

New Generation Digital Cross-connect System

Application
NOTE

Force10's Traverse® Multiservice Transport switch integrates any mix of optional Ethernet, Broadband/HO, and Wideband/LO switching functionality, creating an economical, manageable, and highly scalable New Generation Digital Cross-Connect System solution.

New Generation DCS

The Digital Cross-connect System (DCS or DXC) performs a critical role in a network operator's transport or backhaul network. Designed to optimize network efficiency, these platforms switch and groom bandwidth at multiple levels of granularity for hand-off to the IOF network, or for distribution back into the access network. However, with the increasing capacity demands driven by the influx of new broadband, IP-based access services, scaling legacy DCS/DXC platforms – typically large, power hungry systems that are difficult to manage – becomes increasingly inefficient from both a capital and operational cost perspective.

Force10 Networks eliminates these limitations by building optional wideband/low-order bandwidth management functions directly into the company's industry-leading Traverse Multiservice Transport Switch. Available for a fraction of the cost of a legacy system and allowing you to pay as you grow, this new generation Digital Cross-connect solution offers all the functionality of traditional DCS/DXC, but in a much more economical, versatile and space/ power-efficient form factor. Additionally, the Traverse platform's multiservice design integrates true layer 2 packet switching to support over-subscribed services, along with GFP-enabled support for VLANs, TDM and IP.

A Powerful And Economical Switching Solution

Force10's Traverse™ Multiservice Transport Switch is a true new generation DCS that offers all the functionality of legacy DCS, but in a much more economical, versatile and space/



Traverse 2000 Multiservice Transport Switch

Integrates new generation DCS functions, transport, and Ethernet switching in a compact (1/4 rack high) and economical shelf

Switching matrix scales from 5 to 40 Gbps of capacity by adding modules

Provides a significantly more economical, space efficient, and scalable alternative to legacy DCSs

power efficient form factor. Adding wideband/low-order switching and grooming capabilities to the Traverse platform is as simple as installing an optional VT/TU Switch Module, which provides 5 Gbps of non-blocking VT1.5 and/or VC-11/12 cross-connection capacity. Leveraging the Traverse platform's patent-pending distributed switching architecture, multiple VT/TU Switch Modules can also be installed to enable in-service scalability from 5 to 20 Gbps of switching capacity in a single Traverse 2000 shelf. With the new high density VT Switch and OC-48 modules, any Traverse DCS can be upgraded to support a 40 Gbps switching matrix shelf.

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The Traverse platform goes far beyond the capabilities of legacy DCS systems. A single compact platform can also provide high-density electrical, optical and Ethernet access, scalable transport multiplexing and switching – including support for multiple inter-connected OC-192 rings – as well as optional Ethernet switching. As a carrier grade platform, the Traverse supports a variety of protection modes and provides comprehensive cross-connect provisioning and connection management via the intuitive TransNav™ GUI.

Multi-Layer Bandwidth Management

With the seamless integration of wideband DCS capabilities via optional VT Switch Module(s),

the Traverse™ Multiservice Transport Switch creates an advanced multi-layer bandwidth management system that supports true "any to any" cross-connection ability (See Figure 1). Cost-effective expandability makes the Traverse platform ideally suited for DCS/DXC deployments in end-offices, or in hub locations. When deployed as a distributed DCS solution in an end office, the Traverse platform minimizes backhaul bandwidth requirements. In central hub locations, the Traverse platform serves as a highly-scalable and economical alternative to replacing or upgrading legacy cross-connects by switching and grooming traffic between the access network and core service-layer equipment such as Class 5 switches, ATM switches, and routers.

Cost-effective expandability makes the Traverse platform ideally suited for DCS/DXC deployments in end-offices, or in hub locations.

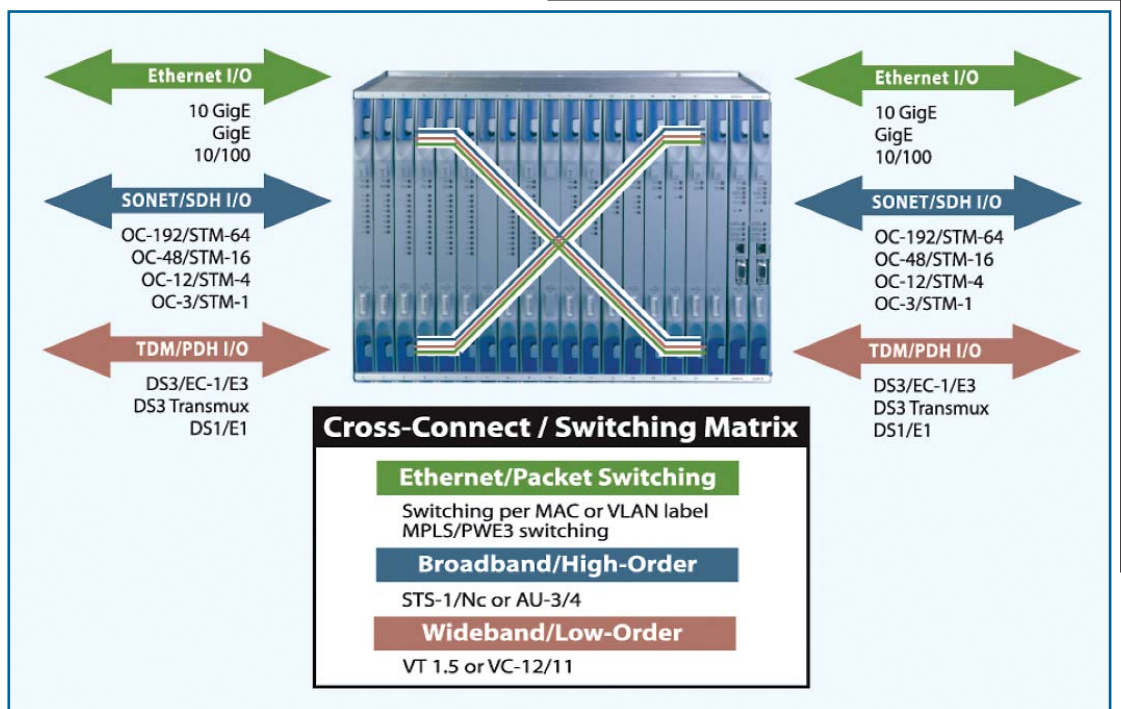


Figure 1: New Generation DCS solution.

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Application NOTE

The wideband cross-connect fabric provides wideband/low-order switching functionality across all supported interface types. In addition to supporting standard DCS/DXC features like groom and fill, bridge & roll, and transmuxing the Traverse also supports integrated test access functionality, whereby interoperability with the

Spirent® Network and Centest testers enables carriers to test and monitor any circuit provisioned on the Traverse switch fabric. The Traverse platform is a fully integrated DCS/DXC, SONET/SDH and packet transport solution that simplifies carrier networks, while providing dramatic scalability and cost advantages.

The Traverse platform serves as a highly-scalable and economical alternative to replacing or upgrading legacy cross-connected networks.

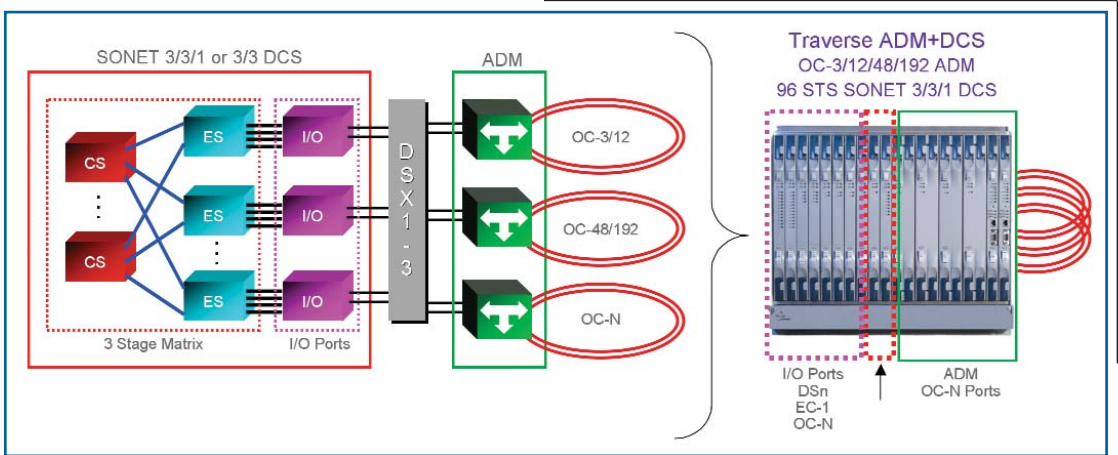


Figure 2: Traverse's Versatility DCS96 Single Integrated ADM+DCS Shelf

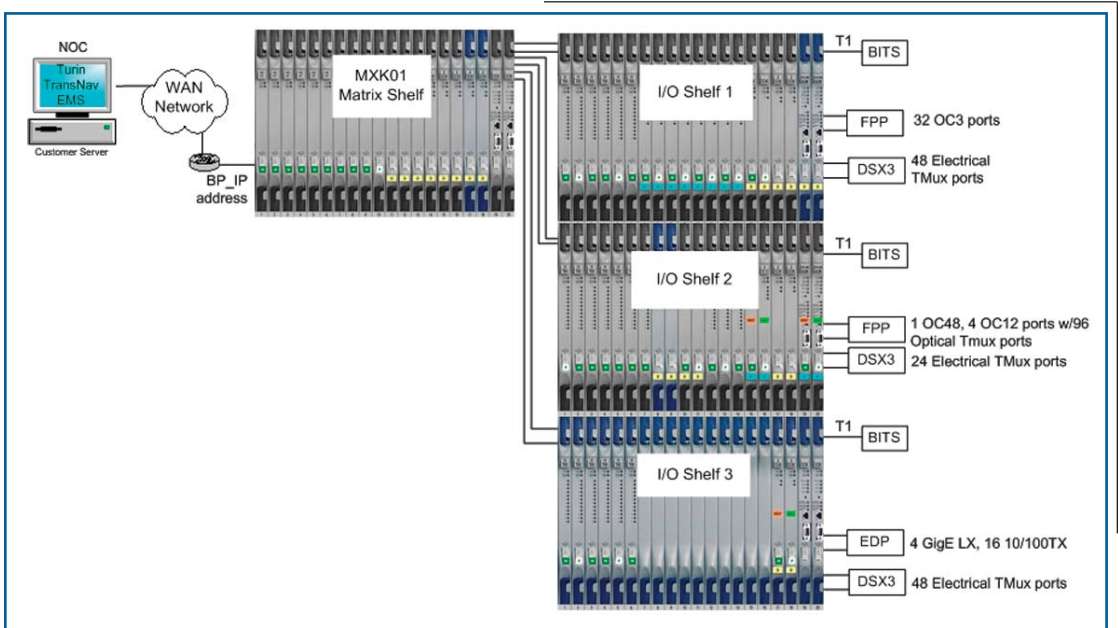


Figure 3: Traverse's Versatile DCS 384 and 768 Matrix and IO Shelves.



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