UX2000

Network Equipment Technologies

NET UX Series

UX2000 All-In-One Branch Office Networking Appliance

- Multiservice Router and VoIP gateway with Branch office Survivability
- Session Border Controller with NAT function, Network topology hiding, and Security
- Single appliance for running concurrent applications
- Continued branch office operations through WAN failure

DATASHEET: UX SERIES

OVERVIEW

NET's Unified Exchange 2000 Series (UX2000) is a modular multi-function, single box appliance that delivers cost savings, reduces management complexity, and increases reliability for branch office networking and communications needs. The core features include Layer 2 and Layer 3 based routing protocols, GigE switching, T1/E1, WAN and LAN ports, Firewall with traffic inspection, Session Border Controller (SBC), media processing through advanced high-density Digital Signal Processors (DSPs), PSTN gateway, and an Application Solutions Module (ASM) for hosting third party applications.

The UX2000 is fully managed using a Web-based management interface with remote management capability. It is an ideal solution for remote sites/branch offices that have minimal IT support. The modular architecture allows deployment flexibility for different size locations and can easily scale up for future expansion. It can be deployed for a variety of applications, for example next-generation VoIP and Unified Communications; SIP Trunking; Wideband (HD Voice) transcoding; Multi-service Business Gateway (MSBG); and for multi-service applications like Pseudo-wire.

UNIFIED COMMUNICATIONS AND VOICE-GATEWAY SERVICES

The UX2000 appliance offers extraordinary service integration of Unified communications to any size branch office. Businesses enjoy the benefit of deploying a single device for all networking and communication needs and save both capital and operational expenses.

By supporting a variety of protocols, advanced security, codec transcoding, and data services, the UX2000 enables a distributed enterprise to cost-effectively implement Unified communications across the enterprise.

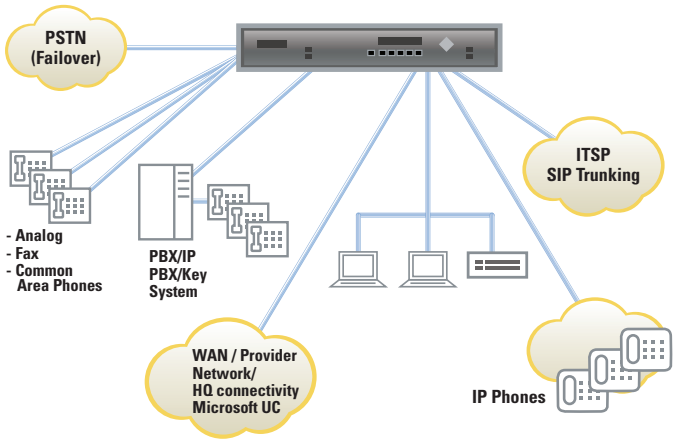
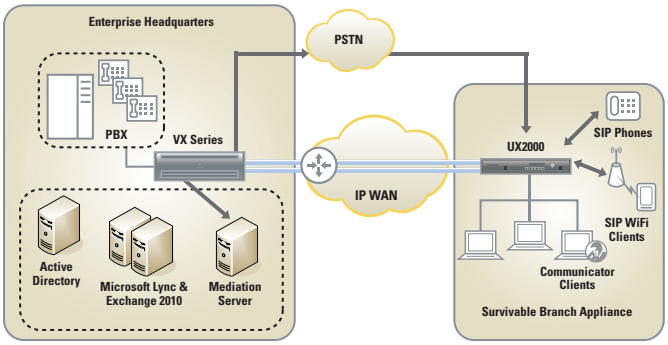


Figure 1: Branch Office Demarcation device with Microsoft SBA, Routing & Switching, and Session Border Controller

COMMON APPLICATION SCENARIOS

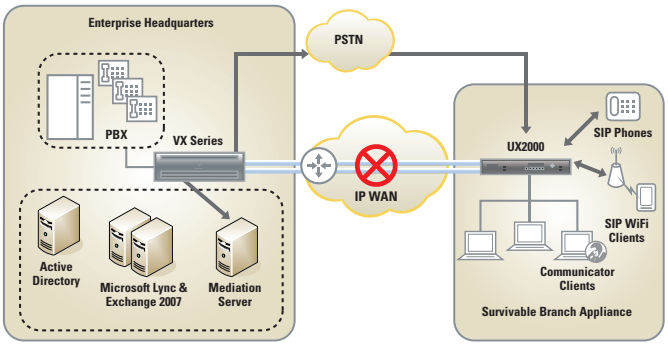
ENTERPRISE BRANCH OFFICE CONNECTIVITY AND SURVIVABILITY FOR MICROSOFT LYNC SERVER 2010

Normal Mode:



In the normal mode, the UX2000 appliance in the branch office is connected to the Microsoft Lync Server 2010 in the datacenter over a WAN network. IP phones are registered with the UX2000. Microsoft Office Communicator clients are registered with the integrated Microsoft Survivable Branch Appliance.

WAN Outage:



The UX2000 Survivable Branch Appliance (SBA) provides basic voice services to branch office users during a WAN outage. During WAN outage, the SBA appliance manages the intra-branch voice calls and IM sessions as well as inter-branch communications and voice mail retrieval over PSTN.

SPECIFICATIONS

Physical PSTN Interfaces	
Digital Modules Analog Modules	• Modular system supporting T1/E1 • 8 T1/E1 spans per module
Networking Interfaces	
WAN and LAN Interfaces	• 8 10/100/1000 BASE-T including 4 SFP ports • Auto-MDIX • 1 10/100/1000 Base-T management port
Applications Solutions Module	
CPU	Intel® Core™ i7 @2.53GHz
Memory	4 GB DDR3 with ECC
Storage	500GB SATA HDD
Software Features	
Any-to-Any Switching	• H.323 (RAS, H.225, H.245) • SIP (UDP, TCP, TLS) • PSTN (CAS, PRI) • Media Encryption (TLS, SRTP)
Call Routing	• Active Directory/LDAP based call routing • Advanced based on quality metrics routing • Least cost routing
Supplementary Services	• Call waiting • Call hold • Call Transfer – Blind and Assisted • Call Forward
Signaling	
TDM Signaling	CAS: MF-R1, T1 CAS (E&M, Loopstart), E1 CAS(MFC-R2) ISDN: AT&T 4ESS, AT&T 5ESS, Nortel DMS-100, Euro ISDN (ETSI 300-102), QSIG, NTT InsNet (Japan), Harris 20/20, CoreNet and ANSI National ISDN-2 (NI-2)

Voice Features	
Codecs	• G.711 (64 kbps – A-law, Mu-law) • G.726 (16 kbps, 24 kbps, 32 kbps, 40 kbps) • G.723.1 (5.3 kbps, 6.3 kbps) • G.729 A&B (8 kbps)
Call Type Detection	Automatic call type detection – voice, fax, or modem
Call Progress Tones	Generate call progress tones – Dial tone, busy, ring-back, congestion (fast busy), Special Information (SIT), Call Waiting, Disconnect
Advanced voice quality features	• G.168 Echo Cancellation up to 128 ms tail length • Noise suppression • G.169 adaptive gain control • Voice Activity Detection (VAD) • Silence Suppression • Comfort Noise Generation
Fax over IP	T.38 with CNG tone detection
Quality of Service	Diffserv Aware
Voice Quality Monitoring	Jitter, Delay, and Packet Loss
Data Routing	
Data Protocols	TCP, UDP, TLS, SRTP, RTP, RTCP IPv4, ICMP, ARP, DNS
Session Border Controller	
Security	• Encryption (TLS, SRTP) • Built-in VoIP firewall • Smart card authentication • Denial of Service mitigation • DNIS, CLID, call type pre-authentication • Topology Hiding • Call Admission Control • Access Control Lists (ACLs)
Branch Survivability	Microsoft UC Survivable Branch Appliance
Management	
OA&M	HTTP, HTTPS Syslog SNMP v2
Authentication	MD5 digest authentication Multilevel Access Control

net. Network Equipment Technologies

Microsoft GOLD CERTIFIED Partner

Voice
Unified Communications
Business Productivity Solutions
Midmarket Solution Provider

OPTIMIZED FOR Microsoft® Lync™

A WORLD CONNECTED IN REAL-TIME