

UX2000 Web Based Management



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Today IT organizations need a cost effective way of managing branch office appliances. The UX2000 web based management tool allows IT administrators to centrally manage the Survivable Branch Appliance (SBA) from their headquarter location. The UX2000 Web User Interface (Web UI) increases administrator’s effectiveness so they can quickly deploy UX nodes in remote branch offices as well as respond to events and issues as they arise.

The UX2000 Web User Interface offers a full set of features including those listed below:

- Allows remote administrator to manage, configure, and monitor nodes
- Simplifies logging into the UX node using Active Directory credentials
- Administrators can perform “Task based” system configuration

This whitepaper describes the UX capabilities of configuration, monitoring, and managing the node through Web UI.

- Configuration: Using the Web UI, administrators can implement dial plans, configure IP interfaces, select routing protocols, create calling routes, and perform digit manipulation
- Monitoring: The UX2000 provides real-time call state information for all calls on all interfaces – TDM and VoIP calls. The UX supports a push model in which the call states changes are automatically sent to the web user interface. Using the real time monitoring, administrators can monitor calls and view trunk utilization in real time
- Management: Administrators can manage configuration changes remotely. The administrator can also reboot system, start and stop services running in the integrated Applications Solutions Module (ASM)

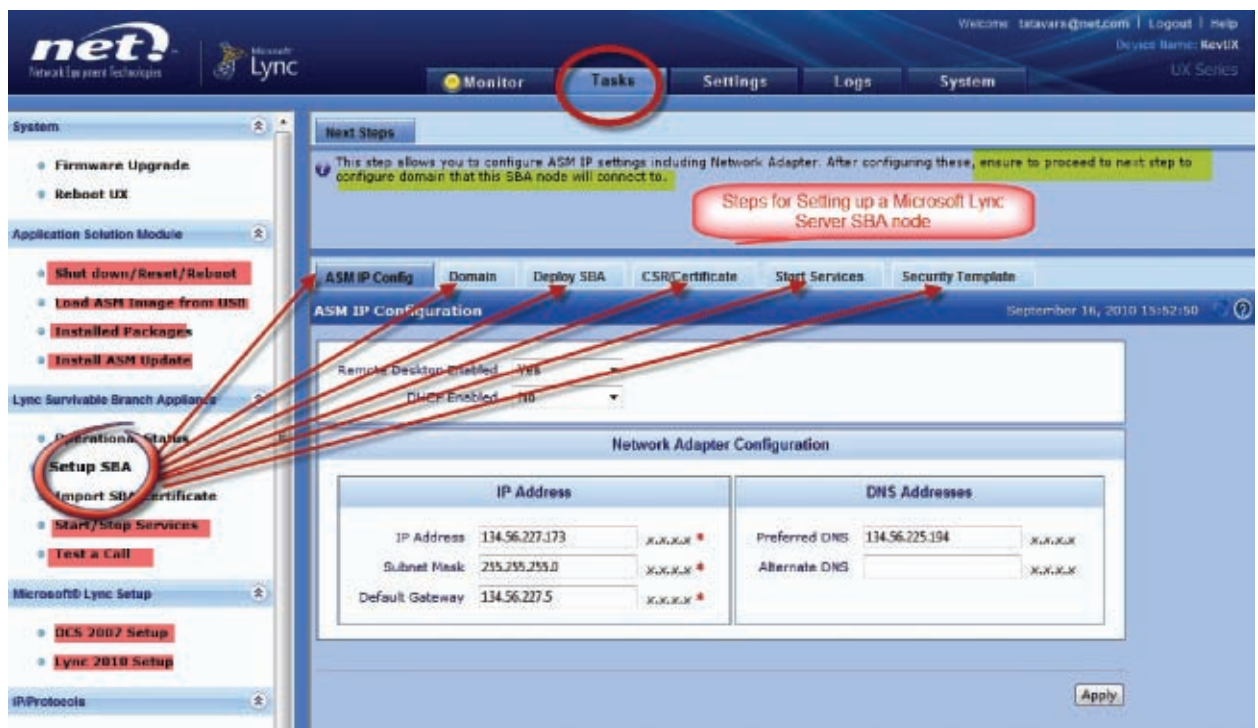
CONFIGURATION

Task Based User Interface

Every task requires performing several steps to complete which leads to errors. Administrators may not know the sequence of steps needed to complete the task, or inadvertently skip a step. The UX implements a task based user interaction to assist the administrator to complete the task effortlessly and with least amount of training required.

The UX Web User Interface has a wizard-like interface to complete the most commonly used tasks by the administrator. The task helps the administrator navigate through the different steps required to complete the task. It also supports forward and backward navigation among the steps.

Because the individual steps are distinct tabs, the administrator has the flexibility to pick the tab to work on next rather than have to follow the rigid sequence of steps.



MONITORING

Real-Time Monitoring

The screenshot displays the net! Network Equipment Technologies monitoring interface. The top navigation bar includes 'Monitor', 'Tasks', 'Settings', 'Logs', and 'System'. The main content area is divided into two sections: 'Real Time Status View - Connected' and 'Alarm View'.

Real Time Status View - Connected

This section shows the status of various ports and spans. Under 'Card 1-DS1 w/ 8 Spans', there are eight ports listed: (E1) Port 1 through (E1) Port 8. Port 5 is highlighted with a green circle, indicating it is active. Below the ports is a grid of 32 small squares, each representing a span. Port 5 has 8 green squares, while other ports have grey squares. Below this, 'SG 2' is shown with a green circle and a row of 32 green squares, indicating all spans are active.

Alarm View

The Alarm View section shows a table of active alarms. The table has columns for Condition, Severity, Source, Count, Last Occur, and Ack. One alarm is listed: 'SBA Failure Recovered' with a severity of 'Minor', source of 'SBA Monitor', count of 1, and last occurrence of '09/14/10 16:08:38.424'.

Alarm Details

The details for the 'SBA Failure Recovered' alarm are shown below the table:

ID	5.3	Occurrences	1
Condition	SBA Failure Recovered	Count	1
Description	SBA system was previously unreachable, but has come up. Auto Clear is no so the user can investigate what went wrong, but the system should be working correctly now.	Last Occurrence Time	09/14/10 16:08:38.424
Severity	Minor	First Occurrence Time	09/14/10 16:08:38.424
Source	SBA Monitor		
Category	Equipment		
Acknowledged	False		
Clearing Event ID	0.0		

UX2000 provides detailed real time monitoring of all call, channel, and alarm activity on the node enabling the administrator to provide timely corrective action as required. With the help of a Web User Interface, administrators can easily monitor network performance and view call data from remote location.

Using the UX web user interface, administrators can view all the channels in a node, trace calls, monitor source to destination call performance, and track network alarms on the port and channel. It is easy to monitor call properties by simply clicking on any active call at any time to view both the called and calling party information.

Since the UX relies on push method to show events, the alarms and events are shown in real time.

Detailed Call Information September 13, 2010 14:11:24

Call Properties

Conference ID: 48	Current Time: 09/13/10 14:11:24
Call Forked: False	Alert Time: 09/13/10 14:11:15
Call Rerouted: False	Connect Time: 09/13/10 14:11:16
Call Transcoded: False	

Inbound Channel Properties

Channel: 1.1.1	Called Number Information	Calling Number Information
Signaling Group: (ISDN) MDC ISDN to fmt-shout: ISDN UC SG	Called Number: +15105742783	Calling Number: +16082252550
Transfer Mode: Packet	Number Plan: Unknown	Number Plan: ISDN
Transfer Rate: 64k	Number Type: Unknown	Number Type: National
User Rate: 20	Outgoing Number:	Presentation Indicator: Allowed
	Outgoing Number Plan:	Screening Indicator: Not Present
	Outgoing Number Type:	Calling Name:

Outbound Channel Properties

Channel ID	Type	SG ID	Calling Number	Calling Number Plan	Called Number	Called Number Plan	Display
2.60	SIP	(SIP) SIP SG to Medi...	+16082252550	ISDN	+15105742783	Unknown	Channel Details

STATISTICS

The statistics dashboard shown below helps monitor the calls that are processed by the UX node.

net. Network Equipment Technologies Welcome: tatavars@net.com | Logout | Help
Device Name: KeyUX
UX Series

Monitor Tasks Settings Logs **System**

Overview Inventory Report **Statistics** About UX

Reset Counters September 20, 2010 14:34:12

Global Call Counters

Current Calls	Call Counters	Error Counters
Calls Currently Up: 0	Calls Attempted: 0	Internal Glares: 0
Calls Currently Transient: 0	Calls Succeeded: 0	External Glares: 0
	Calls Failed: 0	Due to No Trunk: 0

The global call counters is an aggregate of the counters across different ports and channels.

net. Network Equipment Technologies Welcome: tatavars@net.com | Logout | Help
Device Name: KeyUX
UX Series

Monitor Tasks **Settings** Logs System

Port Table View September 20, 2010 16:41:05

Set DS1 Port Type Total 14 Port Rows

Port ID	Port Type	Description	Admin State	Service Status	Display
Port 1:1	E1		Down	Down	Counters Channels
Port 1:2	E1	E1/ETSI	Down	Down	Counters Channels
Port 1:3	E1		Down	Down	Counters Channels
Port 1:4	E1		Down	Down	Counters Channels
Port 1:5	E1		Up	Up	Counters Channels
Port 1:6	E1		Down	Down	Counters Channels
Port 1:7	E1		Down	Down	Counters Channels

DS1 Port Counters: Port 1:1 September 20, 2010 16:44:58

Reset Counters

Port Errors

Frame Errors	0
Path Code Violations	0
Line Code Violations	0
Excessive Zeros	0
Bipolar Violations	0
Errored Seconds - Line	0
Severely Errored Seconds - Framing	0
Bursty Errored Seconds	0
Normal Errored Seconds	0
Unavailable Seconds	0

Receive Port Counters

Rx Frames	0
Rx Bytes	0

Transmit Port Counters

Tx Frames	0
Tx Bytes	0

Receive Port Errors

Rx Busy	0
Rx Aborts	0
Rx Non-Octets	0
Rx CRC Errors	0
Rx Overruns	0
Rx H/W Errors	0
Rx Bad Address	0
Rx CD Lost	0
Rx No Buffer	0
Rx Internal Table Overflow	0
Rx Max Backlog	0
Controlled Rx Slip Positives	0
Controlled Rx Slip Negatives	0

Transmit Port Errors

Tx No Valid Data	0
Tx Underruns	0
Tx Collisions	0
Tx Invalid Data	0
Tx Internal Table Overflow	0
Tx Max Backlog	0
Controlled Tx Slip Positives	0
Controlled Tx Slip Negatives	0

Channel Table: Port 1:5 September 20, 2010 16:53:46

Total 31 Channel Rows

Channel ID	Type	Status	Blocked	Display
1.5:1	DS1 Channel	Idle	No	Call Details
1.5:2	DS1 Channel	Idle	No	Call Details
1.5:3	DS1 Channel	Idle	No	Call Details
1.5:4	DS1 Channel	Idle	No	Call Details
1.5:5	DS1 Channel	Idle	No	Call Details
1.5:6	DS1 Channel	Idle	No	Call Details
1.5:7	DS1 Channel	Idle	No	Call Details
1.5:8	DS1 Channel	Idle	No	Call Details
1.5:9	DS1 Channel	Idle	No	Call Details
1.5:10	DS1 Channel	Idle	No	Call Details
1.5:11	DS1 Channel	Idle	No	Call Details
1.5:12	DS1 Channel	Idle	No	Call Details
1.5:13	DS1 Channel	Idle	No	Call Details
1.5:14	DS1 Channel	Idle	No	Call Details
1.5:15	DS1 Channel	Idle	No	Call Details
1.5:16	D-Channel	Up	N/A	
1.5:17	DS1 Channel	Idle	No	Call Details

LOGS

The event logs enable an administrator to view information about any event that occurs on the system. Some of these events can include configuration changes, warnings, alerts, component failures, etc.

net Network Equipment Technologies

Welcome: tatavars@net.com | Logout | Help
Device Name: RevIX
UX Series

Monitor Tasks Settings **Logs** System

Local Logs Web Access Logs Web Error Logs

Click to show the log in a pop-up window

Logs can be downloaded

Total 9 Local Log Rows

Log File Name	First Message Time	Last Message Time	Size	Action
vwebui.log	2010-09-22 14:00:05	Current File	90.90 Kilobytes	Download
vwebui.log	2010-09-20 10:49:14	2010-09-20 11:54:37	17.49 Megabytes	Download
vwebui.log.0	2010-09-20 10:39:09	2010-09-20 10:39:09	221.35 Megabytes	Download
vwebui.log_20100922-140001	2010-09-22 13:45:05	2010-09-22 14:00:01	894.21 Kilobytes	Download
vwebui.log_20100922-134501	2010-09-22 13:30:04	2010-09-22 13:45:01	853.16 Kilobytes	Download
vwebui.log_20100922-133002	2010-09-22 13:15:03	2010-09-22 13:30:01	851.26 Kilobytes	Download
vwebui.log_20100922-131501	2010-09-22 13:00:02	2010-09-22 13:15:01	850.39 Kilobytes	Download
vwebui.log_20100922-130001	2010-09-22 12:45:01	2010-09-22 13:00:01	902.62 Kilobytes	Download
vwebui.log_20100922-124501	2010-09-22 12:30:05	2010-09-22 12:45:01	851.87 Kilobytes	Download

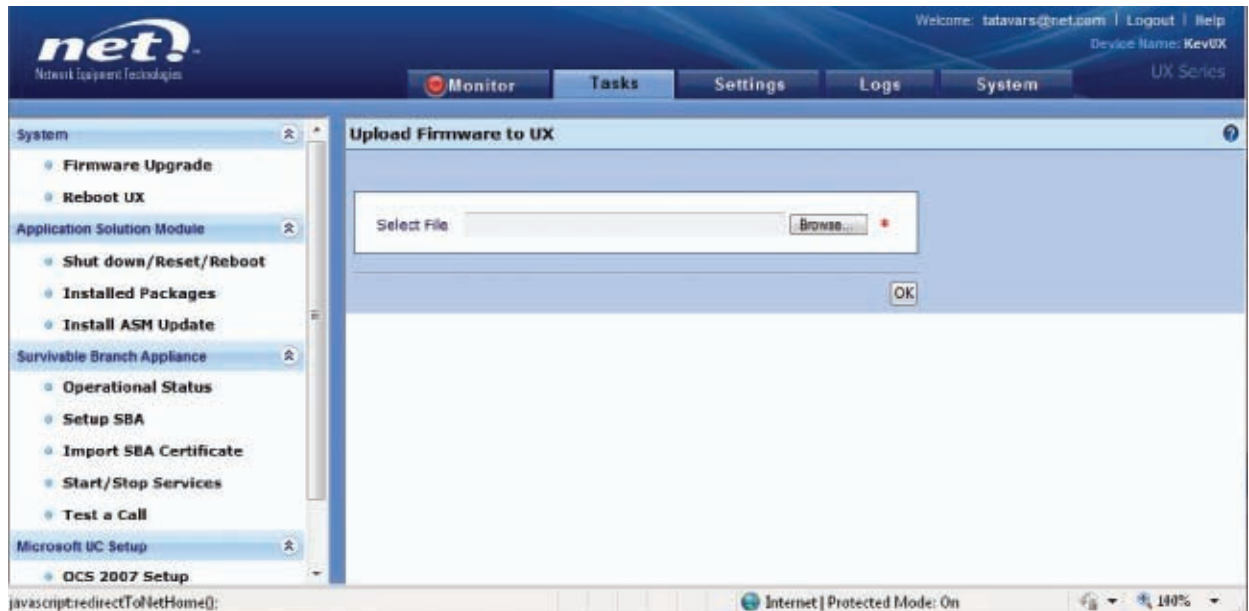
Features and Benefits of Remote Monitoring

- Provides complete visibility of all transactions/call activity metrics in real time or near real time
- Shows event based alarms

MANAGEMENT

Remote Software Deployment

UX2000 remote software deployment allows for one-click software distribution to remote sites from a central location. The main goal of the remote installation is to reduce effort required for install, uninstall, and update.

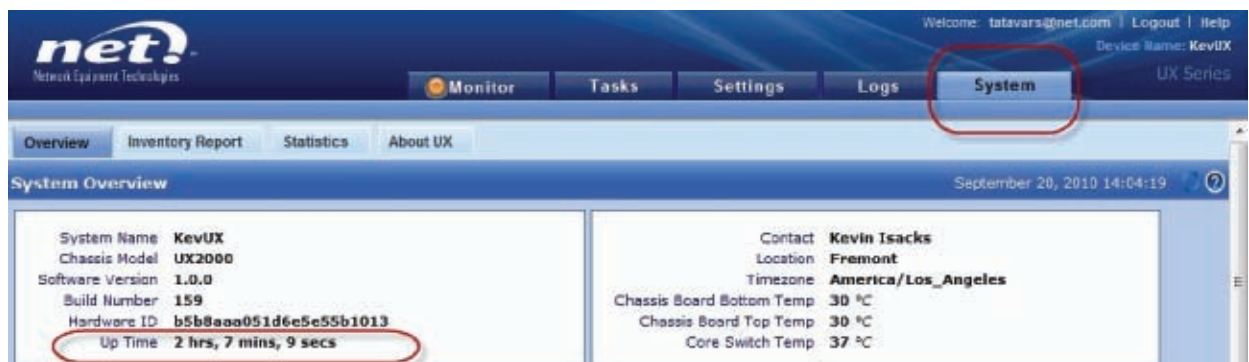


Features and Benefits

- Remote sites can be upgraded with the latest firmware without physically visiting each remote location

SYSTEM OVERVIEW & INVENTORY

With the web user interface, an Administrator can view UX node component details such as Line cards, DSP modules, Application Solutions Module, Main board, Power supply, etc. An Administrator can conduct data gathering without having to visit the remote sites.



Cards/Modules Status				Physical Ports Status			
Total 14 Modules				Total 14 Ports			
Module ID	Type	Location	Service Status	Port ID	Port Type	Admin State	Service Status
1	DS1 w/ 8 Spans	Line Card 1	Activated	Port 1:1	E1	Down	Down
2	Not Installed	Line Card 2	Unknown	Port 1:2	E1	Down	Down
3	MSPD C910 Board	DSP Module 1	Activated	Port 1:3	E1	Down	Down
4	Not Installed	DSP Module 2	Unknown	Port 1:4	E1	Down	Down
5	Not Installed	DSP Module 3	Unknown	Port 1:5	E1	Up	Up
6	Not Installed	DSP Module 4	Unknown	Port 1:6	E1	Down	Down
7	Not Installed	DSP Module 5	Unknown	Port 1:7	E1	Down	Down
8	Not Installed	DSP Module 6	Unknown	Port 1:8	E1	Down	Down
9	Not Installed	BITS WAN	Unknown	lan1	Ethernet	Up	Up
10	Not Installed	SFP Module	Unknown	lan2	Ethernet	Up	Down
11	COM Express	COM Express	Activated	lan3	Ethernet	Up	Down
12	Main Board	Main Board	Activated	lan4	Ethernet	Up	Down
13	Power Supply	PSU Left	Activated	Admin	Ethernet	Up	Down
14	Power Supply	PSU Right	Activated	asm1	Ethernet	Up	Up

Power Supplies											
Total 2 PSUe											
PSU ID	Is Present	AC Input Good	Power In (W)	Power Out (W)	Voltage In (Nominal-AC)	Voltage Out (DC)	Current In (A)	Current Out (A)	Temp (°C)	Fan 1 Speed (RPM)	Fan 2 Speed (RPM)
PSU Left	✓	✓	26	12	115	12.000	0.226	0.800	29	6999	8962
PSU Right	✓	✓	80	36	115	12.000	0.594	3.039	42	6740	6721

Fans State	
Total 9 Fans	
Fan ID	Speed (RPM)
1	11264
2	10752
3	10496
4	11520
5	11008
6	10752
7	11008
8	10496
9	10496



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