

ARISTA AND LEVITON

Technology in the Data Center



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BUILDING MORE SCALABLE DATA CENTER NETWORKS

Successful network scalability requires constructing and expanding a network with simple, repeatable designs that can accommodate increased traffic or new devices without impacting applications, workflows or the cost per port. Scaling needs to be linear for both performance and for cost – i.e., as a system supports more nodes, the price per host and the performance per host stays very close to the same. Achieving this challenging goal in the data center network has several components:

- Scaling up the performance of single systems, as this allows more price/performance linearity
- Extending or stretching the addressing of a network using open standards to embrace workload mobility across increased geographic distances and larger data center facilities
- Scaling the manageability and operational capabilities of the network infrastructure in the data center network so that administrators can effectively provision and manage a larger number of systems. Additionally provide increased visibility to the network, and all of the devices that are required to deliver IT services. This includes integration with automation systems via open and extensible APIs
- Topologies must continue to self-organize and self-heal while failing over quickly in the event of link or nodal failure. Technologies that make all bandwidth available, reduce the dependency on the artificial insertion of loops into the network, and enable integration of topology change with planned operational procedures are part of Arista's Extensible Operating System - EOS

Together, Arista and Leviton can help customers achieve a more scalable, flexible, high-density solution.

ARISTA SWITCH OVERVIEW



7500E Series Switch

In compact 7RU (4-slot) and 11RU (8-slot) chassis options, Arista 7500E switches offer up to 30 Terabits of fabric capacity and 14.4Bpps of L2/3 throughput with 1,152 wirespeed 1/10 GbE ports and support for 40GbE and 100GbE interfaces. With front-to-rear airflow, redundant and hot swappable supervisor, power, fabric and cooling modules, the 7500E is energy efficient with typical power consumption of 3.5 watts per 10G port for a fully loaded chassis.



7150 Series Switches

The Arista 7150S series represents the industry's leading ultra low latency 1RU 1/10/40GbE layer 2/3/4 wire speed switch family, offering a unique combination of performance, advanced functionality and extensive onboard resources. Designed to suit the requirements of demanding environments such as ultra low latency financial ECNs, HPC clusters and cloud data centers, the class-leading deterministic latency from 350ns is coupled with a set of advanced tools for monitoring and controlling mission critical environments.



7048T-A Switch

Positioned for server access, the Arista 7048T-A is a wire-speed layer 2/3 switch with 48 1000 Mbps ports and four 1/10Gb Ethernet uplinks delivering up to 40 gigabits of interconnect capacity from the leaf to the spine layer of the network. Running the Arista Extensible Operating System (EOS), the 7048 provides automated switch and network provisioning through its Zero Touch Provisioning (ZTP) and vmTracer features. Unlike typical top-of-rack switches on the market today, the Arista 7048T-A switch offers buffering capability on every port in combination with a purpose-built architecture for congestion management.

LEVITON CONNECTIVITY

Leviton data center systems are designed for turnkey implementation of the physical layer. With the documented pieces and parts from array cords, trunk cables, patch panels, patch cords and cassettes, Leviton helps your physical layer infrastructure meet the needs of 10/40/100 GbE requirements.



Opt-X Unity 40/100G Fiber System

Update your data center to meet new high-speed applications with the Leviton Opt-X® Unity 40/100 G Fiber System - a simple connectivity solution that makes it easy to migrate to 40GbE and 100GbE speeds. System components include MTP trunk cables, harnesses, array cords, and cassettes. They are available in laser-optimized multimode (OM3/OM4) and feature industry-leading 24-fiber MTP® connectors.



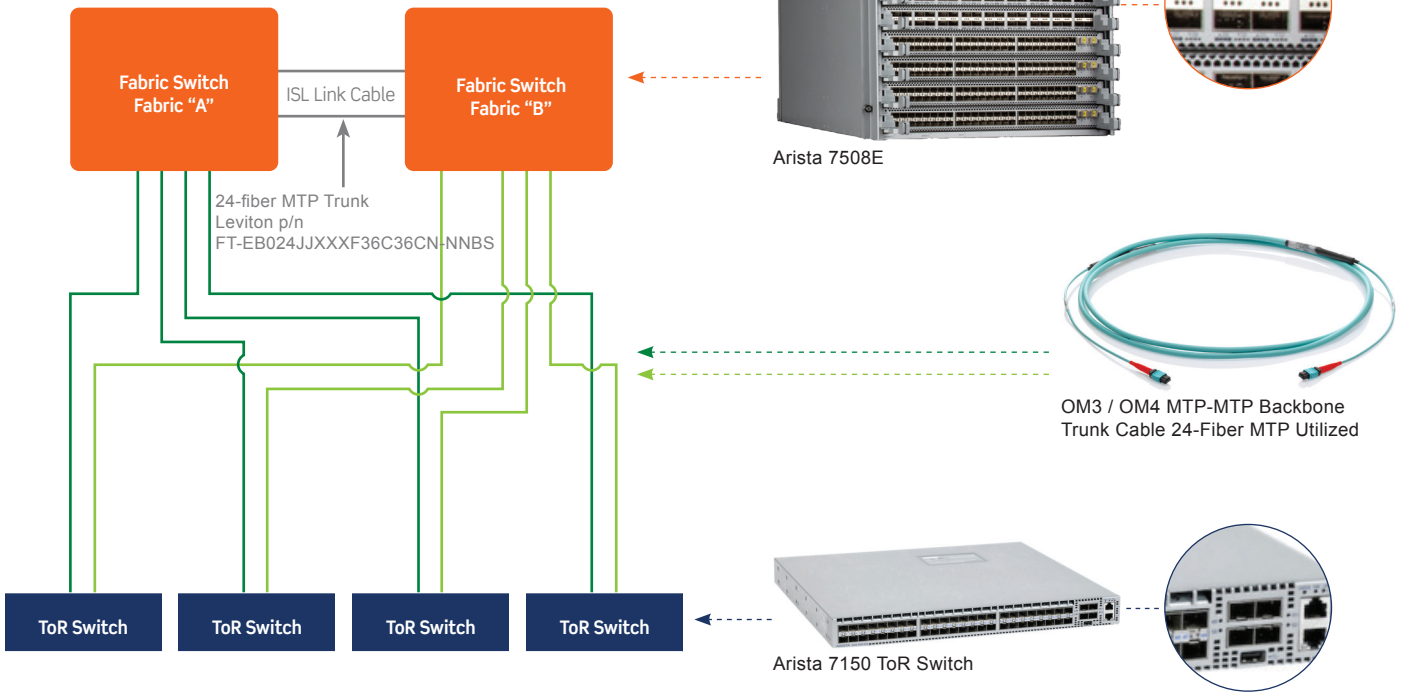
e2XHD Patching System

The e2XHD Patching System provides a high-density solution for data center applications where fast deployment and simple maintenance are priorities. e2XHD fiber cassettes quickly snap in and pull out of high-density 1RU and 4RU panels, making installation, moves, adds, and changes easier than ever. The e2XHD cassettes work seamlessly with Opt-X Unity trunks, harnesses, and array cords to deliver 10GbE, 40GbE, and 100GbE speeds.

ARISTA AND LEVITON: CONNECTIONS

Basic Topology as defined by TIA-942-A

Telecommunications Infrastructure Standard for Data Centers



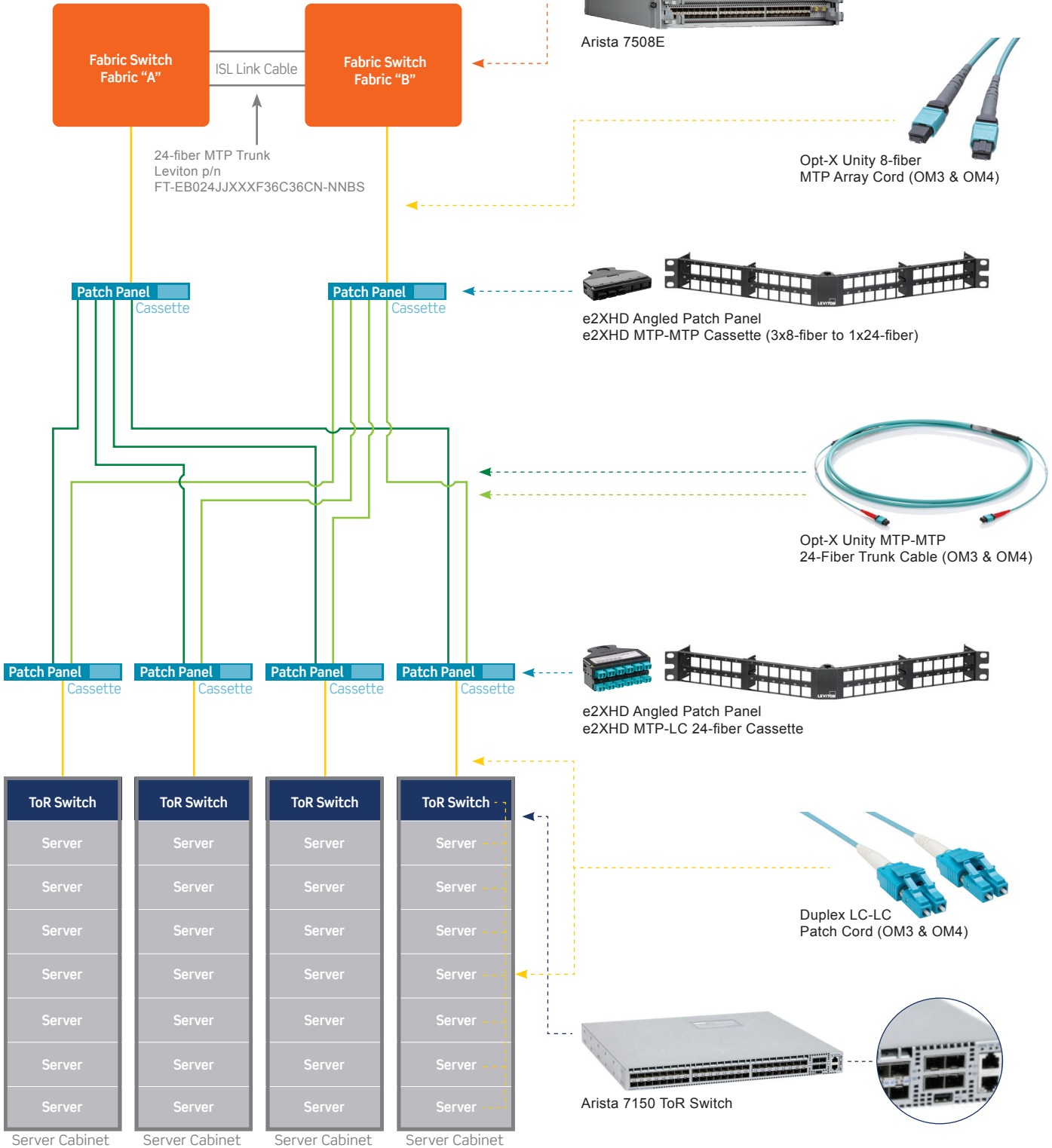
Migration from 10GbE to 40GbE and 100GbE

The following pages show 10, 40, and 100 GbE network topologies, using Arista switches and Leviton connectivity. Each application includes the same 24-fiber MTP backbone trunk cables and patch panels.

10 GBE APPLICATION

Basic 10GbE Solution Building Blocks:

- Opt-X Unity 40/100G Pre-Terminated MTP Trunks
- e2XHD High Density Angled Patch Panels
- e2XHD MTP-LC & MTP-MTP Cassettes
- LC Duplex & MTP Patch Cords (OM3 & OM4)

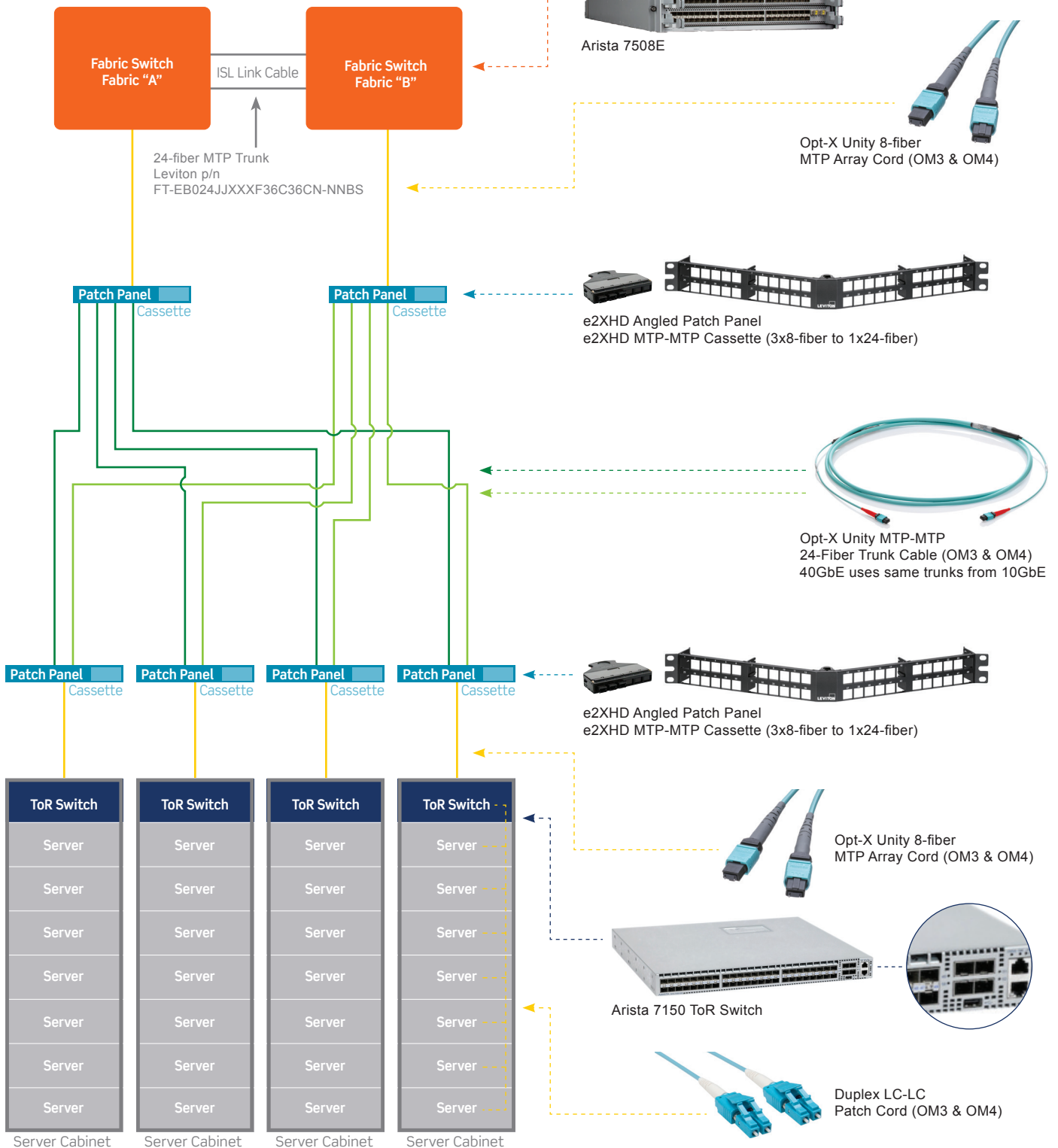


40 GBE (SR4) APPLICATION

Migration from 10GbE to 40GbE

Required component change to enable 40GbE Solution:

- Server end: e2XHD MTP Cassettes
- Server end: Opt-X Unity MTP Array Cords

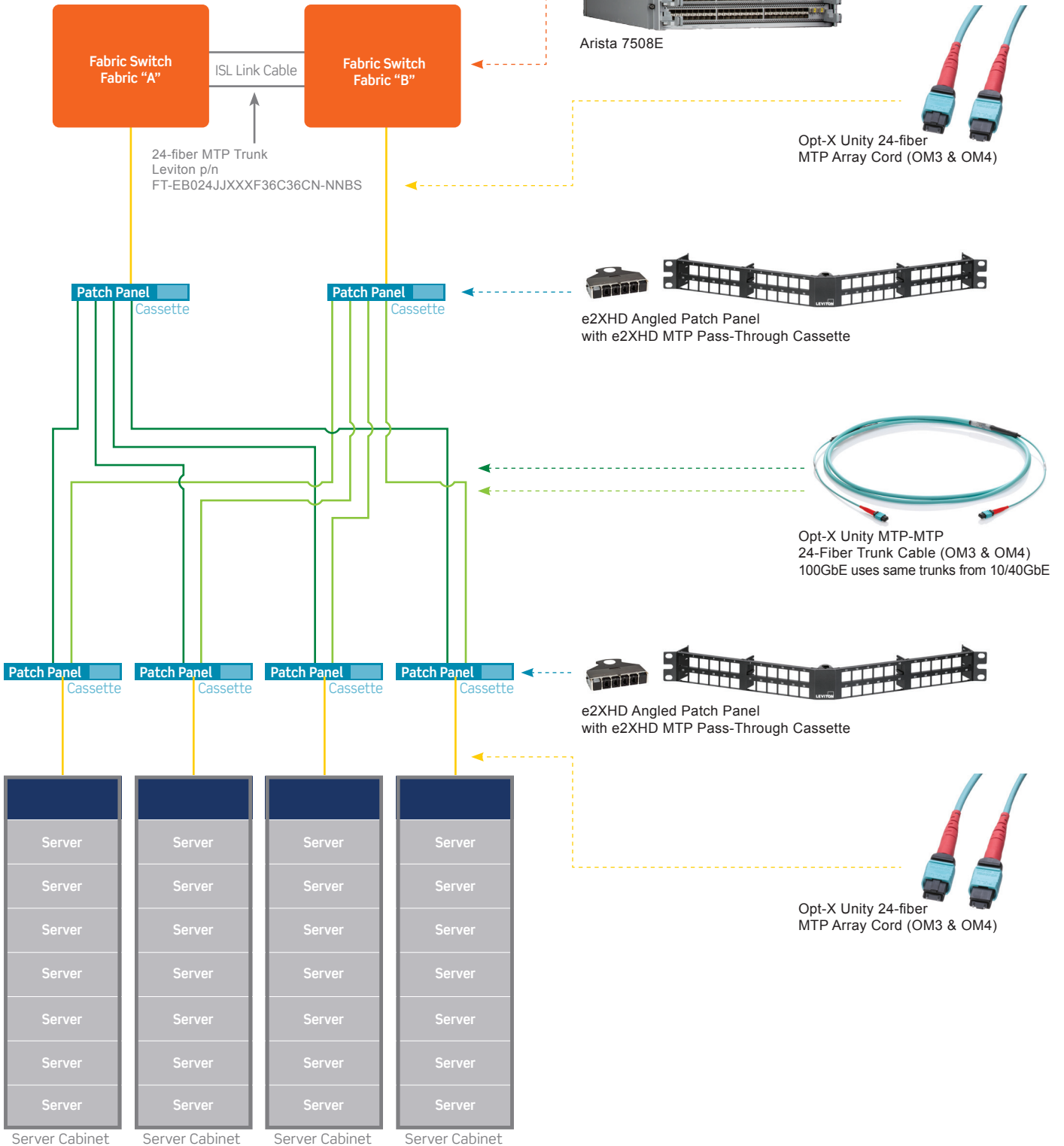


100 GBE (SR10) APPLICATION

Migration from 40GbE to 100GbE

Required Leviton component changes to enable 100GbE Solution:

- e2XHD MTP Pass-Through Cassettes
- Opt-X Unity 24-fiber MTP Array Cords



TOPOLOGY INFRASTRUCTURE CONSIDERATIONS:

- Topologies adhere to the following standards: TIA 942-A, ASHRAE, IEEE 802.3bac, BICSI, OSHA, other International standards
- Migration strategy for 10/40/100 GbE infrastructure as OEM equipment and internal needs require migration to higher bandwidth speeds
- Cable jacket material should be LSZH, Plenum
- Color-coding for fabrics: available in multiple colors to allow for visual identification
- Patch cord / array length is based on 42U cabinet: top third = 3 ft, middle third = 5 ft, bottom third = 8 ft
- High density e2XHD panels allow up to 48 channels in 1RU and up to 192 channels in 4RU
- Panels are available that can be mounted above racks: either inside cabinets or overhead
- Angled e2XHD panels conserved rack space by eliminating the need for additional horizontal cable management
- MTP adapters on rear of e2XHD cassettes swivel to 3 positions for easier cable routing

MORE OPTIONS AVAILABLE

Leviton.com/datacenter

See Leviton's complete offering of data center solutions, including trunks, patch cords, enclosures, panels, cassettes, and cable management.

Leviton.com/configurator

Custom configure pre-terminated solutions and build detailed part numbers.

Contact your local Leviton or Arista representative for assistance building your data center network infrastructure.

THE SMART CHOICE FOR A BETTER NETWORK

High-performance connectivity backed by
the industry's best service and support

We invent the industry's best technologies. We build them to last. And we stand behind every product and every installation – delivering industry-leading performance and unbeatable service and support – throughout the life of your structured cabling system. Add in the peace of mind that comes from working with a stable, century-old supplier and you get far and away the highest return on investment in the industry.

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