

P4-MPLS (MPLS-CORE-4)					
Název		Požadavek	Nabídka		
			Výrobce		
			Identifikátor výrobku		
			Splnění požadavku (X)		V případě nesplnění požadavku uvést návrh hodnoty parametru, funkcionality, služby, důvod nesplnění
Ano	Ne				
Technická specifikace					
Přepínač	Typ zařízení	Modulární			
	Redundantní napájecí zdroj	Ano			
	Minimální počet slotů v šasi	n+1			
	Redundantní řídící modul	Ano			
	Šasi - ventilátory řízené teplotou	Ano			
	Šasi - celková výška (U)	≤4			
	Napájení - typ hlavního zdroje	Interní AC			
	Napájení - vstupní napětí	1x230V 50Hz			
	Napájení - redundance	Ano			
Provozní parametry	L2 - Propustnost přepínače	≥90 Gbps			
	Vlastní spotřeba	≤600 W			
	Tepelné vyzařování (BTU/h)	≤1000			
Požadované služby					
Management	Management - možnosti	CLI/WebView/SNMP/SSH2/FTP			
	IEEE 802.1ag - Connectivity Fault Management	Ano			
	RFC 1350 - TFTP Protocol	Ano			
	RFC 854/855 - Telnet and Telnet options	Ano			
	RFC 1157/2271 SNMP	Ano			
	RFC 1215 Convention for SNMP Traps	Ano			
	RFC 1573/2233/2863 Private Interface MIB	Ano			
	RFC 1643/2665 Ethernet MIB	Ano			
	RFC 1901-1908/3416-3418 SNMP v2c	Ano			
	RFC 2570-2576/3411-3415 SNMP v3	Ano			
	RFC 3414 User based security model	Ano			
	RFC 3164 Syslog	Ano			
Základní parametry	Interface PCM E1	Ano - modul 16x E1			
	Interface PCM E3	Ano - modul 4x E3			
	IEEE 802.3i - 10Base-T	Ano			
	IEEE 802.3u - Fast Ethernet	Ano - modul 8x, 100M			
	IEEE 802.3x - Flow Control	Ano			
	IEEE 802.3z - Gigabit Ethernet	Ano - modul 5x, 1G			
	IEEE 802.3ab - 1000Base-T	Ano			
	IEEE 802.3ae - 10G Ethernet	Ano - modul 1x,2x, 10G			
	IEEE 1588v2 - Synchronní Ethernet	Ano			
	Podpora "jumbo rámců"	Ano			
	RFC 2131/3046 DHCP/BootP Relay	Ano			
	RFC 1757/2819 RMON and MIB	Ano			
	RFC 1305/2030 NTP v3 and Simple NTP	Ano			
	IEEE 802.1AB - LLDP	Ano			
Spolehlivost	Non-Stop routing	Ano			
	Non-Stop services	Ano			
	IEEE 802.1D - STP	Ano			
	IEEE 802.1w - RSTP	Ano			
	IEEE 802.1s - MSTP	Ano			
	RFC 2338/3768 - VRRP	Ano			
	IEEE 802.3ad - Link Aggregation	Ano			
Multicast	RFC 1112 - IGMP v1	Ano			
	RFC 2236/2933 - IGMP v2 a MIB	Ano			
	RFC 2362/4601 PIM-SM	Ano			
	RFC 2365 - Multicast	Ano			
	RFC 2710 - Multicast Listener Discovery for IPv6	ano			
	RFC 3376 - IGMPv3 pro IPv6	ano			
Bezpečnost	802.1X - Port Based Network Access Protocol	Ano			
	RFC 1321 - MD5	Ano			
	RFC 2104 - HMAC Message Authentication	Ano			
	RFC 2138/2865/2868/3575/2618 - RADIUS Authentication and Client MIB	Ano			
	RFC 2139/2866/2867/2620 RADIUS Accounting and Client MIB	Ano			
	Port mirroring	Ano			
	Remote port mirroring	Ano			
	Filtrování pomocí ACL	Ano			

	Spolupráce s IDS/IPS systémem	Ano			
QoS	IEEE 802.1Q - VLAN	4000			
	IEEE 802.1p /TOS/DSCP	8			
	Q-in-Q	Ano			
	Híarchický QoS (H-QoS)	Ano			
	IEEE 802.3ac - VLAN Tagging	Ano			
	RFC 2474/2475/2597/3168/3246 DiffServ	Ano			
RIP	RFC 1722/1723/1724 /2453 RIP v2 and MIB	Ano			
	RFC 1812/2644 IPv4 Router Requirements	Ano			
	RFC 2080 RIPv6 for IPv6	Ano			
OSPF	RFC 1253/1850/2328 OSPF v2 and MIB	Ano			
	RFC 1587/3101 OSPF NSSA Option	Ano			
	RFC 1765 OSPF Database Overflow	Ano			
	RFC 2370/3630 OSPF Opaque LSA	Ano			
	RFC 3623 OSPF Graceful Restart	Ano			
BGP	RFC 1269/1657 BGP v3 & v4 MIB	Ano			
	RFC 1403/1745 BGP/OSPF interaction	Ano			
	RFC 1771-1774/2842/2918/3392/4271 - BGP v4	Ano			
	RFC 1965 BGP AS Confederations	Ano			
	RFC 1966/4456 BGP Route Reflection	Ano			
	RFC 1997/1998 BGP Communities Attribute	Ano			
	RFC 2385 BGP MD5 Signature	Ano			
	RFC 2439 BGP Route Flap Damping	Ano			
	RFC 2545 BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing	Ano			
MPLS	RFC 3065 BGP AS Confederations	Ano			
	RFC 2430 A Provider Architecture DiffServ & TE	Ano			
	RFC 2474 Definition of the DS Field the IPv4 and IPv6 Headers (Rev)	Ano			
	RFC 2597 Assured Forwarding PHB Group (rev3260)	Ano			
	RFC 2598 An Expedited Forwarding PHB	Ano			
	RFC 3031 MPLS Architecture	Ano			
	RFC 3032 MPLS Label Stack Encoding	Ano			
	RFC 3443 Time To Live (TTL) Processing in Multi-Protocol Label Switching (MPLS) Networks	Ano			
	RFC 4182 Removing a Restriction on the use of MPLS Explicit NULL	Ano			
	RFC 3140 Per-Hop Behavior Identification Codes	Ano			
MPLS - LDP	RFC 5332 MPLS Multicast Encapsulations	Ano			
	RFC 3037 LDP Applicability	Ano			
	RFC 3478 Graceful Restart Mechanism for LDP – GR helper	Ano			
	RFC 5036 LDP Specification	Ano			
MPLS /RSVP - TE	RFC 5283 LDP extension for Inter-Area LSP	Ano			
	RFC 5443 LDP IGP Synchronization	Ano			
	RFC 2702 Requirements for Traffic Engineering over MPLS	Ano			
	RFC2747 RSVP Cryptographic Authentication	Ano			
	RFC3097 RSVP Cryptographic Authentication	Ano			
	RFC 3209 Extensions to RSVP for Tunnels	Ano			
	RFC 3564 Requirements for Diff-Serv-aware TE	Ano			
	RFC 3906 Calculating Interior Gateway Protocol (IGP) Routes Over Traffic Engineering Tunnels	Ano			
	RFC 4090 Fast reroute Extensions to RSVP-TE for LSP Tunnels	Ano			
	RFC 4124 Protocol Extensions for Support of Diffserv-aware MPLS Traffic Engineering	Ano			
	RFC 4125 Maximum Allocation Bandwidth Constraints Model for Diffserv-aware MPLS Traffic Engineering	Ano			
	RFC 4561 Definition of a RRO Node-Id Sub-Object	Ano			
	RFC 4875 Extensions to Resource Reservation Protocol - Traffic Engineering (RSVP-TE) for Point to-Multipoint TE Label Switched Paths (LSPs)	Ano			
	RFC 5151 Inter-domain MPLS and GMPLS Traffic Engineering – RSVP-TE Extensions	Ano			
	RFC 5712 MPLS Traffic Engineering Soft Preemption draft-newton-mpls-te-dynamicoverbooking- 00 A Diffserv-TE Implementation Model to dynamically change booking factors during failure events	Ano			
	RFC 5817 Graceful Shutdown in GMPLS Traffic Engineering Networks	Ano			

MPLS	RFC 4379 Detecting Multi-Protocol Label Switched (MPLS) Data Plane Failures	Ano			
	RFC 4762 Virtual Private LAN Services Using LDP	Ano			
Voice / Video Performance	ITU-T G.107 The E Model- A computational model for use in planning.	Ano			
	ETSI TS 101 329-5 Annex E extensions- QoS Measurement for VoIP - Method for determining an Equipment Impairment Factor using Passive Monitoring	Ano			
	ITU-T Rec. P.564 - Conformance testing for voice over IP transmission quality assessment models	Ano			
	ITU-T G.1020 - Appendix Iperformance Parameter Definitions for Quality of Speech and other Voiceband Applications Utilizing IP Networks- Mean Absolute Packet Delay Variation.& Markov Models.	Ano			
	RFC 3550 Appendix A.8- RTP: A Transport Protocol for Real-Time Applications- Estimating the Interarrival Jitter	Ano			
Timing	GR-253-CORE SONET Transport Systems: Common Generic Criteria. Issue 3, September 2000	Ano			
	ITU-T G.781 Telecommunication Standardization Section of ITU, Synchronization layer functions, issued 09/2008	Ano			
	ITU-T G.813 Telecommunication Standardization Section of ITU, Timing characteristics of SDH equipment slave clocks (SEC), issued 03/2003.	Ano			
	GR-1244-CORE Clocks for the Synchronized Network: Common Generic Criteria, Issue 3, May 2005	Ano			
	ITU-T G.8261 Telecommunication Standardization Section of ITU, Timing and synchronization aspects in packet networks, issued 04/2008.	Ano			
	ITU-T G.8262 Telecommunication Standardization Section of ITU, Timing characteristics of synchronous Ethernet equipment slave clock (EEC), issued 08/2007.	Ano			
	ITU-T G.8264 Telecommunication Standardization Section of ITU, Distribution of timing information through packet networks, issued 10/ 2008.	Ano			
PPP	RFC 1332 PPP IPCP	Ano			
	RFC 1377 PPP OSINLCP	Ano			
	RFC 1638/2878PPP BCP	Ano			
	RFC 1661 PPP (rev RFC2151)	Ano			
	RFC 1662 PPP in HDLC-like Framing	Ano			
	RFC 1877 PPP Internet Protocol Control Protocol Extensions for Name Server Addresses	Ano			
	RFC 1989 PPP Link Quality Monitoring	Ano			
	RFC 1990 The PPP Multilink Protocol (MP)	Ano			
	RFC 1994 "PPP Challenge Handshake Authentication Protocol (CHAP)	Ano			
	RFC 2516 A Method for Transmitting PPP Over Ethernet	Ano			
	RFC 2615 PPP over SONET/SDH	Ano			
	RFC 2686 The Multi-Class Extension to Multi-Link PPP	Ano			