11-23T15:14:39.795+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-11-23T15:14:39.885+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Installing the NetApp-MetroCluster-Tiebreaker-Software-1.6P1-
1.x86_64.rpm
Preparing...                          #
############################## # [100%]

Updating / installing...

1:NetApp-MetroCluster-Tiebreaker-So#
############################## # [100%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
```

```
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
```

```
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software
Created symlink /etc/systemd/system/multi-
user.target.wants/netapp-metrocluster-tiebreaker-
software.service → /etc/systemd/system/netapp-metrocluster-
tiebreaker-software.service.

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully installed NetApp MetroCluster Tiebreaker software
version 1.6P1.
```

Actualización 1,6 a 1.6P1

Siga estos pasos para actualizar la versión de software de tiebreaker 1,6 a tiebreaker 1.6P1.

> (i) Después de actualizar a tiebreaker 1.6P1 de 1,6, elimina los monitores existentes y
> vuelve a añadir la configuración de MetroCluster para la supervisión.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.6P1
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
NetApp-MetroCluster-Tiebreaker-Software-1.6P1-1.x86_64
Error making API request.

URL: GET
https://127.0.0.1:8200/v1/sys/internal/ui/mounts/mcctb/data/db
Code: 403. Errors:

* permission denied
Upgrading to NetApp-MetroCluster-Tiebreaker-Software-1.6P1-
1.x86_64.rpm
Preparing...
################################## [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So################################# [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.19.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
```

```
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.mail-2.0.1.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
```

```
    /


    Attempting to start NetApp MetroCluster Tiebreaker software
    services
    Started NetApp MetroCluster Tiebreaker software services
    Successfully upgraded NetApp MetroCluster Tiebreaker software
    to version 1.6P1.
    Cleaning up / removing...
       2:NetApp-MetroCluster-Tiebreaker-
    So############################### [100%]
```

b. Elimine y vuelva a añadir la configuración de MetroCluster siguiendo los pasos de "Configure el software Tiebreaker".

Actualización 1,5 a 1.6P1

Siga estos pasos para actualizar la versión de software de tiebreaker 1,5 a tiebreaker 1.6P1.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.6P1
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok


Enter database user name : root


Please enter database password for root
Enter password:


Password updated successfully in the database.


Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
==> Vault shutdown triggered
2023-07-21T00:30:22.335+0530 [INFO]  core: marked as sealed
2023-07-21T00:30:22.335+0530 [INFO]  core: pre-seal teardown
starting
2023-07-21T00:30:22.335+0530 [INFO]  rollback: stopping
rollback manager
2023-07-21T00:30:22.335+0530 [INFO]  core: pre-seal teardown
complete
2023-07-21T00:30:22.335+0530 [INFO]  core: stopping cluster
listeners
2023-07-21T00:30:22.335+0530 [INFO]  core.cluster-listener:
forwarding rpc listeners stopped
2023-07-21T00:30:22.375+0530 [INFO]  core.cluster-listener:
rpc listeners successfully shut down
2023-07-21T00:30:22.375+0530 [INFO]  core: cluster listeners
successfully shut down
2023-07-21T00:30:22.376+0530 [INFO]  core: vault is sealed
Starting vault server...
==> Vault server configuration:

              Api Address: <api_address>
                      Cgo: disabled
          Cluster Address: <cluster_address>
    Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
```

```
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
                Go Version: go1.20.5
                Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
                 Log Level:
                      Mlock: supported: true, enabled: true
            Recovery Mode: false
                    Storage: file
                    Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
              Version Sha:
13a649f860186dffe3f3a4459814d87191efc321


==> Vault server started! Log data will stream in below:


2023-07-21T00:30:33.065+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-07-21T00:30:33.098+0530 [INFO]  core: Initializing
version history cache for core
2023-07-21T00:30:43.092+0530 [INFO]  core: security barrier
not initialized
2023-07-21T00:30:43.092+0530 [INFO]  core: seal configuration
missing, not initialized
2023-07-21T00:30:43.094+0530 [INFO]  core: security barrier
not initialized
2023-07-21T00:30:43.096+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-07-21T00:30:43.098+0530 [INFO]  core: post-unseal setup
starting
2023-07-21T00:30:43.124+0530 [INFO]  core: loaded wrapping
token key
2023-07-21T00:30:43.124+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-07-21T00:30:43.124+0530 [INFO]  core: no mounts; adding
default mount table
2023-07-21T00:30:43.125+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-07-21T00:30:43.126+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-07-21T00:30:43.126+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
```

```
path=identity/ namespace="ID: root. Path: "
2023-07-21T00:30:43.129+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-07-21T00:30:43.130+0530 [INFO]  rollback: starting
rollback manager
2023-07-21T00:30:43.130+0530 [INFO]  core: restoring leases
2023-07-21T00:30:43.130+0530 [INFO]  identity: entities
restored
2023-07-21T00:30:43.130+0530 [INFO]  identity: groups restored
2023-07-21T00:30:43.131+0530 [INFO]  core: usage gauge
collection is disabled
2023-07-21T00:30:43.131+0530 [INFO]  expiration: lease restore
complete
2023-07-21T00:30:43.131+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-07-20
19:00:43.131158543 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-07-21T00:30:43.371+0530 [INFO]  core: post-unseal setup
complete
2023-07-21T00:30:43.371+0530 [INFO]  core: root token
generated
2023-07-21T00:30:43.371+0530 [INFO]  core: pre-seal teardown
starting
2023-07-21T00:30:43.371+0530 [INFO]  rollback: stopping
rollback manager
2023-07-21T00:30:43.372+0530 [INFO]  core: pre-seal teardown
complete
2023-07-21T00:30:43.694+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-07-21T00:30:43.695+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-07-21T00:30:43.695+0530 [INFO]  core: post-unseal setup
starting
2023-07-21T00:30:43.696+0530 [INFO]  core: loaded wrapping
token key
2023-07-21T00:30:43.696+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-07-21T00:30:43.697+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-07-21T00:30:43.698+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-07-21T00:30:43.698+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
```

```
2023-07-21T00:30:43.701+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-07-21T00:30:43.701+0530 [INFO]  rollback: starting
rollback manager
2023-07-21T00:30:43.702+0530 [INFO]  core: restoring leases
2023-07-21T00:30:43.702+0530 [INFO]  identity: entities
restored
2023-07-21T00:30:43.702+0530 [INFO]  expiration: lease restore
complete
2023-07-21T00:30:43.702+0530 [INFO]  identity: groups restored
2023-07-21T00:30:43.702+0530 [INFO]  core: usage gauge
collection is disabled
2023-07-21T00:30:43.703+0530 [INFO]  core: post-unseal setup
complete
2023-07-21T00:30:43.703+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-07-21T00:30:44.226+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-07-21T00:30:44.315+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Upgrading to NetApp-MetroCluster-Tiebreaker-Software-1.6P1-
1.x86_64.rpm
Preparing...
################################ [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
```

```
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
```

```
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
to version 1.6P1.
Cleaning up / removing...
   2:NetApp-MetroCluster-Tiebreaker-
So############################### [100%]
```

Actualización 1,4 a 1.6P1

Siga estos pasos para actualizar la versión de software de tiebreaker 1,4 a tiebreaker 1.6P1.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.6P1
```

El sistema muestra el siguiente resultado para una actualización correcta:

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
Enter unix user account to use for the installation:
mcctbuseradmin1
Unix user account "mcctbuseradmin1" doesn't exist. Do you wish
to create "mcctbuseradmin1" user account? [Y/N]: y
Unix account "mcctbuseradmin1" created.
Changing password for user mcctbuseradmin1.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.


Enter database user name : root


Please enter database password for root
Enter password:


Password updated successfully in the database.


MetroCluster Tiebreaker requires unix user account
"mcctbuseradmin1" to be added to the group "mcctbgrp" for
admin access.
Do you wish to add ? [Y/N]: y
Unix user account "mcctbuseradmin1" added to "mcctbgrp".
Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
Starting vault server...
==> Vault server configuration:


                Api Address: <api_addess>
                        Cgo: disabled
            Cluster Address: <cluster_address>
    Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
```

```
                 Go Version: go1.20.5
                 Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
                  Log Level:
                      Mlock: supported: true, enabled: true
              Recovery Mode: false
                    Storage: file
                    Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
                Version Sha:
13a649f860186dffe3f3a4459814d87191efc321

==> Vault server started! Log data will stream in below:

2023-11-23T15:58:10.400+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-11-23T15:58:10.432+0530 [INFO]  core: Initializing
version history cache for core
2023-11-23T15:58:20.422+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:58:20.422+0530 [INFO]  core: seal configuration
missing, not initialized
2023-11-23T15:58:20.424+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:58:20.425+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-11-23T15:58:20.427+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:58:20.448+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:58:20.448+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:58:20.448+0530 [INFO]  core: no mounts; adding
default mount table
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:58:20.451+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
```

```
path=token/ namespace="ID: root. Path: "
2023-11-23T15:58:20.452+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:58:20.452+0530 [INFO]  core: restoring leases
2023-11-23T15:58:20.453+0530 [INFO]  identity: entities
restored
2023-11-23T15:58:20.453+0530 [INFO]  identity: groups restored
2023-11-23T15:58:20.453+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:58:20.453+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:58:20.453+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-11-23
10:28:20.453481904 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-11-23T15:58:20.818+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:58:20.819+0530 [INFO]  core: root token
generated
2023-11-23T15:58:20.819+0530 [INFO]  core: pre-seal teardown
starting
2023-11-23T15:58:20.819+0530 [INFO]  rollback: stopping
rollback manager
2023-11-23T15:58:20.819+0530 [INFO]  core: pre-seal teardown
complete
2023-11-23T15:58:21.116+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-11-23T15:58:21.116+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-11-23T15:58:21.117+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:58:21.117+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:58:21.117+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:58:21.119+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:58:21.120+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:58:21.120+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:58:21.123+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
```

```
2023-11-23T15:58:21.123+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:58:21.124+0530 [INFO]  core: restoring leases
2023-11-23T15:58:21.124+0530 [INFO]  identity: entities
restored
2023-11-23T15:58:21.124+0530 [INFO]  identity: groups restored
2023-11-23T15:58:21.124+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:58:21.125+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:58:21.125+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:58:21.125+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-11-23T15:58:21.600+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-11-23T15:58:21.690+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Upgrading to NetApp-MetroCluster-Tiebreaker-Software-1.6P1-
1.x86_64.rpm
Preparing...
################################ [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
```

```
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
```

```
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
to version 1.6P1.
Cleaning up / removing...
   2:NetApp-MetroCluster-Tiebreaker-
So############################### [100%]
```

Instale o actualice a tiebreaker 1,6

Puede instalar tiebreaker 1,6 o actualizar a tiebreaker 1,6 desde tiebreaker 1,5 o 1,4.

Pasos

1. Descargue el software MetroCluster tiebreaker 1,6.

   "MetroCluster tiebreaker (descargas) - Sitio de soporte de NetApp"

2. Inicie sesión en el host como usuario raíz.

3. Si está realizando una actualización, compruebe la versión de tiebreaker que está ejecutando:

   En el siguiente ejemplo, se muestra tiebreaker 1,5.

   ```
   [root@mcctb ~] # netapp-metrocluster-tiebreaker-software-cli
   NetApp MetroCluster Tiebreaker :> version show
   NetApp MetroCluster Tiebreaker 1.5: Sun Mar 13 09:59:02 IST 2022
   NetApp MetroCluster Tiebreaker :> exit
   ```

4. Instale o actualice el software tiebreaker.

Instale tiebreaker 1,6

Utilice los siguientes pasos para una nueva instalación de tiebreaker 1,6.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar que comience la instalación:

```
sh MetroClusterTiebreakerInstall-1.6
```

El sistema muestra el siguiente resultado para una instalación correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
Enter unix user account to use for the installation:
mcctbadminuser
Unix user account "mcctbadminuser" doesn't exist. Do you wish
to create "mcctbadminuser" user account? [Y/N]: y
useradd: warning: the home directory already exists.
Not copying any file from skel directory into it.
Creating mailbox file: File exists
Unix account "mcctbadminuser" created.
Changing password for user mcctbadminuser.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
MetroCluster Tiebreaker requires unix user account
"mcctbadminuser" to be added to the group "mcctbgrp" for admin
access.
Do you wish to add ? [Y/N]: y
Unix user account "mcctbadminuser" added to "mcctbgrp".
Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
Starting vault server...
==> Vault server configuration:

              Api Address: <api_address>
                      Cgo: disabled
          Cluster Address: <cluster_address>
    Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
               Go Version: go1.20.5
               Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
                Log Level:
```

```
                     Mlock: supported: true, enabled: true
           Recovery Mode: false
                   Storage: file
                   Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
             Version Sha:
13a649f860186dffe3f3a4459814d87191efc321


==> Vault server started! Log data will stream in below:

2023-11-23T15:14:28.532+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-11-23T15:14:28.577+0530 [INFO]  core: Initializing
version history cache for core
2023-11-23T15:14:38.552+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.552+0530 [INFO]  core: seal configuration
missing, not initialized
2023-11-23T15:14:38.554+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:14:38.555+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-11-23T15:14:38.556+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:38.577+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:38.577+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:38.577+0530 [INFO]  core: no mounts; adding
default mount table
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:38.578+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:38.581+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:38.581+0530 [INFO]  core: restoring leases
2023-11-23T15:14:38.582+0530 [INFO]  expiration: lease restore
```

```
complete
2023-11-23T15:14:38.582+0530 [INFO]  identity: entities
restored
2023-11-23T15:14:38.582+0530 [INFO]  identity: groups restored
2023-11-23T15:14:38.583+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-11-23
09:44:38.582881162 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-11-23T15:14:38.583+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:38.998+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:38.999+0530 [INFO]  core: root token
generated
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
starting
2023-11-23T15:14:38.999+0530 [INFO]  rollback: stopping
rollback manager
2023-11-23T15:14:38.999+0530 [INFO]  core: pre-seal teardown
complete
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-11-23T15:14:39.311+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-11-23T15:14:39.312+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:14:39.312+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:14:39.312+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:14:39.313+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-11-23T15:14:39.314+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:14:39.314+0530 [INFO]  core: restoring leases
2023-11-23T15:14:39.314+0530 [INFO]  identity: entities
restored
```

```
2023-11-23T15:14:39.314+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:14:39.314+0530 [INFO]  identity: groups restored
2023-11-23T15:14:39.315+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:14:39.316+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:14:39.316+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-11-23T15:14:39.795+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-11-23T15:14:39.885+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Installing the NetApp-MetroCluster-Tiebreaker-Software-1.6-
1.x86_64.rpm
Preparing...                          #
############################### # [100%]

Updating / installing...

1:NetApp-MetroCluster-Tiebreaker-So#
############################### # [100%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
```

```
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
```

```
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software
Created symlink /etc/systemd/system/multi-
user.target.wants/netapp-metrocluster-tiebreaker-
software.service → /etc/systemd/system/netapp-metrocluster-
tiebreaker-software.service.

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully installed NetApp MetroCluster Tiebreaker software
version 1.6.
```

Actualizar 1,5 a 1,6

Utilice los siguientes pasos para actualizar la versión de software de tiebreaker 1,5 a tiebreaker 1,6.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.6
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok


Enter database user name : root


Please enter database password for root
Enter password:


Password updated successfully in the database.


Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
==> Vault shutdown triggered
2023-07-21T00:30:22.335+0530 [INFO]  core: marked as sealed
2023-07-21T00:30:22.335+0530 [INFO]  core: pre-seal teardown
starting
2023-07-21T00:30:22.335+0530 [INFO]  rollback: stopping
rollback manager
2023-07-21T00:30:22.335+0530 [INFO]  core: pre-seal teardown
complete
2023-07-21T00:30:22.335+0530 [INFO]  core: stopping cluster
listeners
2023-07-21T00:30:22.335+0530 [INFO]  core.cluster-listener:
forwarding rpc listeners stopped
2023-07-21T00:30:22.375+0530 [INFO]  core.cluster-listener:
rpc listeners successfully shut down
2023-07-21T00:30:22.375+0530 [INFO]  core: cluster listeners
successfully shut down
2023-07-21T00:30:22.376+0530 [INFO]  core: vault is sealed
Starting vault server...
==> Vault server configuration:

             Api Address: <api_address>
                     Cgo: disabled
         Cluster Address: <cluster_address>
   Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
```

```
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
                Go Version: go1.20.5
                Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
                  Log Level:
                     Mlock: supported: true, enabled: true
             Recovery Mode: false
                   Storage: file
                   Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
               Version Sha:
13a649f860186dffe3f3a4459814d87191efc321


==> Vault server started! Log data will stream in below:


2023-07-21T00:30:33.065+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-07-21T00:30:33.098+0530 [INFO]  core: Initializing
version history cache for core
2023-07-21T00:30:43.092+0530 [INFO]  core: security barrier
not initialized
2023-07-21T00:30:43.092+0530 [INFO]  core: seal configuration
missing, not initialized
2023-07-21T00:30:43.094+0530 [INFO]  core: security barrier
not initialized
2023-07-21T00:30:43.096+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-07-21T00:30:43.098+0530 [INFO]  core: post-unseal setup
starting
2023-07-21T00:30:43.124+0530 [INFO]  core: loaded wrapping
token key
2023-07-21T00:30:43.124+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-07-21T00:30:43.124+0530 [INFO]  core: no mounts; adding
default mount table
2023-07-21T00:30:43.125+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-07-21T00:30:43.126+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-07-21T00:30:43.126+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
```

```
path=identity/ namespace="ID: root. Path: "
2023-07-21T00:30:43.129+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-07-21T00:30:43.130+0530 [INFO]  rollback: starting
rollback manager
2023-07-21T00:30:43.130+0530 [INFO]  core: restoring leases
2023-07-21T00:30:43.130+0530 [INFO]  identity: entities
restored
2023-07-21T00:30:43.130+0530 [INFO]  identity: groups restored
2023-07-21T00:30:43.131+0530 [INFO]  core: usage gauge
collection is disabled
2023-07-21T00:30:43.131+0530 [INFO]  expiration: lease restore
complete
2023-07-21T00:30:43.131+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-07-20
19:00:43.131158543 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-07-21T00:30:43.371+0530 [INFO]  core: post-unseal setup
complete
2023-07-21T00:30:43.371+0530 [INFO]  core: root token
generated
2023-07-21T00:30:43.371+0530 [INFO]  core: pre-seal teardown
starting
2023-07-21T00:30:43.371+0530 [INFO]  rollback: stopping
rollback manager
2023-07-21T00:30:43.372+0530 [INFO]  core: pre-seal teardown
complete
2023-07-21T00:30:43.694+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-07-21T00:30:43.695+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-07-21T00:30:43.695+0530 [INFO]  core: post-unseal setup
starting
2023-07-21T00:30:43.696+0530 [INFO]  core: loaded wrapping
token key
2023-07-21T00:30:43.696+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-07-21T00:30:43.697+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-07-21T00:30:43.698+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-07-21T00:30:43.698+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
```

```
2023-07-21T00:30:43.701+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
2023-07-21T00:30:43.701+0530 [INFO]  rollback: starting
rollback manager
2023-07-21T00:30:43.702+0530 [INFO]  core: restoring leases
2023-07-21T00:30:43.702+0530 [INFO]  identity: entities
restored
2023-07-21T00:30:43.702+0530 [INFO]  expiration: lease restore
complete
2023-07-21T00:30:43.702+0530 [INFO]  identity: groups restored
2023-07-21T00:30:43.702+0530 [INFO]  core: usage gauge
collection is disabled
2023-07-21T00:30:43.703+0530 [INFO]  core: post-unseal setup
complete
2023-07-21T00:30:43.703+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-07-21T00:30:44.226+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-07-21T00:30:44.315+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Upgrading to NetApp-MetroCluster-Tiebreaker-Software-1.6-
1.x86_64.rpm
Preparing...
################################# [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
```

```
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
```

```
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
to version 1.6.
Cleaning up / removing...
   2:NetApp-MetroCluster-Tiebreaker-
So############################### [100%]
```

Actualizar 1,4 a 1,6

Utilice los siguientes pasos para actualizar la versión de software de tiebreaker 1,4 a tiebreaker 1,6.

Pasos

a. Ejecute el siguiente comando en la `[root@mcctb ~]` # solicitar actualización del software:

```
sh MetroClusterTiebreakerInstall-1.6
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Extracting the MetroCluster Tiebreaker installation/upgrade
archive
Install digest hash is Ok
Performing the MetroCluster Tiebreaker code signature check
Install code signature is Ok
Enter unix user account to use for the installation:
mcctbuseradmin1
Unix user account "mcctbuseradmin1" doesn't exist. Do you wish
to create "mcctbuseradmin1" user account? [Y/N]: y
Unix account "mcctbuseradmin1" created.
Changing password for user mcctbuseradmin1.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.


Enter database user name : root


Please enter database password for root
Enter password:


Password updated successfully in the database.


MetroCluster Tiebreaker requires unix user account
"mcctbuseradmin1" to be added to the group "mcctbgrp" for
admin access.
Do you wish to add ? [Y/N]: y
Unix user account "mcctbuseradmin1" added to "mcctbgrp".
Do you wish to generate your own public-private key pair for
encrypting audit log? [Y/N]: y
Generating public-private key pair...
Configuring Vault...
Starting vault server...
==> Vault server configuration:


              Api Address: <api_addess>
                      Cgo: disabled
          Cluster Address: <cluster_address>
    Environment Variables: BASH_FUNC_which%%,
DBUS_SESSION_BUS_ADDRESS, GODEBUG, HISTCONTROL, HISTSIZE,
HOME, HOSTNAME, HOST_ACCOUNT, LANG, LESSOPEN, LOGNAME,
LS_COLORS, MAIL, PATH, PWD, SHELL, SHLVL, SSH_CLIENT,
SSH_CONNECTION, SSH_TTY, STAF_TEMP_DIR, TERM, USER,
VAULT_ADDR, VAULT_TOKEN, XDG_RUNTIME_DIR, XDG_SESSION_ID, _,
vault_Addr, which_declare
```

```
                Go Version: go1.20.5
                Listener 1: tcp (addr: "0.0.0.0:8200", cluster
address: "0.0.0.0:8201", max_request_duration: "1m30s",
max_request_size: "33554432", tls: "enabled")
                Log Level:
                     Mlock: supported: true, enabled: true
             Recovery Mode: false
                   Storage: file
                   Version: Vault v1.14.0, built 2023-06-
19T11:40:23Z
              Version Sha:
13a649f860186dffe3f3a4459814d87191efc321

==> Vault server started! Log data will stream in below:

2023-11-23T15:58:10.400+0530 [INFO]  proxy environment:
http_proxy="" https_proxy="" no_proxy=""
2023-11-23T15:58:10.432+0530 [INFO]  core: Initializing
version history cache for core
2023-11-23T15:58:20.422+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:58:20.422+0530 [INFO]  core: seal configuration
missing, not initialized
2023-11-23T15:58:20.424+0530 [INFO]  core: security barrier
not initialized
2023-11-23T15:58:20.425+0530 [INFO]  core: security barrier
initialized: stored=1 shares=5 threshold=3
2023-11-23T15:58:20.427+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:58:20.448+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:58:20.448+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:58:20.448+0530 [INFO]  core: no mounts; adding
default mount table
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:58:20.449+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:58:20.451+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
```

```
path=token/ namespace="ID: root. Path: "
2023-11-23T15:58:20.452+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:58:20.452+0530 [INFO]  core: restoring leases
2023-11-23T15:58:20.453+0530 [INFO]  identity: entities
restored
2023-11-23T15:58:20.453+0530 [INFO]  identity: groups restored
2023-11-23T15:58:20.453+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:58:20.453+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:58:20.453+0530 [INFO]  core: Recorded vault
version: vault version=1.14.0 upgrade time="2023-11-23
10:28:20.453481904 +0000 UTC" build date=2023-06-19T11:40:23Z
2023-11-23T15:58:20.818+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:58:20.819+0530 [INFO]  core: root token
generated
2023-11-23T15:58:20.819+0530 [INFO]  core: pre-seal teardown
starting
2023-11-23T15:58:20.819+0530 [INFO]  rollback: stopping
rollback manager
2023-11-23T15:58:20.819+0530 [INFO]  core: pre-seal teardown
complete
2023-11-23T15:58:21.116+0530 [INFO]  core.cluster-
listener.tcp: starting listener: listener_address=0.0.0.0:8201
2023-11-23T15:58:21.116+0530 [INFO]  core.cluster-listener:
serving cluster requests: cluster_listen_address=[::]:8201
2023-11-23T15:58:21.117+0530 [INFO]  core: post-unseal setup
starting
2023-11-23T15:58:21.117+0530 [INFO]  core: loaded wrapping
token key
2023-11-23T15:58:21.117+0530 [INFO]  core: successfully setup
plugin catalog: plugin-directory=""
2023-11-23T15:58:21.119+0530 [INFO]  core: successfully
mounted: type=system version="v1.14.0+builtin.vault" path=sys/
namespace="ID: root. Path: "
2023-11-23T15:58:21.120+0530 [INFO]  core: successfully
mounted: type=identity version="v1.14.0+builtin.vault"
path=identity/ namespace="ID: root. Path: "
2023-11-23T15:58:21.120+0530 [INFO]  core: successfully
mounted: type=cubbyhole version="v1.14.0+builtin.vault"
path=cubbyhole/ namespace="ID: root. Path: "
2023-11-23T15:58:21.123+0530 [INFO]  core: successfully
mounted: type=token version="v1.14.0+builtin.vault"
path=token/ namespace="ID: root. Path: "
```

```
2023-11-23T15:58:21.123+0530 [INFO]  rollback: starting
rollback manager
2023-11-23T15:58:21.124+0530 [INFO]  core: restoring leases
2023-11-23T15:58:21.124+0530 [INFO]  identity: entities
restored
2023-11-23T15:58:21.124+0530 [INFO]  identity: groups restored
2023-11-23T15:58:21.124+0530 [INFO]  expiration: lease restore
complete
2023-11-23T15:58:21.125+0530 [INFO]  core: usage gauge
collection is disabled
2023-11-23T15:58:21.125+0530 [INFO]  core: post-unseal setup
complete
2023-11-23T15:58:21.125+0530 [INFO]  core: vault is unsealed
Success! Uploaded policy: mcctb-policy
2023-11-23T15:58:21.600+0530 [INFO]  core: enabled credential
backend: path=approle/ type=approle version=""
Success! Enabled approle auth method at: approle/
2023-11-23T15:58:21.690+0530 [INFO]  core: successful mount:
namespace="" path=mcctb/ type=kv version=""
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Upgrading to NetApp-MetroCluster-Tiebreaker-Software-1.6-
1.x86_64.rpm
Preparing...
################################# [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [ 50%]
Performing file integrity check
etc/cron.weekly/metrocluster-tiebreaker-support is Ok
etc/cron.weekly/metrocluster-tiebreaker-support-cov is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software is Ok
etc/init.d/netapp-metrocluster-tiebreaker-software-cov is Ok
etc/logrotate.d/mcctb is Ok
opt/netapp/mcctb/lib/common/activation-1.1.1.jar is Ok
opt/netapp/mcctb/lib/common/aopalliance.jar is Ok
opt/netapp/mcctb/lib/common/args4j.jar is Ok
opt/netapp/mcctb/lib/common/aspectjrt.jar is Ok
opt/netapp/mcctb/lib/common/aspectjweaver.jar is Ok
opt/netapp/mcctb/lib/common/asup.jar is Ok
opt/netapp/mcctb/lib/common/bcpkix-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk15on.jar is Ok
opt/netapp/mcctb/lib/common/bcprov-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bctls-fips-1.0.13.jar is Ok
opt/netapp/mcctb/lib/common/bctls-jdk18on.jar is Ok
opt/netapp/mcctb/lib/common/bcutil-jdk18on.jar is Ok
```

```
opt/netapp/mcctb/lib/common/cglib.jar is Ok
opt/netapp/mcctb/lib/common/commons-codec.jar is Ok
opt/netapp/mcctb/lib/common/commons-collections4.jar is Ok
opt/netapp/mcctb/lib/common/commons-compress.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.jar is Ok
opt/netapp/mcctb/lib/common/commons-daemon.src.jar is Ok
opt/netapp/mcctb/lib/common/commons-dbcp2.jar is Ok
opt/netapp/mcctb/lib/common/commons-io.jar is Ok
opt/netapp/mcctb/lib/common/commons-lang3.jar is Ok
opt/netapp/mcctb/lib/common/commons-logging.jar is Ok
opt/netapp/mcctb/lib/common/commons-pool2.jar is Ok
opt/netapp/mcctb/lib/common/guava.jar is Ok
opt/netapp/mcctb/lib/common/httpclient.jar is Ok
opt/netapp/mcctb/lib/common/httpcore.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.activation.jar is Ok
opt/netapp/mcctb/lib/common/jakarta.xml.bind-api.jar is Ok
opt/netapp/mcctb/lib/common/java-xmlbuilder.jar is Ok
opt/netapp/mcctb/lib/common/javax.inject.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-api-2.3.1.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-core.jar is Ok
opt/netapp/mcctb/lib/common/jaxb-impl.jar is Ok
opt/netapp/mcctb/lib/common/jline.jar is Ok
opt/netapp/mcctb/lib/common/jna.jar is Ok
opt/netapp/mcctb/lib/common/joda-time.jar is Ok
opt/netapp/mcctb/lib/common/jsch.jar is Ok
opt/netapp/mcctb/lib/common/json.jar is Ok
opt/netapp/mcctb/lib/common/jsvc.zip is Ok
opt/netapp/mcctb/lib/common/junixsocket-common.jar is Ok
opt/netapp/mcctb/lib/common/junixsocket-native-common.jar is
Ok
opt/netapp/mcctb/lib/common/logback-classic.jar is Ok
opt/netapp/mcctb/lib/common/logback-core.jar is Ok
opt/netapp/mcctb/lib/common/mail-1.6.2.jar is Ok
opt/netapp/mcctb/lib/common/mariadb-java-client.jar is Ok
opt/netapp/mcctb/lib/common/mcctb-mib.jar is Ok
opt/netapp/mcctb/lib/common/mcctb.jar is Ok
opt/netapp/mcctb/lib/common/mockito-core.jar is Ok
opt/netapp/mcctb/lib/common/slf4j-api.jar is Ok
opt/netapp/mcctb/lib/common/snmp4j.jar is Ok
opt/netapp/mcctb/lib/common/spring-aop.jar is Ok
opt/netapp/mcctb/lib/common/spring-beans.jar is Ok
opt/netapp/mcctb/lib/common/spring-context-support.jar is Ok
opt/netapp/mcctb/lib/common/spring-context.jar is Ok
opt/netapp/mcctb/lib/common/spring-core.jar is Ok
opt/netapp/mcctb/lib/common/spring-expression.jar is Ok
opt/netapp/mcctb/lib/common/spring-web.jar is Ok
```

```
opt/netapp/mcctb/lib/common/vault-java-driver.jar is Ok
opt/netapp/mcctb/lib/common/xz.jar is Ok
opt/netapp/mcctb/lib/org.jacoco.agent-0.8.8-runtime.jar is Ok
opt/netapp/mcctb/bin/mcctb-asup-invoke is Ok
opt/netapp/mcctb/bin/mcctb_postrotate is Ok
opt/netapp/mcctb/bin/netapp-metrocluster-tiebreaker-software-
cli is Ok
/

Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software

Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
to version 1.6.
Cleaning up / removing...
    2:NetApp-MetroCluster-Tiebreaker-
So################################# [100%]
```

Instale tiebreaker 1,5

Configure el acceso de administrador a la API de ONTAP y SSH

Puede configurar el acceso de administrador a la API de ONTAP y SSH.

Pasos

1. Cree un usuario administrador con acceso a la API de ONTAP: `security login create -user-or-group-name` *mcctb* `-application ontapi -authentication-method` *password*

2. Cree un usuario administrador con acceso SSH: `security login create -user-or-group-name` *mcctb* `-application` *ssh* `-authentication-method` *password*

3. Compruebe que se han creado los nuevos usuarios administradores: `security login show`

4. Repita estos pasos en el clúster de partners.

> ⓘ   "Autenticación de administrador y RBAC" está implementado.

Instale las dependencias de MetroCluster tiebreaker 1,5

Según el sistema operativo Linux del host, debe instalar un servidor MySQL o MariaDB antes de instalar o actualizar el software tiebreaker.

Pasos

1. Instale JDK

2. Instalar y configurar el almacén

3. Instalar el servidor MySQL o MariaDB:

Si el host Linux es	Realice lo siguiente…
Red Hat Enterprise Linux 7/CentOS 7	Instale MySQL Server 5.5.30 o posterior y las versiones 5,6.x en Red Hat Enterprise Linux 7 o CentOS 7
Red Hat Enterprise Linux 8	Instale el servidor MariaDB en Red Hat Enterprise Linux 8

Instale JDK

Debe instalar JDK en el sistema host antes de instalar o actualizar el software tiebreaker. Tiebreaker 1,5 y versiones posteriores son compatibles con OpenJDK 17, 18 o 19.

Pasos

1. Inicie sesión como usuario "raíz" o como usuario sudo que puede cambiar al modo de privilegios avanzado.

   ```
   login as: root
   root@mcctb's password:
   Last login: Fri Jan  8 21:33:00 2017 from host.domain.com
   ```

2. Compruebe si hay versiones JDK disponibles:

   ```
   yum search openjdk
   ```

3. Instale JDK 17,18 o 19.

   El siguiente comando instala JDK 17:

   ```
   yum install java-17-openjdk
   ```

4. Compruebe la instalación:

   ```
   java -version
   ```

   Una instalación correcta muestra la siguiente salida:

```
openjdk version "17.0.2" 2022-01-18 LTS
OpenJDK Runtime Environment 21.9 (build 17.0.2+8-LTS)
OpenJDK 64-Bit Server VM 21.9 (build 17.0.2+8-LTS, mixed mode, sharing)
```

Instalar y configurar el almacén

Si no tiene o desea utilizar el servidor local del almacén, debe instalar el almacén. Puede consultar este procedimiento estándar para instalar el almacén o consultar las instrucciones de instalación de Hashicorp para obtener directrices alternativas.

> ⓘ Si tiene un servidor Vault en la red, puede configurar el host MetroCluster Tiebreaker para usar la instalación de dicho almacén. Si lo hace, no es necesario instalar Vault en el host.

Pasos

1. Desplácese hasta la `/bin` directorio:

   ```
   [root@mcctb] cd /bin
   ```

2. Descargue el archivo zip del almacén.

   ```
   [root@mcctb /bin]#  curl -sO
   https://releases.hashicorp.com/vault/1.12.2/vault_1.12.2_linux_amd64.zip
   ```

3. Descomprima el archivo del almacén.

   ```
   [root@mcctb /bin]# unzip vault_1.12.2_linux_amd64.zip
   Archive:  vault_1.12.2_linux_amd64.zip
     inflating: vault
   ```

4. Compruebe la instalación.

   ```
   [root@mcctb /bin]# vault -version
   Vault v1.12.2 (415e1fe3118eebd5df6cb60d13defdc01aa17b03), built 2022-11-
   23T12:53:46Z
   ```

5. Desplácese hasta la `/root` directorio:

   ```
   [root@mcctb /bin] cd /root
   ```

6. Cree un archivo de configuración del almacén en `/root` directorio.

En la `[root@mcctb ~]` solicite, copie y ejecute el siguiente comando para crear el `config.hcl` archivo:

```
# cat > config.hcl << EOF
 storage "file" {
  address = "127.0.0.1:8500"
  path    = "/mcctb_vdata/data"
 }
 listener "tcp" {
   address     = "127.0.0.1:8200"
   tls_disable = 1
 }
EOF
```

7. Inicie el servidor del almacén:

```
[root@mcctb ~] vault server -config config.hcl &
```

8. Exporte la dirección del almacén.

```
[root@mcctb ~]# export VAULT_ADDR="http://127.0.0.1:8200"
```

9. Inicialice el almacén.

```
[root@mcctb ~]# vault operator init
2022-12-15T14:57:22.113+0530 [INFO]  core: security barrier not
initialized
2022-12-15T14:57:22.113+0530 [INFO]  core: seal configuration missing,
not initialized
2022-12-15T14:57:22.114+0530 [INFO]  core: security barrier not
initialized
2022-12-15T14:57:22.116+0530 [INFO]  core: security barrier initialized:
stored=1 shares=5 threshold=3
2022-12-15T14:57:22.118+0530 [INFO]  core: post-unseal setup starting
2022-12-15T14:57:22.137+0530 [INFO]  core: loaded wrapping token key
2022-12-15T14:57:22.137+0530 [INFO]  core: Recorded vault version: vault
version=1.12.2 upgrade time="2022-12-15 09:27:22.137200412 +0000 UTC"
build date=2022-11-23T12:53:46Z
2022-12-15T14:57:22.137+0530 [INFO]  core: successfully setup plugin
catalog: plugin-directory=""
2022-12-15T14:57:22.137+0530 [INFO]  core: no mounts; adding default
mount table
2022-12-15T14:57:22.143+0530 [INFO]  core: successfully mounted backend:
type=cubbyhole version="" path=cubbyhole/
```

```
2022-12-15T14:57:22.144+0530 [INFO]  core: successfully mounted backend:
type=system version="" path=sys/
2022-12-15T14:57:22.144+0530 [INFO]  core: successfully mounted backend:
type=identity version="" path=identity/
2022-12-15T14:57:22.148+0530 [INFO]  core: successfully enabled
credential backend: type=token version="" path=token/ namespace="ID:
root. Path: "
2022-12-15T14:57:22.149+0530 [INFO]  rollback: starting rollback manager
2022-12-15T14:57:22.149+0530 [INFO]  core: restoring leases
2022-12-15T14:57:22.150+0530 [INFO]  expiration: lease restore complete
2022-12-15T14:57:22.150+0530 [INFO]  identity: entities restored
2022-12-15T14:57:22.150+0530 [INFO]  identity: groups restored
2022-12-15T14:57:22.151+0530 [INFO]  core: usage gauge collection is
disabled
2022-12-15T14:57:23.385+0530 [INFO]  core: post-unseal setup complete
2022-12-15T14:57:23.387+0530 [INFO]  core: root token generated
2022-12-15T14:57:23.387+0530 [INFO]  core: pre-seal teardown starting
2022-12-15T14:57:23.387+0530 [INFO]  rollback: stopping rollback manager
2022-12-15T14:57:23.387+0530 [INFO]  core: pre-seal teardown complete
Unseal Key 1: <unseal_key_1_id>
Unseal Key 2: <unseal_key_2_id>
Unseal Key 3: <unseal_key_3_id>
Unseal Key 4: <unseal_key_4_id>
Unseal Key 5: <unseal_key_5_id>


Initial Root Token: <initial_root_token_id>



Vault initialized with 5 key shares and a key threshold of 3. Please
securely
distribute the key shares printed above. When the Vault is re-sealed,
restarted, or stopped, you must supply at least 3 of these keys to
unseal it
before it can start servicing requests.

Vault does not store the generated root key. Without at least 3 keys to
reconstruct the root key, Vault will remain permanently sealed!

It is possible to generate new unseal keys, provided you have a quorum
of
existing unseal keys shares. See "vault operator rekey" for more
information.
```

(i) Debe registrar y almacenar los identificadores de clave y el token raíz inicial en una
ubicación segura para usarlos más adelante en el procedimiento.

10. Exporte el token raíz del almacén.

```
[root@mcctb ~]#  export VAULT_TOKEN="<initial_root_token_id>"
```

11. Desselle el Almacén utilizando tres de las cinco claves que se crearon.

Debe ejecutar el `vault operator unseal` comando para cada una de las tres claves:

a. Desselle el almacén con la primera clave:

```
[root@mcctb ~]# vault operator unseal
Unseal Key (will be hidden):
Key                 Value
---                 -----
Seal Type           shamir
Initialized         true
Sealed              true
Total Shares        5
Threshold           3
Unseal Progress     1/3
Unseal Nonce        <unseal_key_1_id>
Version             1.12.2
Build Date          2022-11-23T12:53:46Z
Storage Type        file
HA Enabled          false
```

b. Desselle el almacén con la segunda clave:

```
[root@mcctb ~]# vault operator unseal
Unseal Key (will be hidden):
Key                 Value
---                 -----
Seal Type           shamir
Initialized         true
Sealed              true
Total Shares        5
Threshold           3
Unseal Progress     2/3
Unseal Nonce        <unseal_key_2_id>
Version             1.12.2
Build Date          2022-11-23T12:53:46Z
Storage Type        file
HA Enabled          false
```

c. Desselle el almacén con la tercera clave:

```
[root@mcctb ~]# vault operator unseal
Unseal Key (will be hidden):
2022-12-15T15:15:00.980+0530 [INFO]  core.cluster-listener.tcp:
starting listener: listener_address=127.0.0.1:8201
2022-12-15T15:15:00.980+0530 [INFO]  core.cluster-listener: serving
cluster requests: cluster_listen_address=127.0.0.1:8201
2022-12-15T15:15:00.981+0530 [INFO]  core: post-unseal setup starting
2022-12-15T15:15:00.981+0530 [INFO]  core: loaded wrapping token key
2022-12-15T15:15:00.982+0530 [INFO]  core: successfully setup plugin
catalog: plugin-directory=""
2022-12-15T15:15:00.983+0530 [INFO]  core: successfully mounted
backend: type=system version="" path=sys/
2022-12-15T15:15:00.984+0530 [INFO]  core: successfully mounted
backend: type=identity version="" path=identity/
2022-12-15T15:15:00.984+0530 [INFO]  core: successfully mounted
backend: type=cubbyhole version="" path=cubbyhole/
2022-12-15T15:15:00.986+0530 [INFO]  core: successfully enabled
credential backend: type=token version="" path=token/ namespace="ID:
root. Path: "
2022-12-15T15:15:00.986+0530 [INFO]  rollback: starting rollback
manager
2022-12-15T15:15:00.987+0530 [INFO]  core: restoring leases
2022-12-15T15:15:00.987+0530 [INFO]  expiration: lease restore
complete
2022-12-15T15:15:00.987+0530 [INFO]  identity: entities restored
2022-12-15T15:15:00.987+0530 [INFO]  identity: groups restored
2022-12-15T15:15:00.988+0530 [INFO]  core: usage gauge collection is
disabled
2022-12-15T15:15:00.989+0530 [INFO]  core: post-unseal setup complete
2022-12-15T15:15:00.989+0530 [INFO]  core: vault is unsealed
Key             Value
---             -----
Seal Type       shamir
Initialized     true
Sealed          false
Total Shares    5
Threshold       3
Version         1.12.2
Build Date      2022-11-23T12:53:46Z
Storage Type    file
Cluster Name    vault-cluster
Cluster ID      <cluster_id>
HA Enabled      false
```

12. Compruebe que el estado sellado del almacén es falso.

```
[root@mcctb ~]# vault status
Key               Value
---               -----
Seal Type         shamir
Initialized       true
Sealed            false
Total Shares      5
Threshold         3
Version           1.12.2
Build Date        2022-11-23T12:53:46Z
Storage Type      file
Cluster Name      vault-cluster
Cluster ID        <cluster_id>
HA Enabled        false
```

13. Configure el servicio del almacén para que se inicie en el inicio.

   a. Ejecute el siguiente comando: `cd /etc/systemd/system`

```
[root@mcctb ~]#  cd /etc/systemd/system
```

   b. En la `[root@mcctb system]` Solicite, copie y ejecute el siguiente comando para crear el archivo de servicio del almacén.

```
# cat > vault.service << EOF
[Unit]
Description=Vault Service
After=mariadb.service

[Service]
Type=forking
ExecStart=/usr/bin/vault server -config /root/config.hcl &
Restart=on-failure

[Install]
WantedBy=multi-user.target
EOF
```

   c. Ejecute el siguiente comando: `systemctl daemon-reload`

```
[root@mcctb system]#  systemctl daemon-reload
```

d. Ejecute el siguiente comando: `systemctl enable vault.service`

```
[root@mcctb system]#  systemctl enable vault.service
Created symlink /etc/systemd/system/multi-
user.target.wants/vault.service → /etc/systemd/system/vault.service.
```

> ⓘ Se le solicitará que utilice esta función durante la instalación de MetroCluster Tiebreaker. Si desea cambiar el método para dessellar el almacén, deberá desinstalar y volver a instalar el software MetroCluster Tiebreaker.

Instale MySQL Server 5.5.30 o posterior y las versiones 5,6.x en Red Hat Enterprise Linux 7 o CentOS 7

Debe instalar MySQL Server 5.5.30 o posterior y la versión 5.6.x en el sistema host antes de instalar o actualizar el software Tiebreaker. Para Red Hat Enterprise Linux 8, Instale el servidor MariaDB.

Pasos

1. Inicie sesión como usuario raíz o como usuario sudo que puede cambiar al modo de privilegios avanzado.

```
login as: root
root@mcctb's password:
Last login: Fri Jan  8 21:33:00 2016 from host.domain.com
```

2. Añada el repositorio de MySQL al sistema host:

```
[root@mcctb ~]# yum localinstall https://dev.mysql.com/get/mysql57-community-
release-el6-11.noarch.rpm
```

```
Loaded plugins: product-id, refresh-packagekit, security, subscription-
manager
Setting up Local Package Process
Examining /var/tmp/yum-root-LLUw0r/mysql-community-release-el6-
5.noarch.rpm: mysql-community-release-el6-5.noarch
Marking /var/tmp/yum-root-LLUw0r/mysql-community-release-el6-
5.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package mysql-community-release.noarch 0:el6-5 will be installed
--> Finished Dependency Resolution
Dependencies Resolved
========================================================================
========
Package                   Arch    Version
                                    Repository
Size
========================================================================
========
Installing:
mysql-community-release
                         noarch el6-5 /mysql-community-release-el6-
5.noarch 4.3 k
Transaction Summary
========================================================================
========
Install      1 Package(s)
Total size: 4.3 k
Installed size: 4.3 k
Is this ok [y/N]: y
Downloading Packages:
Running rpm_check_debug
Running Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing : mysql-community-release-el6-5.noarch
1/1
  Verifying  : mysql-community-release-el6-5.noarch
1/1
Installed:
  mysql-community-release.noarch 0:el6-5
Complete!
```

3. Deshabilite el repositorio de MySQL 57:

```
[root@mcctb ~]# yum-config-manager --disable mysql57-community
```

4. Habilite el repositorio de MySQL 56:

```
[root@mcctb ~]# yum-config-manager --enable mysql56-community
```

5. Habilite el repositorio:

```
[root@mcctb ~]# yum repolist enabled | grep "mysql.-community."
```

```
mysql-connectors-community              MySQL Connectors Community
21
mysql-tools-community                   MySQL Tools Community
35
mysql56-community                       MySQL 5.6 Community Server
231
```

6. Instale el servidor de comunidad MySQL:

```
[root@mcctb ~]# yum install mysql-community-server
```

```
Loaded plugins: product-id, refresh-packagekit, security, subscription-
manager
This system is not registered to Red Hat Subscription Management. You
can use subscription-manager
to register.
Setting up Install Process
Resolving Dependencies
--> Running transaction check
 .....Output truncated.....
---> Package mysql-community-libs-compat.x86_64 0:5.6.29-2.el6 will be
obsoleting
--> Finished Dependency Resolution
Dependencies Resolved
=======================================================================
======
Package                           Arch    Version        Repository
Size
=======================================================================
======
Installing:
 mysql-community-client         x86_64  5.6.29-2.el6  mysql56-community
18  M
      replacing  mysql.x86_64 5.1.71-1.el6
 mysql-community-libs           x86_64  5.6.29-2.el6  mysql56-community
1.9 M
```

```
     replacing  mysql-libs.x86_64 5.1.71-1.el6
 mysql-community-libs-compat   x86_64  5.6.29-2.el6  mysql56-community
1.6 M
     replacing  mysql-libs.x86_64 5.1.71-1.el6
 mysql-community-server        x86_64  5.6.29-2.el6  mysql56-community
53  M
     replacing  mysql-server.x86_64 5.1.71-1.el6
Installing for dependencies:
mysql-community-common        x86_64  5.6.29-2.el6  mysql56-community
308 k

Transaction Summary
========================================================================
=======
Install    5 Package(s)
Total download size: 74 M
```

Is this ok [y/N]: y

```
Downloading Packages:
(1/5): mysql-community-client-5.6.29-2.el6.x86_64.rpm     |  18 MB
00:28
(2/5): mysql-community-common-5.6.29-2.el6.x86_64.rpm     | 308 kB
00:01
(3/5): mysql-community-libs-5.6.29-2.el6.x86_64.rpm      | 1.9 MB
00:05
(4/5): mysql-community-libs-compat-5.6.29-2.el6.x86_64.rpm | 1.6 MB
00:05
(5/5): mysql-community-server-5.6.29-2.el6.x86_64.rpm     |  53 MB
03:42
 ----------------------------------------------------------------------
--------
Total                                            289 kB/s |  74 MB
04:24
warning: rpmts_HdrFromFdno: Header V3 DSA/SHA1 Signature, key ID
<key_id> NOKEY
Retrieving key from file:/etc/pki/rpm-gpg/RPM-GPG-KEY-mysql
Importing GPG key 0x5072E1F5:
 Userid : MySQL Release Engineering <mysql-build@oss.oracle.com>
Package: mysql-community-release-el6-5.noarch
         (@/mysql-community-release-el6-5.noarch)
 From   : file:/etc/pki/rpm-gpg/RPM-GPG-KEY-mysql
```

Is this ok [y/N]: y

```
Running rpm_check_debug
Running Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing : mysql-community-common-5.6.29-2.el6.x86_64
```

```
....Output truncated....
1.el6.x86_64
7/8
  Verifying  : mysql-5.1.71-1.el6.x86_64
8/8
Installed:
  mysql-community-client.x86_64 0:5.6.29-2.el6
  mysql-community-libs.x86_64 0:5.6.29-2.el6
  mysql-community-libs-compat.x86_64 0:5.6.29-2.el6
  mysql-community-server.x86_64 0:5.6.29-2.el6

Dependency Installed:
  mysql-community-common.x86_64 0:5.6.29-2.el6

Replaced:
  mysql.x86_64 0:5.1.71-1.el6 mysql-libs.x86_64 0:5.1.71-1.el6
  mysql-server.x86_64 0:5.1.71-1.el6
Complete!
```

7. Inicie el servidor MySQL:

```
[root@mcctb ~]# service mysqld start
```

```
Initializing MySQL database:  2016-04-05 19:44:38 0 [Warning] TIMESTAMP
with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see documentation
for more details).
2016-04-05 19:44:38 0 [Note] /usr/sbin/mysqld (mysqld 5.6.29)
         starting as process 2487 ...
2016-04-05 19:44:38 2487 [Note] InnoDB: Using atomics to ref count
         buffer pool pages
2016-04-05 19:44:38 2487 [Note] InnoDB: The InnoDB memory heap is
disabled
....Output truncated....
2016-04-05 19:44:42 2509 [Note] InnoDB: Shutdown completed; log sequence
       number 1625987


PLEASE REMEMBER TO SET A PASSWORD FOR THE MySQL root USER!
To do so, start the server, then issue the following commands:

  /usr/bin/mysqladmin -u root password 'new-password'
  /usr/bin/mysqladmin -u root -h mcctb password 'new-password'

Alternatively, you can run:
  /usr/bin/mysql_secure_installation

which will also give you the option of removing the test
databases and anonymous user created by default.  This is
strongly recommended for production servers.
.....Output truncated.....
WARNING: Default config file /etc/my.cnf exists on the system
This file will be read by default by the MySQL server
If you do not want to use this, either remove it, or use the
--defaults-file argument to mysqld_safe when starting the server


                                                        [  OK  ]
Starting mysqld:                                        [  OK  ]
```

8. Confirme que el servidor MySQL está ejecutando:

```
[root@mcctb ~]# service mysqld status
```

```
mysqld (pid  2739) is running...
```

9. Configure los ajustes de seguridad y contraseña:

```
[root@mcctb ~]# mysql_secure_installation
```

```
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MySQL
        SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!

 In order to log into MySQL to secure it, we'll need the current
 password for the root user.  If you've just installed MySQL, and
 you haven't set the root password yet, the password will be blank,
 so you should just press enter here.

 Enter current password for root (enter for none):    <== on default
install

                                                    hit enter here
 OK, successfully used password, moving on...

 Setting the root password ensures that nobody can log into the MySQL
 root user without the proper authorization.

 Set root password? [Y/n] y
 New password:
 Re-enter new password:
 Password updated successfully!
 Reloading privilege tables..
  ... Success!

 By default, a MySQL installation has an anonymous user, allowing anyone
 to log into MySQL without having to have a user account created for
 them.  This is intended only for testing, and to make the installation
 go a bit smoother.  You should remove them before moving into a
 production environment.

 Remove anonymous users? [Y/n] y
  ... Success!

 Normally, root should only be allowed to connect from 'localhost'.
This
 ensures that someone cannot guess at the root password from the
network.

 Disallow root login remotely? [Y/n] y
  ... Success!

 By default, MySQL comes with a database named 'test' that anyone can
 access.  This is also intended only for testing, and should be removed
 before moving into a production environment.

 Remove test database and access to it? [Y/n] y
  - Dropping test database...
 ERROR 1008 (HY000) at line 1: Can't drop database 'test';
```

```
database doesn't exist
 ... Failed!  Not critical, keep moving...
 - Removing privileges on test database...
 ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
 ... Success!

All done!  If you've completed all of the above steps, your MySQL
installation should now be secure.

Thanks for using MySQL!

Cleaning up...
```

10. Compruebe que el inicio de sesión de MySQL funciona:

```
[root@mcctb ~]# mysql -u root -p
```

```
Enter password: <configured_password>
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 17
Server version: 5.6.29 MySQL Community Server (GPL)

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reserved.

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input
statement.
mysql>
```

Si el inicio de sesión de MySQL está funcionando, la salida finalizará en la `mysql>` prompt.

Habilite la configuración de inicio automático de MySQL

Debe verificar que la función de inicio automático esté activada para el daemon MySQL. Al activar el daemon MySQL se reinicia automáticamente si se reinicia el sistema en el que reside el software MetroCluster Tiebreaker. Si el daemon MySQL no se está ejecutando, el software Tiebreaker continúa ejecutándose, pero no puede reiniciarse y no se pueden realizar cambios de configuración.

Paso

1. Compruebe que MySQL está habilitado para el inicio automático cuando arranque:

```
[root@mcctb ~]# systemctl list-unit-files mysqld.service
```

```
UNIT FILE            State
----------------- ----------
mysqld.service      enabled
```

Si MySQL no está habilitado para el inicio automático al arrancar, consulte la documentación de MySQL para activar la función de inicio automático para la instalación.

Instale el servidor MariaDB en Red Hat Enterprise Linux 8

Debe instalar el servidor MariaDB en el sistema host antes de instalar o actualizar el software Tiebreaker. Para Red Hat Enterprise Linux 7 o CentOS 7, Instale MySQL Server.

Antes de empezar

El sistema host debe ejecutarse en Red Hat Enterprise Linux (RHEL) 8.

Pasos

1. Inicie sesión como `root` usuario o un usuario que puede sudo al modo de privilegios avanzado.

```
login as: root
root@mcctb's password:
Last login: Fri Jan  8 21:33:00 2017 from host.domain.com
```

2. Instale el servidor MariaDB:

```
[root@mcctb ~]# yum install mariadb-server.x86_64
```

```
[root@mcctb ~]# yum install mariadb-server.x86_64
Loaded plugins: fastestmirror, langpacks
 ...
 ...


========================================================================
===
 Package                        Arch    Version         Repository
Size
========================================================================
===
Installing:
mariadb-server                 x86_64   1:5.5.56-2.el7   base
11 M
```

```
Installing for dependencies:

Transaction Summary
========================================================================
===
Install  1 Package  (+8 Dependent packages)
Upgrade              ( 1 Dependent package)


Total download size: 22 M
Is this ok [y/d/N]: y

Downloading packages:
No Presto metadata available for base warning:
/var/cache/yum/x86_64/7/base/packages/mariadb-libs-5.5.56-
2.el7.x86_64.rpm:
Header V3 RSA/SHA256 Signature,
key ID f4a80eb5: NOKEY] 1.4 MB/s | 3.3 MB  00:00:13 ETA
Public key for mariadb-libs-5.5.56-2.el7.x86_64.rpm is not installed
(1/10): mariadb-libs-5.5.56-2.el7.x86_64.rpm  | 757 kB  00:00:01
..
..
(10/10): perl-Net-Daemon-0.48-5.el7.noarch.rpm|  51 kB  00:00:01
------------------------------------------------------------------------
-----------------
Installed:
  mariadb-server.x86_64 1:5.5.56-2.el7

Dependency Installed:
mariadb.x86_64 1:5.5.56-2.el7
perl-Compress-Raw-Bzip2.x86_64 0:2.061-3.el7
perl-Compress-Raw-Zlib.x86_64 1:2.061-4.el7
perl-DBD-MySQL.x86_64 0:4.023-5.el7
perl-DBI.x86_64 0:1.627-4.el7
perl-IO-Compress.noarch 0:2.061-2.el7
perl-Net-Daemon.noarch 0:0.48-5.el7
perl-PlRPC.noarch 0:0.2020-14.el7

Dependency Updated:
  mariadb-libs.x86_64 1:5.5.56-2.el7
Complete!
```

3. Inicie el servidor MariaDB:

```
[root@mcctb ~]# systemctl start mariadb
```

4. Compruebe que el servidor MariaDB se ha iniciado:

```
[root@mcctb ~]# systemctl status mariadb
```

```
[root@mcctb ~]# systemctl status mariadb
mariadb.service - MariaDB database server
...
Nov 08 21:28:59 mcctb systemd[1]: Starting MariaDB database server...
...
Nov 08 21:29:01 mcctb systemd[1]: Started MariaDB database server.
```

5. Configure los ajustes de seguridad y contraseña:

> (i) Cuando se le solicite la contraseña root, déjela vacía y pulse Intro para continuar configurando la configuración de seguridad y contraseña.

```
[root@mcctb ~]# mysql_secure_installation
```

```
root@localhost systemd]# mysql_secure_installation

 NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
       SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user.  If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
 ... Success!


By default, a MariaDB installation has an anonymous user, allowing
anyone
to log into MariaDB without having to have a user account created for
them.  This is intended only for testing, and to make the installation
go a bit smoother.  You should remove them before moving into a
```

```
production environment.

Remove anonymous users? [Y/n] y
 ... Success!

Normally, root should only be allowed to connect from 'localhost'.  This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
 ... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access.  This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
 - Dropping test database...
   ... Success!
 - Removing privileges on test database...
    ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n]

 ... Success!

Cleaning up...

All done!  If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
```

Active la configuración de inicio automático para el servidor MariaDB

Debe verificar que la función de inicio automático está activada para el servidor MariaDB. Si no activa la función de inicio automático y el sistema en el que reside el software MetroCluster Tiebreaker debe reiniciarse, el software de tiebreaker, pero el servicio MariaDB no puede reiniciarse y no se pueden realizar cambios de configuración.

Pasos

1. Active el servicio de inicio automático:

```
[root@mcctb ~]# systemctl enable mariadb.service
```

2. Compruebe que MariaDB está habilitado para iniciarse automáticamente al arrancar:

```
[root@mcctb ~]# systemctl list-unit-files mariadb.service
```

```
UNIT FILE          State
------------------ ----------
mariadb.service    enabled
```

Instale o actualice a tiebreaker 1,5

Realice una nueva instalación o actualización a tiebreaker 1,5 en el sistema operativo Linux del host para supervisar las configuraciones de MetroCluster.

Acerca de esta tarea

- El sistema de almacenamiento debe ejecutar una versión compatible de ONTAP. Consulte "Requisitos de software" tabla para obtener más información.

- Debe haber instalado OpenJDK mediante el `yum install java-x.x.x-openjdk` comando. Tiebreaker 1,5 y versiones posteriores son compatibles con OpenJDK 17, 18 o 19.

- Puede instalar MetroCluster tiebreaker como usuario no root con suficientes privilegios administrativos para realizar la instalación de tiebreaker, crear tablas y usuarios y definir la contraseña de usuario.

Pasos

1. Descargue el software MetroCluster tiebreaker y la clave MetroCluster_tiebreaker_RPM_GPG.

   > ⓘ La clave MetroCluster_tiebreaker_RPM_GPG está disponible para descargar desde la misma página que se descarga el paquete de software para tiebreaker 1,5 en el sitio de soporte de NetApp.

   "MetroCluster tiebreaker (descargas) - Sitio de soporte de NetApp"

2. Inicie sesión en el host como usuario raíz.

3. Cree un usuario que no sea raíz y el `mcctbgrp` grupo.

   a. Cree un usuario que no sea root y defina la contraseña.

      Los siguientes comandos de ejemplo crean un usuario que no es raíz llamado `mcctbuser1`:

      ```
      [root@mcctb ~]# useradd mcctbuser1
      [root@mcctb ~]# passwd mcctbuser1
      Changing password for user mcctbuser1.
      New password:
      Retype new password:
      passwd: all authentication tokens updated successfully.
      ```

   b. Cree un grupo denominado `mcctbgrp`:

```
[root@mcctb ~~]# groupadd mcctbgrp
```

c. Añada el usuario que no sea raíz al que ha creado `mcctbgrp` grupo.

Se añade el siguiente comando `mcctbuser1` para la `mcctbgrp` grupo:

```
[root@mcctb ~]# usermod -a -G mcctbgrp mcctbuser1
```

4. Verifique el archivo RPM.

   Ejecute los siguientes subpasos desde el directorio que contiene la clave RPM.

   a. Descargue e importe el archivo de claves RPM:

   ```
   [root@mcctb ~]# rpm --import MetroCluster_Tiebreaker_RPM_GPG.key
   ```

   b. Compruebe la huella digital para comprobar que se ha importado la clave correcta.

      En el ejemplo siguiente se muestra una huella digital correcta de la clave:

   ```
   root@mcctb:~/signing/mcctb-rpms# gpg --show-keys --with-fingerprint
   MetroCluster_Tiebreaker_RPM_GPG.key
   pub     rsa3072 2022-11-17 [SCEA] [expires: 2025-11-16]
           65AC 1562 E28A 1497 7BBD  7251 2855 EB02 3E77 FAE5
   uid                      MCCTB-RPM (mcctb RPM production signing)
   <mcctb-rpm@netapp.com>
   ```

   a. Compruebe la firma: `rpm --checksig NetApp-MetroCluster-Tiebreaker-Software-1.5-1.x86_64.rpm`

   ```
   NetApp-MetroCluster-Tiebreaker-Software-1.5-1.x86_64.rpm: digests OK
   ```

   > (i) Sólo debe continuar con la instalación una vez que haya verificado correctamente la firma.

5. instale o actualice el software de tiebreaker:

   > (i) Solo puede actualizar a tiebreaker versión 1.5 cuando actualice desde la versión 1.4 de tiebreaker. No se puede actualizar desde versiones anteriores a Tiebreaker 1.5.

   Seleccione el procedimiento correcto en función de si está realizando una nueva instalación o actualizando una instalación existente.

Realice una instalación nueva

a. Recupere y registre la ruta de acceso absoluta para Java:

```
[root@mcctb ~]# readlink -f /usr/bin/java
/usr/lib/jvm/java-19-openjdk-19.0.0.0.36-
2.rolling.el8.x86_64/bin/java
```

b. Ejecute el siguiente comando: `rpm -ivh NetApp-MetroCluster-Tiebreaker-Software-1.5-1.x86_64.rpm`

El sistema muestra el siguiente resultado para una instalación correcta:

> (i) Cuando se le solicite durante la instalación, proporcione el usuario que no sea root que haya creado y asignado previamente al `mcctbgrp` grupo.

Ejemplo

```
Verifying...
################################# [100%]
Preparing...
################################# [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So################################# [100%]
Enter the absolute path for Java : /usr/lib/jvm/java-19-
openjdk-19.0.0.0.36-2.rolling.el8.x86_64/bin/java
Verifying if Java exists...
Found Java. Proceeding with the installation.
Enter host user account to use for the installation:
mcctbuser1
User account mcctbuser1 found. Proceeding with the
installation
Enter database user name:
root
Please enter database password for root
Enter password:
Sealed          false
Do you wish to auto unseal vault(y/n)?y
Enter the key1:
Enter the key2:
Enter the key3:
Success! Uploaded policy: mcctb-policy
Error enabling approle auth: Error making API request.
URL: POST http://127.0.0.1:8200/v1/sys/auth/approle
Code: 400. Errors:
* path is already in use at approle/
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Password updated successfully in the vault.
Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software
Created symlink /etc/systemd/system/multi-
user.target.wants/netapp-metrocluster-tiebreaker-
software.service → /etc/systemd/system/netapp-metrocluster-
tiebreaker-software.service.
Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
```

```
Successfully installed NetApp MetroCluster Tiebreaker software
version 1.5.
```

Actualizar una instalación existente

a. Compruebe que una versión compatible de OpenJDK está instalada y es la versión actual de Java que se encuentra en el host.

> (i) Para las actualizaciones de Tiebreaker 1.5, debe instalar OpenJDK versión 17, 18 o 19.

```
[root@mcctb ~]# readlink -f /usr/bin/java
/usr/lib/jvm/java-19-openjdk-19.0.0.0.36-
2.rolling.el8.x86_64/bin/java
```

b. Compruebe que el servicio del almacén no está sellado y en funcionamiento: `vault status`

```
[root@mcctb ~]# vault status
Key             Value
---             -----
Seal Type       shamir
Initialized     true
Sealed          false
Total Shares    5
Threshold       3
Version         1.12.2
Build Date      2022-11-23T12:53:46Z
Storage Type    file
Cluster Name    vault
Cluster ID      <cluster_id>
HA Enabled      false
```

c. Actualice el software Tiebreaker.

```
[root@mcctb ~]# rpm -Uvh NetApp-MetroCluster-Tiebreaker-Software-
1.5-1.x86_64.rpm
```

El sistema muestra el siguiente resultado para una actualización correcta:

Ejemplo

```
Verifying...
################################# [100%]
Preparing...
################################# [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So################################# [ 50%]

Enter the absolute path for Java : /usr/lib/jvm/java-19-
openjdk-19.0.0.0.36-2.rolling.el8.x86_64/bin/java
Verifying if Java exists...
Found Java. Proceeding with the installation.
Enter host user account to use for the installation:
mcctbuser1
User account mcctbuser1 found. Proceeding with the
installation
Sealed          false
Do you wish to auto unseal vault(y/n)?y
Enter the key1:
Enter the key2:
Enter the key3:
Success! Uploaded policy: mcctb-policy
Error enabling approle auth: Error making API request.
URL: POST http://127.0.0.1:8200/v1/sys/auth/approle
Code: 400. Errors:
* path is already in use at approle/
Success! Enabled the kv secrets engine at: mcctb/
Success! Data written to: auth/approle/role/mcctb-app
Enter database user name : root
Please enter database password for root
Enter password:
Password updated successfully in the database.
Password updated successfully in the vault.
Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable
netapp-metrocluster-tiebreaker-software
Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Successfully upgraded NetApp MetroCluster Tiebreaker software
to version 1.5.
Cleaning up / removing...
```

```
        2:NetApp-MetroCluster-Tiebreaker-
So############################## [100%]
```

> ⓘ Si introduce la contraseña raíz de MySQL incorrecta, el software Tiebreaker indica que se
> ha instalado correctamente, pero muestra mensajes de acceso denegado. Para resolver el
> problema, debe desinstalar el software Tiebreaker mediante `rpm -e` Y a continuación,
> vuelva a instalar el software utilizando la contraseña raíz de MySQL correcta.

6. Compruebe la conectividad de tiebreaker con el software MetroCluster abriendo una conexión SSH desde
   el host Tiebreaker hasta cada LIF de gestión de nodos y LIF de gestión de clústeres.

Información relacionada

"Soporte de NetApp"

Instale tiebreaker 1,4

Instale las dependencias de MetroCluster tiebreaker 1,4

Según el sistema operativo Linux del host, instale un servidor MySQL o MariaDB antes
de instalar o actualizar el software tiebreaker.

Pasos

1. Instale JDK.
2. Instalar el servidor MySQL o MariaDB:

Si el host Linux es	Realice lo siguiente…
Red Hat Enterprise Linux 7/CentOS 7	Instale MySQL Server 5.5.30 o posterior y las versiones 5,6.x en Red Hat Enterprise Linux 7 o CentOS 7
Red Hat Enterprise Linux 8	Instale el servidor MariaDB en Red Hat Enterprise Linux 8

Instale JDK

Debe instalar JDK en el sistema host antes de instalar o actualizar el software tiebreaker. Tiebreaker 1,4 y
versiones anteriores son compatibles con JDK 1,8.0. (JRE 8).

Pasos

1. Inicie sesión como usuario raíz.

```
login as: root
root@mcctb's password:
Last login: Fri Jan  8 21:33:00 2017 from host.domain.com
```

2. Instale JDK 1,8.0:

```
yum install java-1.8.0-openjdk.x86_64
```

```
[root@mcctb ~]# yum install java-1.8.0-openjdk.x86_64
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
... shortened....
Dependencies Resolved


================================================================
Package               Arch    Version                Repository    Size
================================================================
Installing:
 java-1.8.0-openjdk   x86_64  1:1.8.0.144-0.b01.el7_4 updates      238 k
 ..
 ..
Transaction Summary
================================================================
Install  1 Package  (+ 4 Dependent packages)

Total download size: 34 M
Is this ok [y/d/N]: y

Installed:
java-1.8.0-openjdk.x86_64 1:1.8.0.144-0.b01.el7_4
Complete!
```

Instale MySQL Server 5.5.30 o posterior y las versiones 5,6.x en Red Hat Enterprise Linux 7 o CentOS 7

Debe instalar MySQL Server 5.5.30 o posterior y la versión 5.6.x en el sistema host antes de instalar o actualizar el software Tiebreaker. Para Red Hat Enterprise Linux 8, Instale el servidor MariaDB.

Pasos

1. Inicie sesión como usuario root.

```
login as: root
root@mcctb's password:
Last login: Fri Jan  8 21:33:00 2016 from host.domain.com
```

2. Añada el repositorio de MySQL al sistema host:

```
[root@mcctb ~]# yum localinstall https://dev.mysql.com/get/mysql57-community-
release-el6-11.noarch.rpm
```

```
Loaded plugins: product-id, refresh-packagekit, security, subscription-
manager
Setting up Local Package Process
Examining /var/tmp/yum-root-LLUw0r/mysql-community-release-el6-
5.noarch.rpm: mysql-community-release-el6-5.noarch
Marking /var/tmp/yum-root-LLUw0r/mysql-community-release-el6-
5.noarch.rpm to be installed
Resolving Dependencies
--> Running transaction check
---> Package mysql-community-release.noarch 0:el6-5 will be installed
--> Finished Dependency Resolution
Dependencies Resolved
========================================================================
========
Package                 Arch    Version
                                    Repository
Size
========================================================================
========
Installing:
mysql-community-release
                        noarch el6-5 /mysql-community-release-el6-
5.noarch 4.3 k
Transaction Summary
========================================================================
========
Install       1 Package(s)
Total size: 4.3 k
Installed size: 4.3 k
Is this ok [y/N]: y
Downloading Packages:
Running rpm_check_debug
Running Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing : mysql-community-release-el6-5.noarch
1/1
  Verifying  : mysql-community-release-el6-5.noarch
1/1
Installed:
  mysql-community-release.noarch 0:el6-5
Complete!
```

3. Deshabilite el repositorio de MySQL 57:

```
[root@mcctb ~]# yum-config-manager --disable mysql57-community
```

4. Habilite el repositorio de MySQL 56:

```
[root@mcctb ~]# yum-config-manager --enable mysql56-community
```

5. Habilite el repositorio:

```
[root@mcctb ~]# yum repolist enabled | grep "mysql.-community."
```

```
mysql-connectors-community          MySQL Connectors Community
21
mysql-tools-community               MySQL Tools Community
35
mysql56-community                   MySQL 5.6 Community Server
231
```

6. Instale el servidor de comunidad MySQL:

```
[root@mcctb ~]# yum install mysql-community-server
```

```
Loaded plugins: product-id, refresh-packagekit, security, subscription-
manager
This system is not registered to Red Hat Subscription Management. You
can use subscription-manager
to register.
Setting up Install Process
Resolving Dependencies
--> Running transaction check
 .....Output truncated.....
---> Package mysql-community-libs-compat.x86_64 0:5.6.29-2.el6 will be
obsoleting
--> Finished Dependency Resolution
Dependencies Resolved
=======================================================================
======
Package                         Arch    Version        Repository
Size
=======================================================================
======
Installing:
 mysql-community-client         x86_64  5.6.29-2.el6   mysql56-community
18  M
     replacing  mysql.x86_64 5.1.71-1.el6
 mysql-community-libs           x86_64  5.6.29-2.el6   mysql56-community
1.9 M
```

```
       replacing   mysql-libs.x86_64 5.1.71-1.el6
 mysql-community-libs-compat    x86_64   5.6.29-2.el6   mysql56-community
1.6 M
       replacing   mysql-libs.x86_64 5.1.71-1.el6
 mysql-community-server         x86_64   5.6.29-2.el6   mysql56-community
53  M
       replacing   mysql-server.x86_64 5.1.71-1.el6
Installing for dependencies:
mysql-community-common          x86_64   5.6.29-2.el6   mysql56-community
308 k

Transaction Summary
================================================================================
=======
Install      5 Package(s)
Total download size: 74 M
Is this ok [y/N]: y
Downloading Packages:
(1/5): mysql-community-client-5.6.29-2.el6.x86_64.rpm      |  18 MB
00:28
(2/5): mysql-community-common-5.6.29-2.el6.x86_64.rpm      | 308 kB
00:01
(3/5): mysql-community-libs-5.6.29-2.el6.x86_64.rpm       | 1.9 MB
00:05
(4/5): mysql-community-libs-compat-5.6.29-2.el6.x86_64.rpm  | 1.6 MB
00:05
(5/5): mysql-community-server-5.6.29-2.el6.x86_64.rpm      |  53 MB
03:42
 --------------------------------------------------------------------
--------
Total                                      289 kB/s |  74 MB
04:24
warning: rpmts_HdrFromFdno: Header V3 DSA/SHA1 Signature, key ID
<key_id> NOKEY
Retrieving key from file:/etc/pki/rpm-gpg/RPM-GPG-KEY-mysql
Importing GPG key 0x5072E1F5:
 Userid : MySQL Release Engineering <mysql-build@oss.oracle.com>
Package: mysql-community-release-el6-5.noarch
         (@/mysql-community-release-el6-5.noarch)
 From   : file:/etc/pki/rpm-gpg/RPM-GPG-KEY-mysql
Is this ok [y/N]: y
Running rpm_check_debug
Running Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing : mysql-community-common-5.6.29-2.el6.x86_64
```

```
....Output truncated....
1.el6.x86_64
7/8
  Verifying  : mysql-5.1.71-1.el6.x86_64
8/8
Installed:
  mysql-community-client.x86_64 0:5.6.29-2.el6
  mysql-community-libs.x86_64 0:5.6.29-2.el6
  mysql-community-libs-compat.x86_64 0:5.6.29-2.el6
  mysql-community-server.x86_64 0:5.6.29-2.el6

Dependency Installed:
  mysql-community-common.x86_64 0:5.6.29-2.el6

Replaced:
  mysql.x86_64 0:5.1.71-1.el6 mysql-libs.x86_64 0:5.1.71-1.el6
  mysql-server.x86_64 0:5.1.71-1.el6
Complete!
```

7. Inicie el servidor MySQL:

```
[root@mcctb ~]# service mysqld start
```

```
Initializing MySQL database:  2016-04-05 19:44:38 0 [Warning] TIMESTAMP
with implicit DEFAULT value is deprecated. Please use
--explicit_defaults_for_timestamp server option (see documentation
for more details).
2016-04-05 19:44:38 0 [Note] /usr/sbin/mysqld (mysqld 5.6.29)
         starting as process 2487 ...
2016-04-05 19:44:38 2487 [Note] InnoDB: Using atomics to ref count
         buffer pool pages
2016-04-05 19:44:38 2487 [Note] InnoDB: The InnoDB memory heap is
disabled
....Output truncated....
2016-04-05 19:44:42 2509 [Note] InnoDB: Shutdown completed; log sequence
       number 1625987


PLEASE REMEMBER TO SET A PASSWORD FOR THE MySQL root USER!
To do so, start the server, then issue the following commands:

  /usr/bin/mysqladmin -u root password 'new-password'
  /usr/bin/mysqladmin -u root -h mcctb password 'new-password'

Alternatively, you can run:
  /usr/bin/mysql_secure_installation

which will also give you the option of removing the test
databases and anonymous user created by default.  This is
strongly recommended for production servers.
.....Output truncated.....
WARNING: Default config file /etc/my.cnf exists on the system
This file will be read by default by the MySQL server
If you do not want to use this, either remove it, or use the
--defaults-file argument to mysqld_safe when starting the server


                                                       [  OK  ]
Starting mysqld:                                       [  OK  ]
```

8. Confirme que el servidor MySQL está ejecutando:

```
[root@mcctb ~]# service mysqld status
```

```
mysqld (pid  2739) is running...
```

9. Configure los ajustes de seguridad y contraseña:

```
[root@mcctb ~]# mysql_secure_installation
```

```
  NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MySQL
          SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!


 In order to log into MySQL to secure it, we'll need the current
 password for the root user.  If you've just installed MySQL, and
 you haven't set the root password yet, the password will be blank,
 so you should just press enter here.


 Enter current password for root (enter for none):    <== on default
install

                                                     hit enter here
 OK, successfully used password, moving on...


 Setting the root password ensures that nobody can log into the MySQL
 root user without the proper authorization.


 Set root password? [Y/n] y
 New password:
 Re-enter new password:
 Password updated successfully!
 Reloading privilege tables..
  ... Success!


 By default, a MySQL installation has an anonymous user, allowing anyone
 to log into MySQL without having to have a user account created for
 them.  This is intended only for testing, and to make the installation
 go a bit smoother.  You should remove them before moving into a
 production environment.


 Remove anonymous users? [Y/n] y
  ... Success!


 Normally, root should only be allowed to connect from 'localhost'.
This
 ensures that someone cannot guess at the root password from the
network.


 Disallow root login remotely? [Y/n] y
  ... Success!


 By default, MySQL comes with a database named 'test' that anyone can
 access.  This is also intended only for testing, and should be removed
 before moving into a production environment.


 Remove test database and access to it? [Y/n] y
  - Dropping test database...
 ERROR 1008 (HY000) at line 1: Can't drop database 'test';
```

```
database doesn't exist
 ... Failed!  Not critical, keep moving...
 - Removing privileges on test database...
 ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
 ... Success!

All done!  If you've completed all of the above steps, your MySQL
installation should now be secure.

Thanks for using MySQL!

Cleaning up...
```

10. Compruebe que el inicio de sesión de MySQL funciona:

```
[root@mcctb ~]# mysql -u root -p
```

```
Enter password: <configured_password>
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 17
Server version: 5.6.29 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input
statement.
mysql>
```

Cuando el inicio de sesión de MySQL funciona según lo esperado, la salida termina en el `mysql>` prompt.

Habilite la configuración de inicio automático de MySQL

Debe verificar que la función de inicio automático esté activada para el daemon MySQL. Al activar el daemon MySQL se reinicia automáticamente si se reinicia el sistema en el que reside el software MetroCluster Tiebreaker. Si el daemon MySQL no se está ejecutando, el software Tiebreaker continúa ejecutándose, pero no puede reiniciarse y no se pueden realizar cambios de configuración.

Paso

1. Compruebe que MySQL está habilitado para el inicio automático cuando arranque:

```
[root@mcctb ~]# systemctl list-unit-files mysqld.service
```

```
UNIT FILE          State
----------------- ----------
mysqld.service     enabled
```

Si MySQL no está habilitado para el inicio automático al arrancar, consulte la documentación de MySQL para activar la función de inicio automático para la instalación.

Instale el servidor MariaDB en Red Hat Enterprise Linux 8

Debe instalar el servidor MariaDB en el sistema host antes de instalar o actualizar el software Tiebreaker. Para Red Hat Enterprise Linux 7 o CentOS 7, Instale MySQL Server.

Antes de empezar

El sistema host debe ejecutarse en Red Hat Enterprise Linux (RHEL) 8.

Pasos

1. Inicie sesión como `root` usuario.

```
login as: root
root@mcctb's password:
Last login: Fri Jan  8 21:33:00 2017 from host.domain.com
```

2. Instale el servidor MariaDB:

```
[root@mcctb ~]# yum install mariadb-server.x86_64
```

```
[root@mcctb ~]# yum install mariadb-server.x86_64
Loaded plugins: fastestmirror, langpacks
 ...
 ...


========================================================================
===
 Package                        Arch    Version        Repository
Size
========================================================================
===
Installing:
mariadb-server                 x86_64   1:5.5.56-2.el7   base
11 M
```

```
Installing for dependencies:

Transaction Summary
========================================================================
===
Install  1 Package  (+8 Dependent packages)
Upgrade             ( 1 Dependent package)

Total download size: 22 M
Is this ok [y/d/N]: y

Downloading packages:
No Presto metadata available for base warning:
/var/cache/yum/x86_64/7/base/packages/mariadb-libs-5.5.56-
2.el7.x86_64.rpm:
Header V3 RSA/SHA256 Signature,
key ID f4a80eb5: NOKEY] 1.4 MB/s | 3.3 MB  00:00:13 ETA
Public key for mariadb-libs-5.5.56-2.el7.x86_64.rpm is not installed
(1/10): mariadb-libs-5.5.56-2.el7.x86_64.rpm  | 757 kB  00:00:01
..
..
(10/10): perl-Net-Daemon-0.48-5.el7.noarch.rpm|  51 kB  00:00:01
------------------------------------------------------------------------
-----------------
Installed:
  mariadb-server.x86_64 1:5.5.56-2.el7

Dependency Installed:
mariadb.x86_64 1:5.5.56-2.el7
perl-Compress-Raw-Bzip2.x86_64 0:2.061-3.el7
perl-Compress-Raw-Zlib.x86_64 1:2.061-4.el7
perl-DBD-MySQL.x86_64 0:4.023-5.el7
perl-DBI.x86_64 0:1.627-4.el7
perl-IO-Compress.noarch 0:2.061-2.el7
perl-Net-Daemon.noarch 0:0.48-5.el7
perl-PlRPC.noarch 0:0.2020-14.el7

Dependency Updated:
  mariadb-libs.x86_64 1:5.5.56-2.el7
Complete!
```

3. Inicie el servidor MariaDB:

```
[root@mcctb ~]# systemctl start mariadb
```

4. Compruebe que el servidor MariaDB se ha iniciado:

```
[root@mcctb ~]# systemctl status mariadb
```

```
[root@mcctb ~]# systemctl status mariadb
mariadb.service - MariaDB database server
...
Nov 08 21:28:59 mcctb systemd[1]: Starting MariaDB database server...
...
Nov 08 21:29:01 mcctb systemd[1]: Started MariaDB database server.
```

5. Configure los ajustes de seguridad y contraseña:

> (i) Cuando se le solicite la contraseña root, déjela vacía y pulse Intro para continuar configurando la configuración de seguridad y contraseña.

```
[root@mcctb ~]# mysql_secure_installation
```

```
root@localhost systemd]# mysql_secure_installation

 NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
       SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user.  If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

Set root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
 ... Success!


By default, a MariaDB installation has an anonymous user, allowing
anyone
to log into MariaDB without having to have a user account created for
them.  This is intended only for testing, and to make the installation
go a bit smoother.  You should remove them before moving into a
```

```
production environment.

Remove anonymous users? [Y/n] y
 ... Success!

Normally, root should only be allowed to connect from 'localhost'.  This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
 ... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access.  This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
 - Dropping test database...
   ... Success!
 - Removing privileges on test database...
     ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n]

   ... Success!

Cleaning up...

All done!  If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
```

Active la configuración de inicio automático para el servidor MariaDB

Debe verificar que la función de inicio automático está activada para el servidor MariaDB. Si no activa la función de inicio automático y el sistema en el que reside el software MetroCluster Tiebreaker debe reiniciarse, el software de tiebreaker, pero el servicio MariaDB no puede reiniciarse y no se pueden realizar cambios de configuración.

Pasos

1. Active el servicio de inicio automático:

```
[root@mcctb ~]# systemctl enable mariadb.service
```

2. Compruebe que MariaDB está habilitado para iniciarse automáticamente al arrancar:

```
[root@mcctb ~]# systemctl list-unit-files mariadb.service
```

```
UNIT FILE           State
----------------- ----------
mariadb.service     enabled
```

Instale o actualice a tiebreaker 1,4

Realice una nueva instalación o actualización a tiebreaker 1,4 en el sistema operativo Linux del host para supervisar las configuraciones de MetroCluster.

Acerca de esta tarea

- El sistema de almacenamiento debe ejecutar una versión compatible de ONTAP. Consulte "Requisitos de software" tabla para obtener más información.

- Debe haber instalado OpenJDK mediante el `yum install java-x.x.x-openjdk` comando. Tiebreaker 1,4 y versiones anteriores son compatibles con JDK 1.8.0 (JRE 8).

Pasos

1. Descargue el software MetroCluster tiebreaker.

   "MetroCluster tiebreaker (descargas) - Sitio de soporte de NetApp"

2. Inicie sesión en el host como usuario raíz.

3. instale o actualice el software de tiebreaker:

   Seleccione el procedimiento correcto en función de si está realizando una nueva instalación o actualizando una instalación existente.

Realice una instalación nueva

a. Instale el software tiebreaker ejecutando :

```
rpm -ivh NetApp-MetroCluster-Tiebreaker-Software-1.4-1.x86_64.rpm
```

El sistema muestra el siguiente resultado para una instalación correcta:

```
Verifying...
################################ [100%]
Preparing...
################################ [100%]
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So############################### [100%]
Post installation start Fri Apr  5 02:28:09 EDT 2024
Enter MetroCluster Tiebreaker user password:

Please enter mysql root password when prompted
Enter password:
Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable netapp-
metrocluster-tiebreaker-software
Created symlink /etc/systemd/system/multi-
user.target.wants/netapp-metrocluster-tiebreaker-software.service
→ /etc/systemd/system/netapp-metrocluster-tiebreaker-
software.service.
Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Enabled autostart of NetApp MetroCluster Tiebreaker software
daemon during boot
Created symbolic link for NetApp MetroCluster Tiebreaker software
CLI
Post installation end Fri Apr  5 02:28:22 EDT 2024
Successfully installed NetApp MetroCluster Tiebreaker software
version 1.4.
```

Actualizar una instalación existente

a. Actualice el software Tiebreaker.

```
[root@mcctb ~]# rpm -Uvh NetApp-MetroCluster-Tiebreaker-Software-
1.4-1.x86_64.rpm
```

El sistema muestra el siguiente resultado para una actualización correcta:

```
Verifying...
################################ [100%]
Preparing...
################################ [100%]
Upgrading NetApp MetroCluster Tiebreaker software....
Stopping NetApp MetroCluster Tiebreaker software services before
upgrade.
Updating / installing...
   1:NetApp-MetroCluster-Tiebreaker-
So################################ [ 50%]
Post installation start Mon Apr  8 06:29:51 EDT 2024
Synchronizing state of netapp-metrocluster-tiebreaker-
software.service with SysV service script with
/usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable netapp-
metrocluster-tiebreaker-software
Attempting to start NetApp MetroCluster Tiebreaker software
services
Started NetApp MetroCluster Tiebreaker software services
Enabled autostart of NetApp MetroCluster Tiebreaker software
daemon during boot
Created symbolic link for NetApp MetroCluster Tiebreaker software
CLI
Post upgrade end Mon Apr  8 06:29:51 EDT 2024
Successfully upgraded NetApp MetroCluster Tiebreaker software to
version 1.4.
Cleaning up / removing...
   2:NetApp-MetroCluster-Tiebreaker-
So################################ [100%]
```

(i) Si introduce la contraseña raíz de MySQL incorrecta, el software Tiebreaker indica que se ha instalado correctamente, pero muestra mensajes de acceso denegado. Para resolver el problema, debe desinstalar el software Tiebreaker mediante `rpm -e` Y a continuación, vuelva a instalar el software utilizando la contraseña raíz de MySQL correcta.

4. Compruebe la conectividad de tiebreaker con el software MetroCluster abriendo una conexión SSH desde el host Tiebreaker hasta cada LIF de gestión de nodos y LIF de gestión de clústeres.

Información relacionada

"Soporte de NetApp"