

5. On information and belief, defendant EMC Corporation is a Massachusetts corporation with a principal place of business at One Dell Way, Round Rock, Texas 78682. EMC Corporation is wholly owned by its corporate parent, Dell Technologies Inc.

JURISDICTION AND VENUE

6. This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 284, and 285.

7. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has specific and general personal jurisdiction over each defendant pursuant to due process and/or the Texas Long Arm Statute, because each defendant has committed acts giving rise to this action within Texas and within this judicial district. The Court's exercise of jurisdiction over each defendant would not offend traditional notions of fair play and substantial justice because each defendant has established minimum contacts with the forum. For example, on information and belief, each defendant has committed acts of infringement in this judicial district, by among other things, selling and offering for sale products that infringe the asserted patent, directly or through intermediaries, as alleged herein.

9. Venue in the Western District of Texas is proper pursuant to 28 U.S.C. §§1391 and/or 1400(b). Each defendant has established places of business in the Western District of Texas. Each defendant is registered to do business in Texas. Upon information and belief, each defendant has transacted business in this District and has committed acts of infringement in this District.

**COUNT ONE - INFRINGEMENT OF
U.S. PATENT NO. 7,126,921**

10. Brazos re-alleges and incorporates by reference the preceding paragraphs of this Complaint.

11. On October 24, 2006, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,126,921 (“the ‘921 Patent”), entitled “Packet Network Providing Fast Distribution of Node Related Information and a Method Therefor.” A true and correct copy of the ‘921 Patent is attached as Exhibit A to this Complaint.

12. Brazos is the owner of all rights, title, and interest in and to the ‘921 Patent, including the right to assert all causes of action arising under the ‘921 Patent and the right to any remedies for the infringement of the ‘921 Patent.

13. Defendants make, use, sell, offer for sale, import, and/or distribute in the United States, including within this judicial district, products such as, but not limited to, controlled networking devices, including but not limited to, routers controlled by DNOS incorporating features of FTOS (collectively, the “Accused Products”).

14. The Accused Products operate based on Dell Networking OS (DNOS), which incorporates features from Force10 Networks’s Force10 Operating System (FTOS) for packet networks having nodes and links.

Dell takes deeper dive into networking, buys Force10

<https://www.networkworld.com/article/2179414/dell-takes-deeper-dive-into-networking--buys-force10.html>

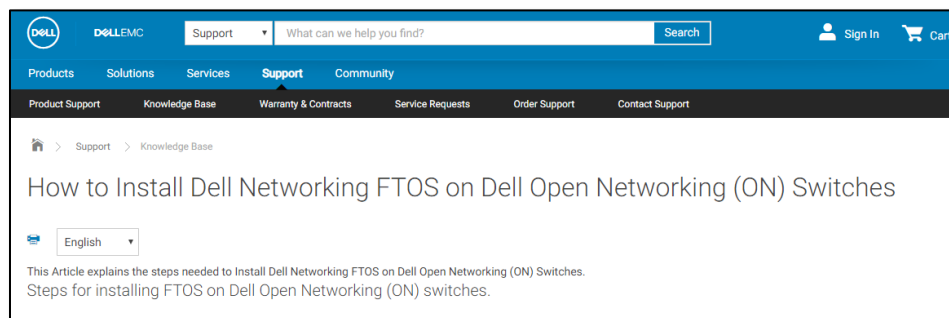
FTOS Configuration Guide

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This guide describes the protocols and features supported by the Force10 Operating System (FTOS) and provides configuration instructions and examples for implementing them. It supports the system platforms E-Series, C-Series, and S-Series.

https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All_CONFIG%20Book_8212_13-Oct-09.pdf

15. FTOS can be installed on Dell Open Networking (ON) Switches.



<https://www.dell.com/support/article/us/en/04/how11548/how-to-install-dell-networking-ftos-on-dell-open-networking-on-switches?lang=en>

16. The Accused Products implement a control plane to control the nodes and a forwarding (data) plane responsive to the control plane. A control plane is a set of protocols that determine how the forwarding plane should forward packets, deciding which data packets are

allowed to be forwarded and where they should go.

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https://cdn.competec.ch/documents/3/9/392428/DE_Handbuch_switch.pdf

17. Link State Advertisements (LSAs) help routing network devices forward data packets. Link state information provides routing-related information to the nodes in the packet network and is provided to the control plane for computing forward routing information.

- Type 9 - Link Local LSA (OSPFv2), Intra-Area-Prefix LSA (OSPFv3)
 - For OSPFv2, this is a link-local "opaque" LSA as defined by RFC2370.
 - For OSPFv3, this LSA carries the IPv6 prefixes of the router and network links.

https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All_CONFIG%20Book_8212_13-Oct-09.pdf

18. When one of the routing network devices goes down, there is a potential to lose access to parts of the network, causing potential packet loss. Therefore, the network will want to maintain a stable topology if it is possible for data flow to continue uninterrupted. To facilitate this in networks using the Accused Products, the computed forward routing information gets

downloaded into a Forwarding Information Base (FIB) on the line cards (the data plane) of the routing network devices.

When a router goes down without a Graceful Restart, there is a potential to lose access to parts of the network due to the necessity of network topology changes. Additionally, LSA flooding and reconvergence can cause substantial delays. It is, therefore, desirable that the network maintain a stable topology if it is possible for data flow to continue uninterrupted.

OSPF Graceful Restart recognizes the fact that in a modern router, the control plane and data plane functionality are separate, restarting the control plane functionality (such as the failover of the active RPM to the backup in a redundant configuration), does not necessarily have to interrupt the forwarding of data packets. This behavior is supported because the forwarding tables previously computed by an active RPM have been downloaded into the Forwarding Information Base on the line cards (the data plane), and are still resident. For packets that have existing FIB/CAM entries, forwarding between ingress and egress ports/VLANs etc., can continue uninterrupted while the control plane OSPF process comes back to full functionality and rebuilds its routing tables.

<https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All CONFIG%20Book 8212 13-Oct-09.pdf>

19. The data plane provides fast propagation of link state information. For example, type 9 link-local opaque grace-LSAs notify the helper neighbors during a restart process. The other nodes routers continue to announce information regarding the restarting router if the network topology is unchanged. Link state information contains the forward route information for the nodes.

The grace period is the time period that a router defines for other adjacent routers to wait for it to return to full control plane functionality, and which it advertises to its neighbors. When an outage occurs, the neighbors will wait for this time period before flooding LSAs and beginning reconvergence. When a router is attempting to restart gracefully, it will originate Type 9 link local opaque grace-LSAs that notify its helper neighbors that the restart process is beginning. During this period, the helper neighbor routers continue to announce the restarting router as fully adjacent, as long as the network topology remains unchanged. When the restarting router completes its restart, it flushes the grace-LSAs, thereby notifying its neighbors that the restart is complete. This should happen before the grace period expires.

<https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All CONFIG%20Book 8212 13-Oct-09.pdf>

20. Moreover, Fast Convergence allows a user to define the speeds at which link-state information originates and accepted to speed up route information propagation.

Fast Convergence (OSPFv2, IPv4 only)

Fast Convergence allows you to define the speeds at which LSAs are originated and accepted, and reduce OSPFv2 end-to-end convergence time. FTOS enables you to accept and originate LSAs as soon as they are available to speed up route information propagation.

https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All_CONFIG%20Book_8212_13-Oct-09.pdf

21. In view of preceding paragraphs, each and every element of at least claim 1 of the '921 Patent is found in the Accused Products.

22. Defendants continue to directly infringe at least one claim of the '921 Patent, literally or under the doctrine of equivalents, by making, using, selling, offering for sale, importing, and/or distributing the Accused Products in the United States, including within this judicial district, without the authority of Brazos.

23. Defendants have received notice and actual or constructive knowledge of the '921 Patent since at least the date of service of this Complaint.

24. Since at least the date of service of this Complaint, through its actions, Defendants have actively induced product makers, distributors, retailers, and/or end users of the Accused Products to infringe the '921 Patent throughout the United States, including within this judicial district, by, among other things, advertising and promoting the use of the Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- <https://www.networkworld.com/article/2179414/dell-takes-deeper-dive-into->

[networking--buys-force10.html](#)

- https://www.force10networks.com/CSPortal20/KnowledgeBase/DOCUMENTATION/CLIConfig/FTOS/All_CONFIG%20Book_8212_13-Oct-09.pdf
- https://cdn.competec.ch/documents/3/9/392428/DE_Handbuch_switch.pdf
- <https://www.dell.com/support/article/us/en/04/how11548/how-to-install-dell-networking-ftos-on-dell-open-networking-on-switches?lang=en>

25. Since at least the date of service of this Complaint, through its actions, Defendants have contributed to the infringement of the '921 Patent by having others sell, offer for sale, or use the Accused Products throughout the United States, including within this judicial district, with knowledge that the Accused Products infringe the '921 Patent. The Accused Products are especially made or adapted for infringing the '921 Patent and have no substantial non-infringing use. For example, in view of the preceding paragraphs, the Accused Products contain functionality which is material to at least one claim of the '921 Patent.

JURY DEMAND

Brazos hereby demands a jury on all issues so triable.

REQUEST FOR RELIEF

WHEREFORE, Brazos respectfully requests that the Court:

- (A) Enter judgment that Defendants infringe one or more claims of the '921 Patent literally and/or under the doctrine of equivalents;
- (B) Enter judgment that Defendants have induced infringement and continue to induce infringement of one or more claims of the '921 Patent;
- (C) Enter judgment that Defendants have contributed to and continue to contribute to the infringement of one or more claims of the '921 Patent;

(D) Award Brazos damages, to be paid by Defendants in an amount adequate to compensate Brazos for such damages, together with pre-judgment and post-judgment interest for the infringement by Defendants of the '921 Patent through the date such judgment is entered in accordance with 35 U.S.C. § 284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. § 284;

(E) Declare this case exceptional pursuant to 35 U.S.C. § 285; and

(F) Award Brazos its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

Dated: May 19, 2020

Respectfully submitted,

/s/ James L. Etheridge

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