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Ethernet on all cylinders

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On May 23, the network technology, Ethernet celebrated its 40th Birthday. During this period, the Ethernet has completely reinvented several times: In the local network transfer rates of nearly 3 Mbit / s at relatively short intervals to 10 were 100, 1000 Mbit / s and ratcheted up to date on 10, 40 and 100 Gb / s . Ten years ago, Ethernet has also left its ancestral territory and conquered since then as the Carrier Ethernet WANs.

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Carrier Ethernet provides both service providers and users great benefits and has rightly as the preferred transmission technology for numerous applications established. With increasing acceptance of Carrier Ethernet services is also growing competitive pressure, forcing providers to do more to differentiate themselves from their competitors. An important role is played by the subject of speed, both in terms of the provision, as well as ensuring the flexibility of services. Only if the providers meet these challenges, they can improve the overall services and convince their clients in all areas - from the smooth activation of services to shorten the troubleshooting time through to continuous compliance with SLAs throughout the service lifecycle.

The standardization of Carrier Ethernet services has contributed significantly to the rapid acceptance. From simple point-to-point connection to complex multi-point to multi-point configuration is now a wide range of Ethernet services available. However, the provision of services was previously associated with time-consuming, often manually performed steps. An acceleration of these processes possible, for example with the plug-and-play installation of the equipment or the unified service activation and modification. Thus, with the automation of work in the installation and configuration of Ethernet switches shown to reduce by up to 75 percent.

Especially the use of automation software avoids time-consuming manual intervention by experts or incorrect operation: When a new service request, the network automatically triggers operation center (NOC) from a work order and arrange for the delivery of the corresponding device to the customer. This site configuration is not required. At the same time the appropriate service profile to activate the corresponding network server is transmitted. Once the unit is installed and connected, there is the automatic configuration. By the NOCs is completed on this simple point-and-click deployment remotely.

One aspect of customers is becoming increasingly important is the performance of the services and related guarantees. Providers need to ensure consistent compliance with SLAs throughout the service lifecycle. An important contribution to customer satisfaction through on-time service guarantee provides automatic monitoring of the health and performance of the network and the end-user services. Equally high importance to monitoring the status of system and network links, measuring performance of Ethernet services for customers, the confirmation of connection and service throughput according to the SLAs and distribution of this information in the network.

Visualization tools enable the performance in real time to identify problem areas in the network as the protocols are supported with scalable hardware-based implementation. If a network failure or a service deterioration discovered, the provider easily accessible diagnostic tools can use to quickly isolate problems to solve and to provide higher availability for business-critical services.

If customers can also obtain instant access to SLA reports on a cloud-based portal, they can diagnose the state of the Ethernet services themselves and verify SLA compliance. This also helps to increase customer satisfaction and loyalty. The condition are robust, detailed security features to isolate customer domains and protect the flow of information throughout the entire data collection, storage and presentation. A provider-oriented concept with individually adaptable "white labeling" can implement a flexible value-added offering service providers without additional operational overhead. They will also be spared from problems that have nothing to do with their network and customers can quickly make corrections in their own network environment.

Another critical point is the growing momentum of customer requirements. On the first activation, the services therefore need to be adjusted continuously due to changes or additions. Especially in service endpoints, bandwidth and network applications provide customers with increasingly higher requirements and service providers need to scale their offerings accordingly quickly and flexibly. This requires consistent functions that cover different service delivery platforms. Automated provisioning based on predefined service profiles thereby facilitates the rapid implementation of the adjustments. A mass configuration allows the implementation on many devices, accelerated comprehensive service adjustments and avoids error-prone manual process. Even if bandwidth of 1 Gbit / s to 10 Gbit / s can be increased, neither initial Overbuild is still required all the equipment needs to be replaced on site. Rather, increasing capacity requirements can be considered easy.

Conclusion

The market for Ethernet services is growing rapidly. At the same time rising expectations of customers in the shortening of the service response times. Providers must ensure that immediate service needs can be met quickly without complex projections, and a network that can meet the growing demands with minimal risk and overhead. The better and especially quicker this can be done, the more increase customer satisfaction and customer loyalty. The speed in all service areas is thus a major criterion to strengthen the competitive position of service providers. This object provides the optimum combination of platforms, software and market-oriented services. Only then the provider can implement an Ethernet service system that can keep pace with the changes and challenges.