Failover and Failback in an Active-Active Cluster

https://campus.barracuda.com/doc/4259896/

This configuration is available ONLY in 7.7 and above Firmware Versions. For information on High Availability in previous Firmware Versions, call Barracuda Networks Technical Support.

Failover

Failover is a process of moving active Vsite(s) from the failed unit to the Peer unit when one of the units serving requests is in the Failed state. The Peer unit should be in Active state to take over the active Vsite(s) from the failed unit. On a failover, the Peer unit assumes the active Vsite(s) of the failed unit and continues to process the traffic until the failed unit is restored.

Failover can occur in three ways:

1. **Link Down** – If the parameter **Monitor Link** for **WAN**, **LAN** and **Management** is selected in the **ADVANCED > High Availability** page, and when the link is down for any one of the interfaces being monitored, the system goes into the Failed state.
2. **Inability to Serve Traffic** – Instability in any traffic processing module which prevents it from serving traffic will cause the system to go into the Failed state.
3. **Lost Heartbeat** – When the backup unit has not received a heartbeat from the primary unit for nine (9) seconds, it concludes that the primary unit is down or dead and it executes failover.

Failover in Automatic Mode

When the unit that is active and handling traffic fails, the active Vsite(s) automatically fails over to the Peer unit. The Peer unit assumes the Services in Vsite(s) from the failed unit and continues to process the traffic until the failed unit is restored.

Failover in Manual Mode

Failover in manual mode occurs in two ways. They are:

1. When one of the units serving traffic fails.
2. Clicking the **Failover** button on one of the units.

The first case is similar to the automatic failover. When the unit that is active and handling traffic fails, the active Vsite(s) automatically fails over to the Peer unit. The Peer unit assumes the Vsite(s) of the failed unit and continues to process traffic.

In the second case, you can force a failover on one of the units by clicking the **Failover** button in the

Clustered Systems section. The unit switches to the Standby state and the Peer unit assumes the Services in Vsite(s) from the unit and continues to process traffic.

> Failover is always automatic irrespective of **Automatic** or **Manual** mode. In both **Automatic** and **Manual** modes, the Failover process cannot take place if the Peer unit is also down.

Failback

Failback restores functioning Vsite(s) that have failed over from the failed unit to the Peer unit. When the failed unit returns from the Failed state to the Active state (that is, it can now actively serve application requests), the Vsite(s) that were Active on the failed unit before failover are automatically failed back (released) from the Peer unit.

Failback in Automatic Mode

When the failed unit recovers from the Failed state and is ready to resume operation, the Vsite(s) that were Active on the failed unit automatically fails back to the restored unit, and continues to serve traffic. The Peer unit continues to serve traffic to the Vsite(s) that are Active on it (if any).

Failback in Manual Mode

Failback in the manual mode occurs in two ways. They are:

1. Clicking the **Failback** button on the backup unit.
2. If the Peer unit fails and the other unit is in Standby/Active state

In Manual mode, the Peer unit remains Active even if the failed unit restores from the Failed state and is ready to resume operation. You need to click on the **Failback** button in the **Clustered Systems** section of the Peer unit to resume operation on the other unit.
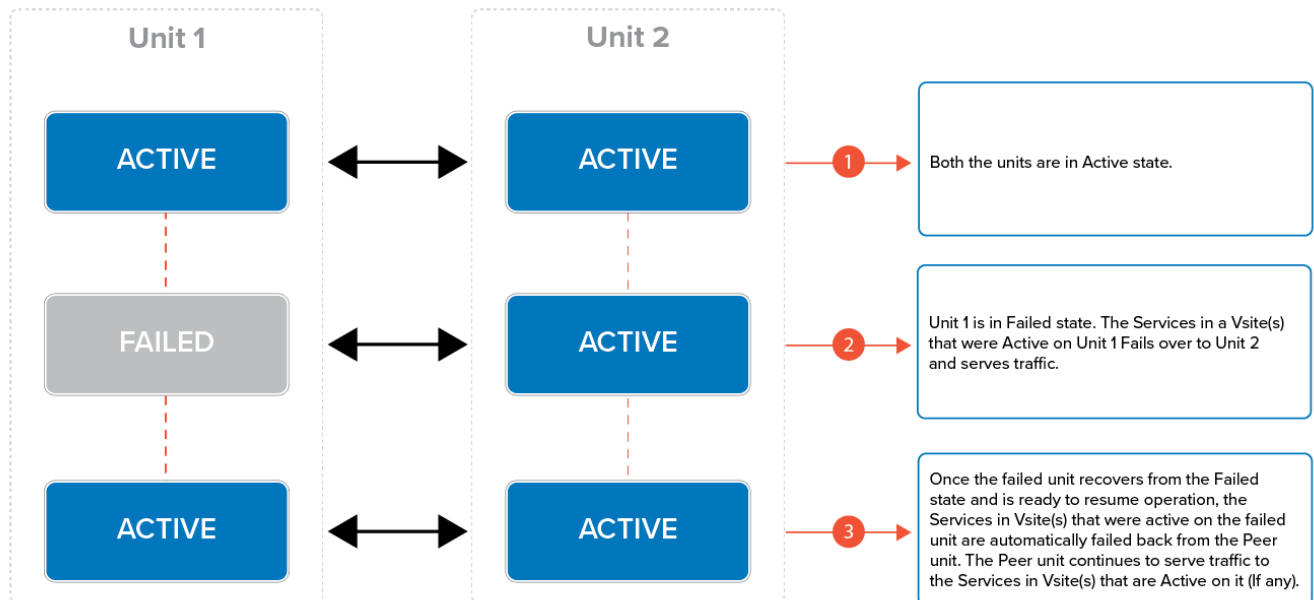
In the second case, the other unit automatically resumes operation if the Peer unit fails. This can occur only when the failed unit is not in Failed state and is ready to resume operation.

Manual Failover/Fallback
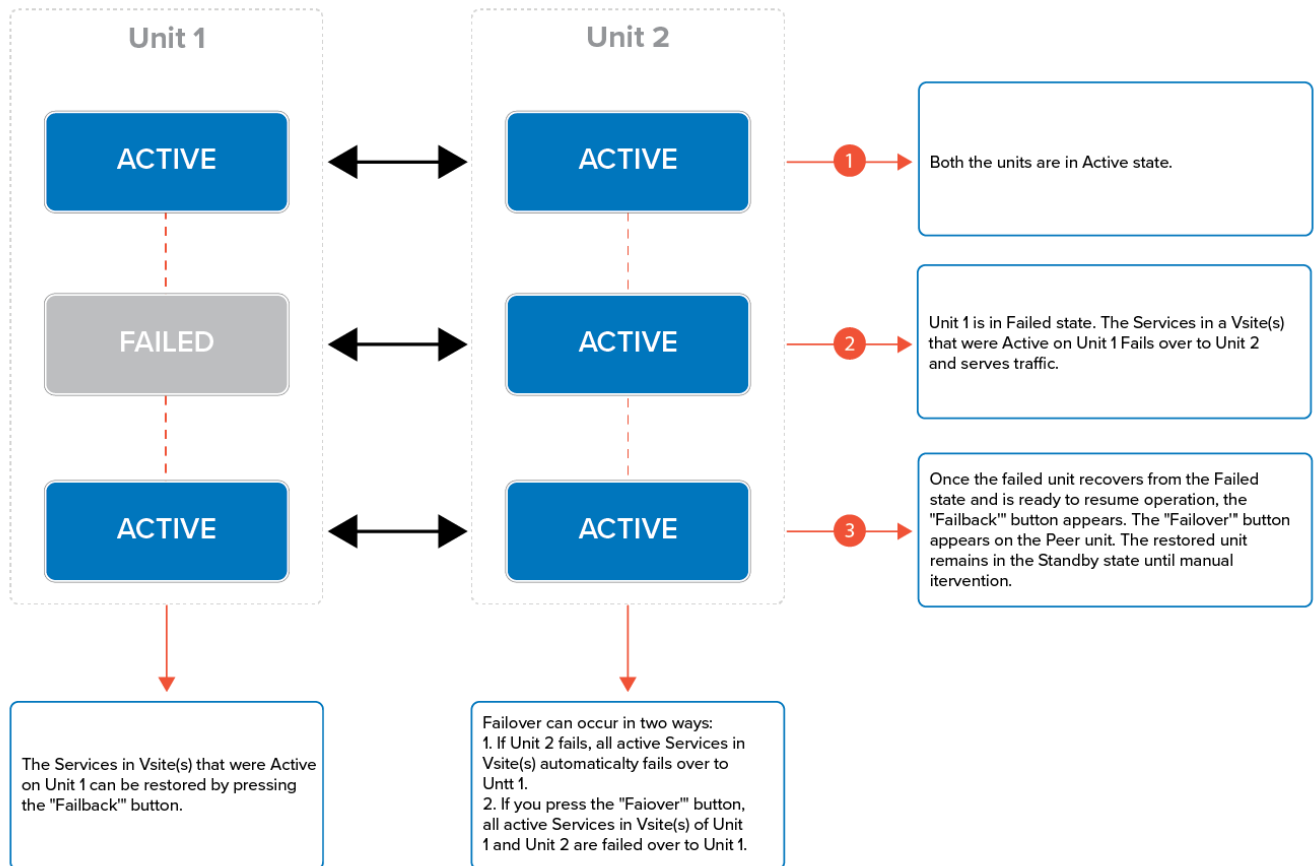
In case if both the units (Self and Peer) goes to Active-Failed state in Manual mode due to network issue (or any other issue such as heartbeat lost), the units will recover with the same state they were in before going to Active-Failed state.

For example, consider Unit_1 and Unit_2 are in Active (Self)-Standby (Peer) and Standby (Self)-Active (Peer) state respectively. If due to network issue or loss of heartbeats, the Unit_1 and Unit_2 are unable to communicate with each other, the units will enter to Active (Self)-Failed (Peer) state. Here, both the units assume that they are Active and the other unit is in Failed state. Upon recovery, both the units will enter the same state they were in before going to Active(Self)-Failed(Peer) state, i.e. Unit_1 in Active(Self)-Standby(Peer) and Unit_2 in Standby(Self)-Active(Peer) state.

Automatic Failover/Fallback

1	Both the units are in Active state.
2	Unit 1 is in Failed state. The Services in a Vsite(s) that were Active on Unit 1 Fails over to Unit 2 and serves traffic.
3	Once the failed unit recovers from the Failed state and is ready to resume operation, the Services in Vsite(s) that were active on the failed unit are automatically failed back from the Peer unit. The Peer unit continues to serve traffic to the Services in Vsite(s) that are Active on it (If any).

Related Articles

- [How to Set Up a High Availability Environment with Two Barracuda Web Application Firewalls](#)
- [How to Remove or Replace Units in a Cluster](#)
- [Updating the Firmware in Clustered Units](#)

Figures

1. man_failover.png
2. aut_failover.png