

# Configuration Note

## VX Configuration for Microsoft Unified Messaging

Release 1.0

Reference Number: 550-0201-00 Rev A



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Network Equipment Technologies, Inc.

6900 Paseo Padre Parkway

Fremont, CA 94555 U.S.A.

*<http://www.net.com>*

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## About This Document

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### Document Overview

The purpose of this document is to provide a step by step procedure to deploy a VX gateway in the following scenario:

PSTN gateway in a Microsoft Unified Messaging environment

Typically, the VX gateway is connected to Unified Messaging (Exchange 2007) with a SIP-trunk (SIP TCP, G711 A-Law codec), and to the PBX using QSIG link.

This document describes the following steps:

- General parameters configuration using Wizard
- Customization of the configuration

### Audience

Any user wanting to deploy a VX gateway with Microsoft Unified Communications (OCS).

### Assumptions and Prerequisites

This procedure is designed assuming the following steps have already been covered:

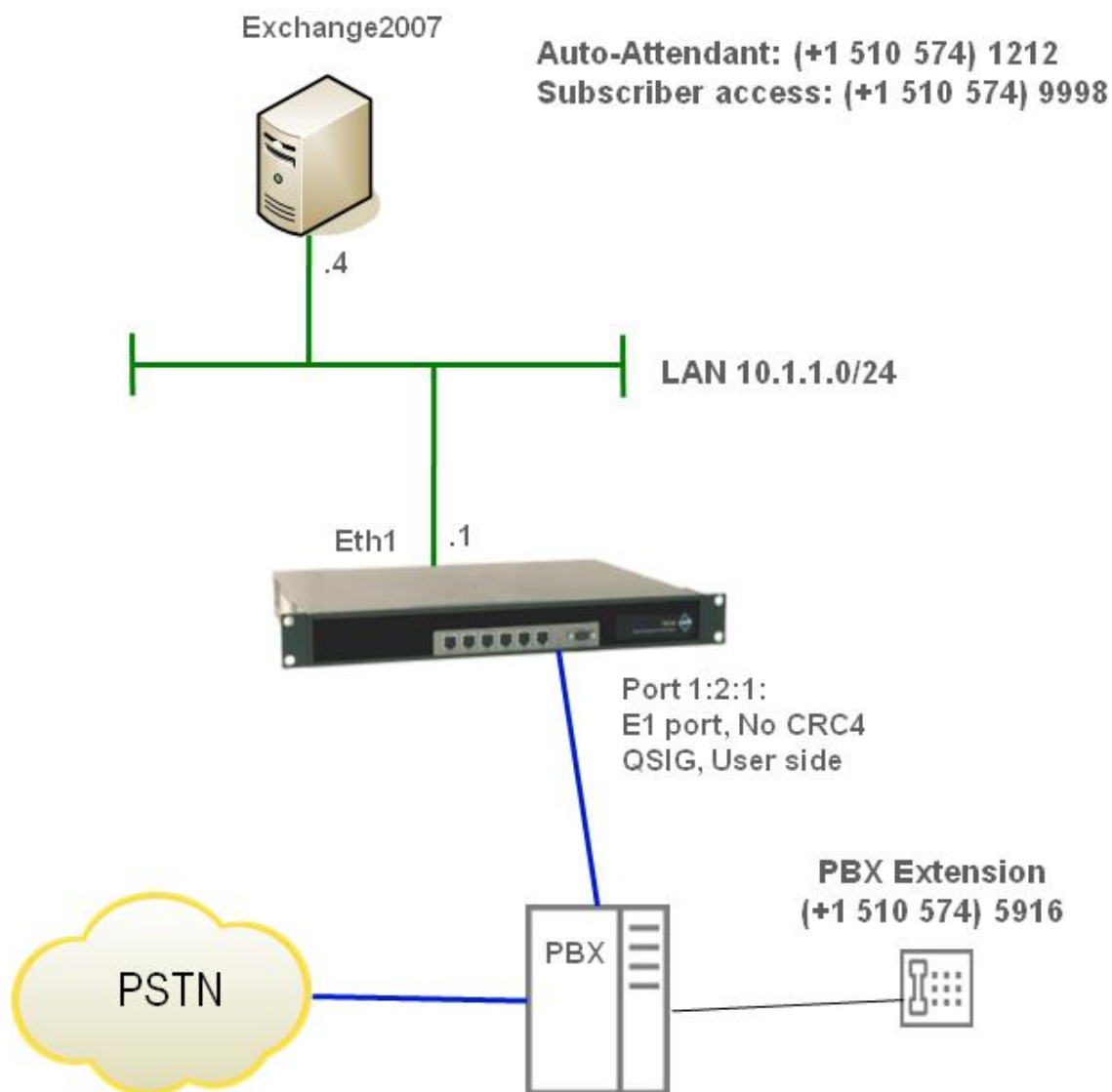
- the user of this procedure has been trained on NET equipment
- the VX gateway is running release 4.7 or later
- the VX gateway has been initialized as per product documentation
- the user has installed VXwatch and VXbuilder management software on their PC/laptop to match the software version of the VX gateway



**Note:** VX software versions earlier than R4.7 can be used, and are fully qualified, for this functionality against Exchange 2007. However some screen shots within this guide may differ with earlier versions of code.

## Solution Illustration

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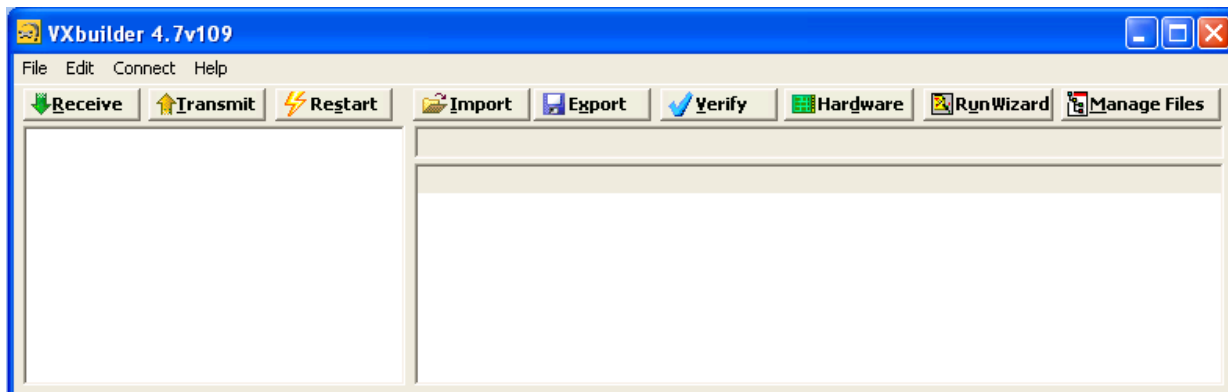
## VX Configuration

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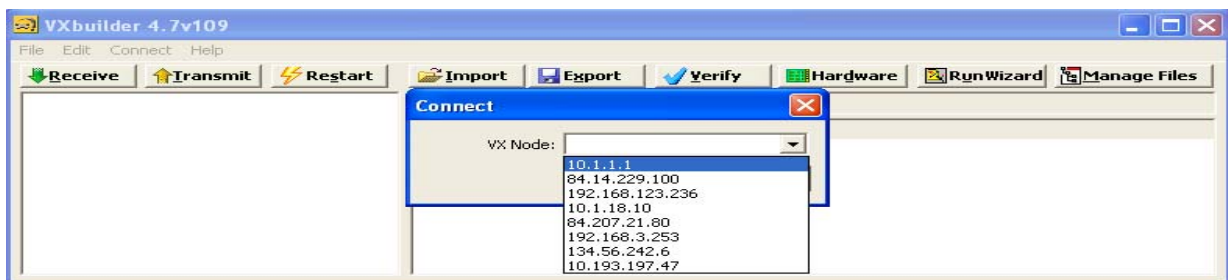
For the configuration of the VX gateway, refer to Config Note 55-210-00 describing the configuration of a VX Gateway for Greenfield deployment (VX directly connected to PSTN, and using SIP for OCS communications).

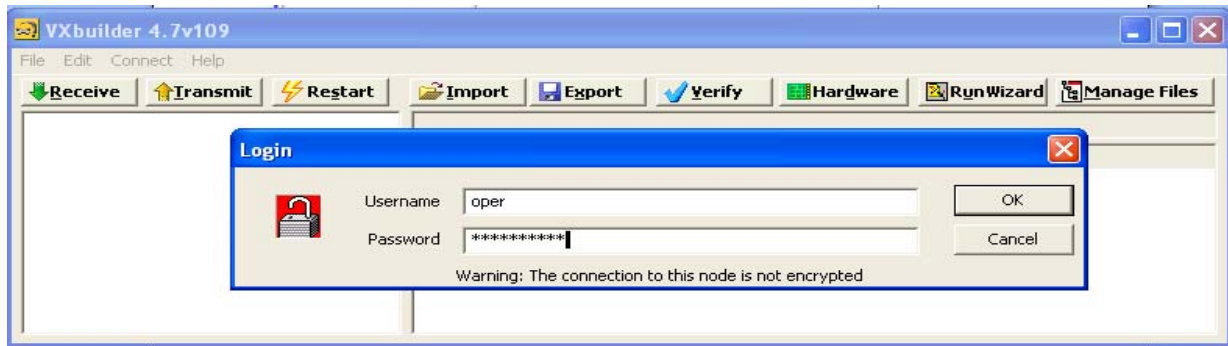
### Prepare the VX configuration using the Wizard option of VXbuilder:

- Ensure the VX gateway has been initialized as per recommended procedure in product documentation
- Launch the VXbuilder application



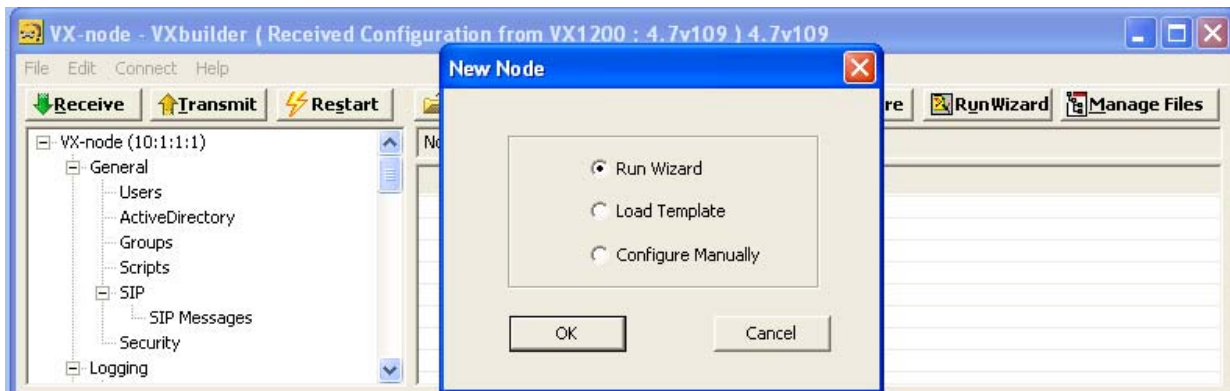
- Receive configuration from VX gateway





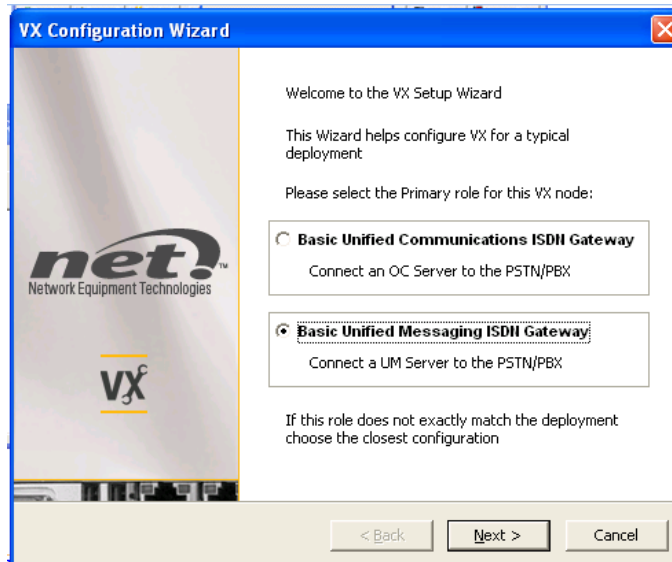
***VX downloads the configuration and a new window will pop up***

- Select the Wizard option and click OK. Note that this option box is available ONLY if the VX gateway has been previously initialized (factory delivery, or setup command has been used in conf menu)



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- Select the option “Basic Unified Messaging ISDN gateway”



- Follow the Wizard options and make sure you complete the following fields:
  - DNS IP address or FQDN (10.1.1.4 in our example)
  - Primary Unified Messaging server IP address or FQDN (10.1.1.4 in our example)
  - Select line type (E1 in our example)
  - Select protocol type (QSIG in our example)

The configuration has now been loaded into the VXbuilder application on your PC

- Transmit the newly created configuration to the VX gateway



**Note:** The VX gateway requires a restart in order to load properly the different parameters of the E1 card. When prompted to restart, select 'yes'.

## Customizing the Configuration


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Ensure that the VX gateway has been set with proper time:

- From telnet session: show time to verify
- From telnet session: set time hh:mm:ss to set a new time

The wizard application in VXbuilder configured the VX gateway with the required setup


This section allows you to understand and customize this configuration:

|   |  |
|---|--|
|  | <p><b>Note:</b> The VX gateway configuration can handle user friendly names for a large amount of parameters. It is strongly recommended to populate these fields with "tuned" description that will help to better understand the overall config of the VX gateway.</p> |
|---|--|

### Where to look in the VXbuilder Application Tree

#### General Menu

- VX Clock Reference is set for the first E1/T1 port of the first E1/T1 card (1:2:1 on VX1200, 1:1:1 on VX1800)

|   |   |
|---|---|
|  | <p><b>Note:</b> In most cases, the VX gateway has to collect a clock reference from PBX. This is achieved in 2 steps:</p> <ul style="list-style-type: none"> <li>• In the General Menu, ensure that a minimum of one port is configured as clock reference</li> <li>• For every port in use, ensure that clocking is set for slave</li> </ul> |
|---|---|

- SIP -> default SIP setup has been configured

#### Logging menu

- Trace Logging Enabled: VX gateway captures a permanent full debug trace and store it on the hard-disk

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## Chassis Menu

- Virtual Slot has been installed (Slot 15)
- Virtual port for UM traffic has been installed with 31 circuits
- All available cards have been installed and enabled
- All E1/T1 ports have been installed as per Wizard options (Euro ISDN or QSIG, User side [TE], with CRC4 ON in our example)
  - These parameters have to match with PBX setup in order to bring up the E1/T1 link. Incorrect setup for ISDN protocol and side, framing and clocking could generate E1/T1 failure.
  - It is also recommended to disable all the unused ports
- Default USA Tone Table is set for the E1/T1 card, and needs to be changed based on country requirements

## Networking Menu

- Peer Table has been configured to ensure Link Quality Management (LQM) for the UM server
- DNS IP Address has been configured

## Telephony Menu

- Trunk-groups: 2 Trunk Groups have been configured:
  - 1 Trunk-Group for ISDN E1 connection
  - 1 Trunk-Group for UM SIP TCP connection
- Call routes: 2 Call Route Tables have been configured
  - 1 Call route for Trunk-group 1 for ISDN to SIP calls
  - This table takes care of PBX traffic sent to UM server. PBX will send calls to UM SA (Subscriber Access, 9998 in our example). It is important to match in the input rule the dialing format of the PBX (most of the time, 4 digits) and the expected dialing format on UM (most of the time 4 digits with or without +).
  - 1 Call route for Trunk-group 2 for SIP to ISDN callsThis table takes care of UM traffic to PBX. It is important to match in the input rule the dialing format of UM: most of time 4 digits to PBX and E164 for PSTN calls.

For the output rule, it is important to match with the PBX dialing plan: 4 digits for PBX extension and specific format for PSTN calls: 0 or 9 for outside line, national number format with 0 in front or not, international format...etc.

- SIP Inbound Call Routing: 1 Default Route pointing to SIP Trunk Group 2
- Calling Number/Name Translation: 2 Tables for re-formatting calling numbers
  - Table 1 is allocated to trunk-group 1 OUTBOUND

This table will ensure that Calling number provided by VX gateway will match the PBX expected format, and must be configured accordingly
  - Table 2 is allocated to trunk-group 2 OUTBOUND

This table ensures that the Calling number provided by VX gateway will match the UM expected format, and must be configured accordingly
- Media Class: 1 Media Class is available with G711 & T.38 Fax codecs. This Media Class is allocated at Trunk-group level

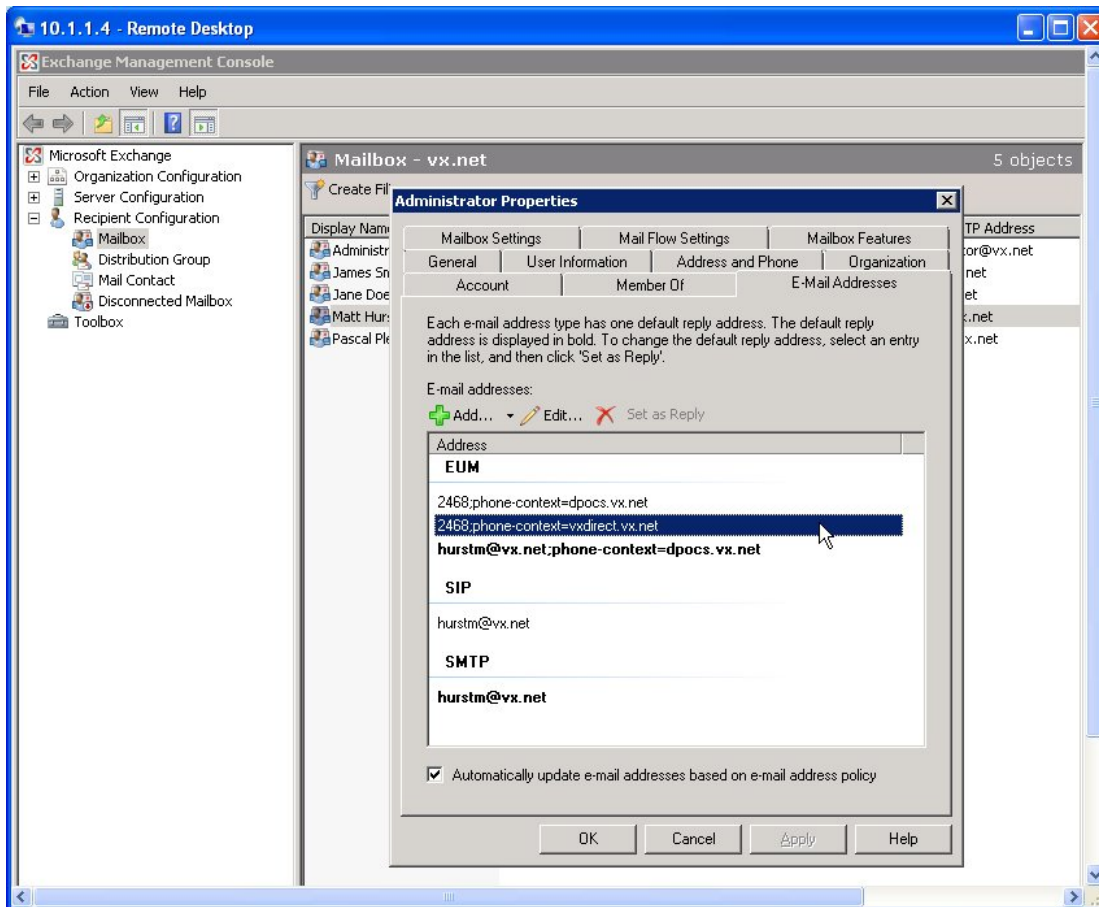
NOTE: The default Wizard setup uses G711 Mu-Law codec. It is recommended to change it to A-Law for all countries outside USA and Japan

IMPORTANT: For better granularity for codec handling, it is also possible to allocate Media-class at Call route table, line by line

## External Equipment

Within Exchange UM, ensure that there is a Dial Plan associated for direct connection with the VX gateway.

Users must be configured with an EUM address associated with this Dial Plan, and formatted for the correct extension digit length.



## Reference Material

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- PBX Compatibility testing – the VX gateway has been extensively tested for interoperability with a number of PBX's – for the most up to date list of certification results visit:  
<http://www.net.com/Pages/MicrosoftUC.aspx?pgid=217>
- VX Customer Documentation, R4.7

## Contact Information

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### Reader Feedback

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