FLUIDMESH
NETWORKS

CISCO Fluidmesh is now part of Cisco.

TITAN
FAST-FAILOVER

TITAN is Fluidmesh's proprietary fast-failover function, allowing data exchange to resume almost instantly in case of transceiver and/or gateway device failure. This unique feature can virtually guarantee uninterrupted service in mission-critical applications where safety and/or operations would otherwise be compromised by failure of one or more non-redundant radio transceiver units.

Leveraging Fluidmesh's MPLS-based protocol, TITAN is the leading failover technology, able to perform device failovers within 500ms on both Layer 2 and Layer 3 networks.

HOW DOES TITAN WORK?

If TITAN is enabled on an identical backup Mesh-end unit (known as the Secondary Master device), the network works as shown below:

01   **The Secondary Master monitors the Primary Master Fluidmesh device.**

02   **If the Primary Master Mesh-end device fails, the Secondary Master (backup) device takes over all data traffic and routing within 500 milliseconds.**

03   **No service interruptions are experienced by end-users, and operation of the network continues seamlessly.**

TITAN works on wayside network Mesh-end units, and on mobile unit Mesh-point units.

WHERE IS TITAN USED?

Fluidmesh recommends that TITAN be used to build redundancy into gateway units and wireless transceiver units that serve as Mesh-end units at any point, in any mission-critical Layer 2 (single network/VLAN) or Layer 3 (multiple subnets) wireless network.

This is particularly important wherever a single point of failure could hinder the passage of network traffic and lead to financial losses, property damage, personal injury or other severe consequences.

As an example, TITAN is indispensable in the areas of:

Communication Based Train Control (CBTC Technology)

Mining operations and processing

Ports, Terminal Operations and Intermodal yards

Mission-critical mesh networks for traffic automation in Smart Cities

Wireless mesh networks for public safety and video-surveillance

Vehicle Automation and autonomous vehicles

Industrial Automation over a wireless network

AGV and AS/RS systems

Military-high-security applications

MAIN BENEFITS OF TITAN

NEAR-IMMEDIATE RESPONSE

If data exchange ceases or becomes erratic because of failure of a primary Fluidmesh device, TITAN immediately enables and re-routes data traffic through a designated secondary Fluidmesh device, re-establishing normal connectivity within a maximum of 500 milliseconds.

PROOF AGAINST COMPONENT FAILURE

TITAN embraces and exploits the principle of multiple redundancy, providing a failsafe backup connection. This ensures that if connectivity is ever interrupted on your network, your customers will not notice – and data-dependent functions will not be affected.

WORKS ON LAYER 2 AND LAYER 3 NETWORK ARCHITECTURES

Large networks often need to be organized as subdomains in order to be more efficient and operate with much more control. Organizing a network as a series of subdomains creates complexity on the routing tables and makes it challenging in case of failover.

TITAN has a unique approach and can re-converge the network even on Layer 3 typologies in the same amount of time, making it a powerful solution for mission-critical applications. TITAN can also simultaneously configure the L2TP connection on the installed FM10000 global gateway.

NO HUMAN INTERVENTION NEEDED

Once configured, TITAN is completely autonomous and ensures stable, reliable connectivity without the need for human supervision. If a primary device fails, the designated secondary device automatically takes over the exchange of data. If a failed primary device comes back online, the secondary device automatically reverts to its standby role.

A TITAN-enabled network can also be configured to take local actions in response to specific events, ensuring the best possible performance of the mesh network.

TITAN AND BACKHAUL CONNECTION CHECKING

The backhaul check function, already available in all Fluidmesh devices, performs a network connection check of the radio and, if needed, runs failover actions. Together with **TITAN, the BACKHAUL CHECK** can go one step further, speeding up the recovery within 500ms.

INCREASED RELIABILITY AND ERROR-PROOFING

With a maximum connection downtime of half a second, almost all service delivery interruptions cannot be noticed at user level, and the potential for data corruption and consequent delays is practically eliminated.