

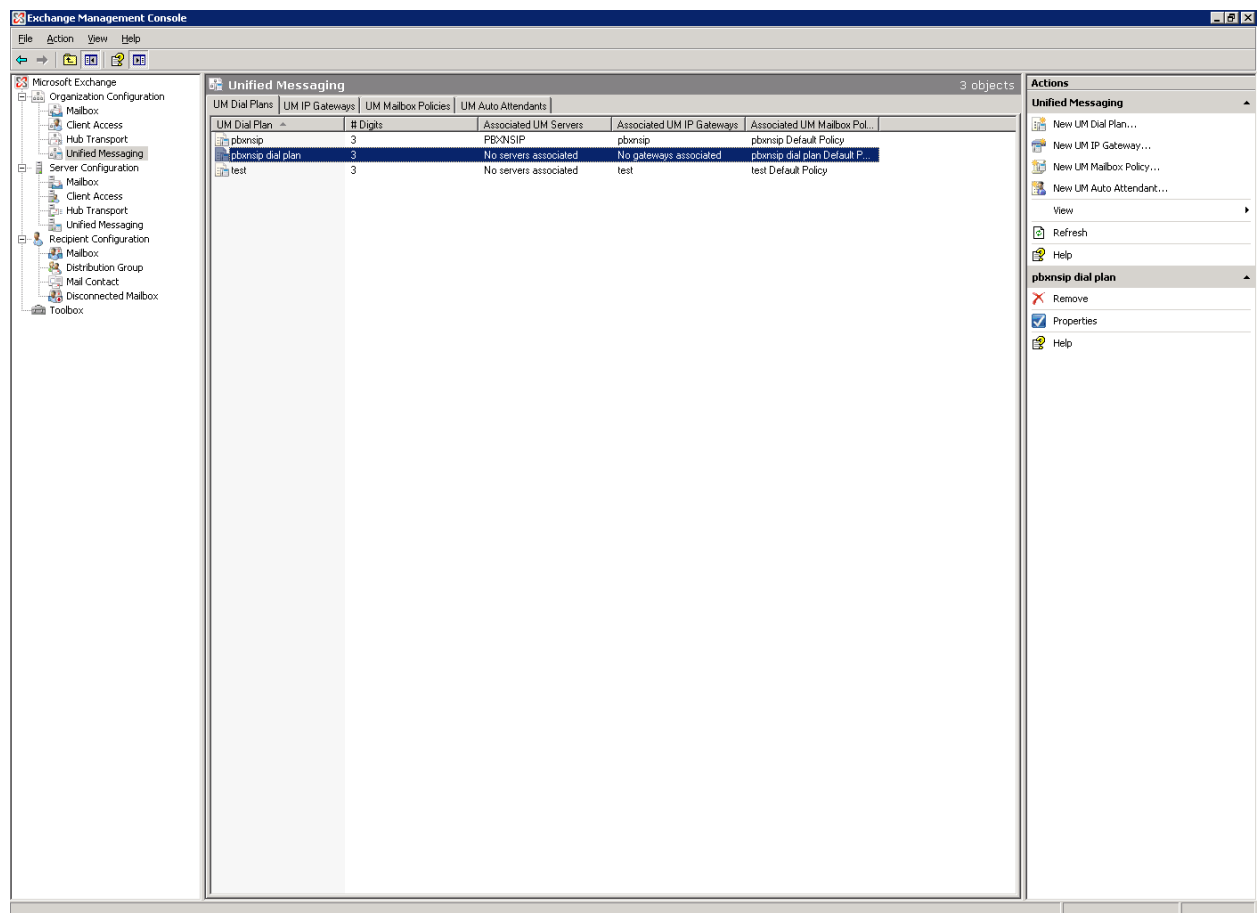
Basic Setup for pbxnsip / Exchange Server 2007 UM Interoperability

This document describes a simple set up for Microsoft Exchange 2007 UM and pbxnsip software. Although this setup provides basic functionality to get you started, keep in mind both Exchange and pbxnsip offer extensive customization allowing much more complex configurations.

Configuring Exchange for pbxnsip

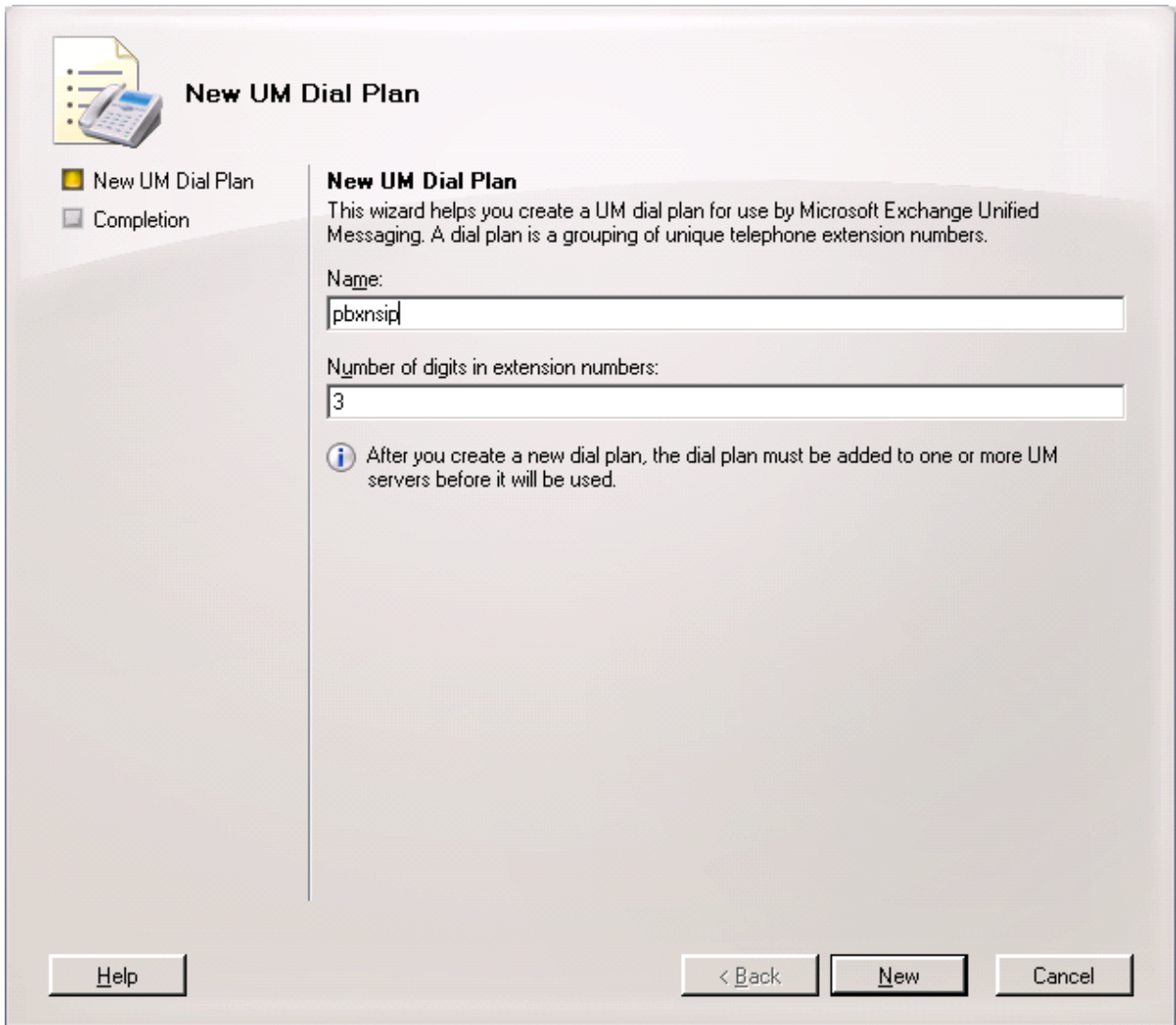
1. Install the unified messaging role on your exchange server. Run Exchange Management

Console:



2. **Create a new unified messaging dial plan:** Using the Exchange management console, select Organization Configuration/Unified Messaging. Under actions select new UM dial plan. Name the dial plan 'pbxnsip' and set the 'number of digits in extension numbers' to 3. Click 'new' and

then 'finish'.



The screenshot shows a wizard window titled "New UM Dial Plan". On the left, there is a progress indicator with two steps: "New UM Dial Plan" (selected with a yellow square) and "Completion" (unselected with a grey square). The main area contains the following text and fields:

New UM Dial Plan
This wizard helps you create a UM dial plan for use by Microsoft Exchange Unified Messaging. A dial plan is a grouping of unique telephone extension numbers.

Name:

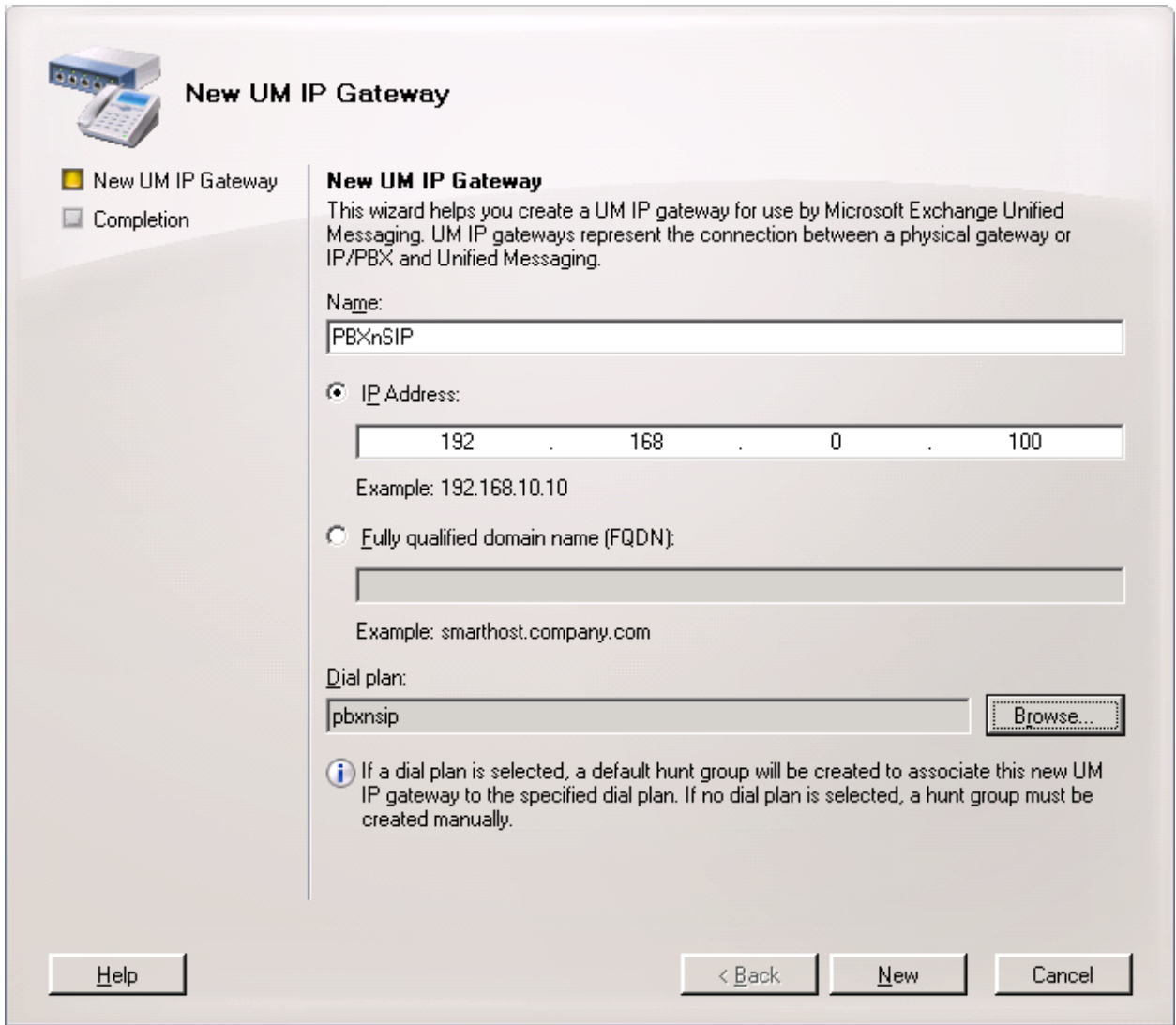
Number of digits in extension numbers:

i After you create a new dial plan, the dial plan must be added to one or more UM servers before it will be used.

At the bottom, there are four buttons: "Help", "< Back", "New", and "Cancel".

3. **Create a new unified messaging IP gateway:** Under actions select New UM IP Gateway. Name the gateway 'PBXnSIP', select IP address and enter the IP address of your pbxnsip server. Click the 'browse' button next to dial plan and select the 'pbxnsip' dial plan you created in step two.

Click 'new' and then 'finish'.



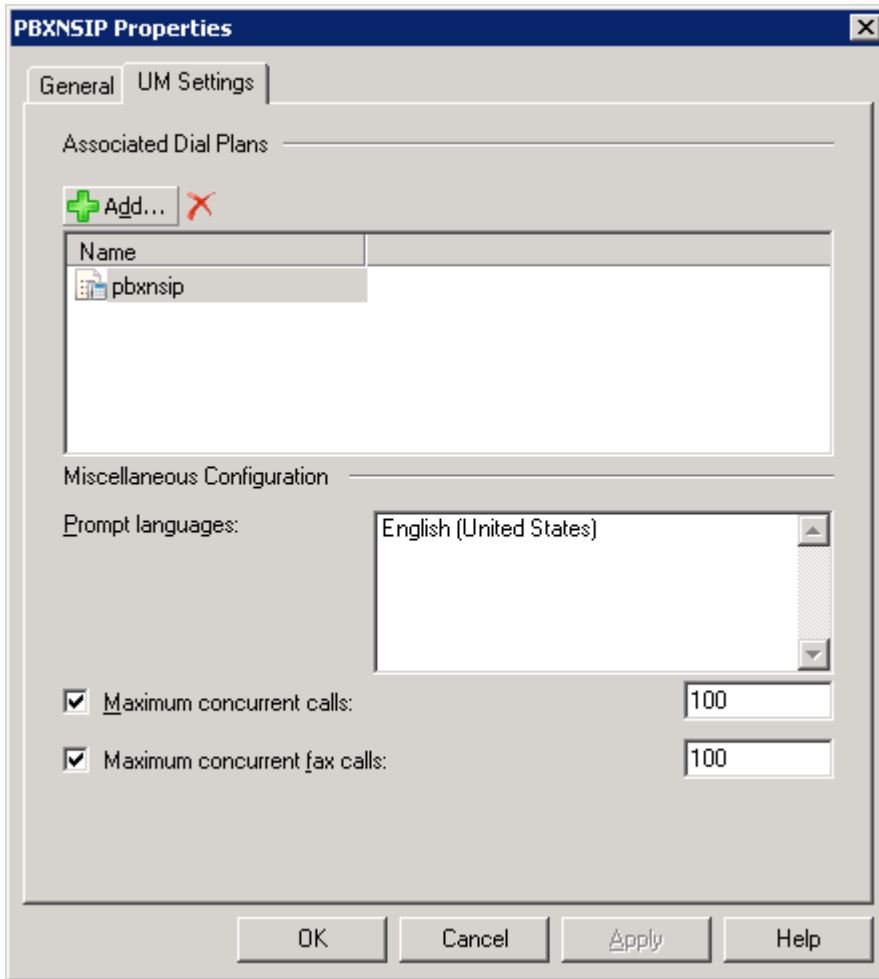
The screenshot shows the 'New UM IP Gateway' wizard. On the left, there are two steps: 'New UM IP Gateway' (selected with a yellow square) and 'Completion' (unselected with a grey square). The main area is titled 'New UM IP Gateway' and contains the following fields and options:

- Name:** A text box containing 'PBXnSIP'.
- IP Address:** A radio button is selected. Below it is a text box with '192 . 168 . 0 . 100' and the example 'Example: 192.168.10.10'.
- Fully qualified domain name (FQDN):** A radio button is unselected. Below it is an empty text box and the example 'Example: smarthost.company.com'.
- Dial plan:** A text box containing 'pbxnsip' and a 'Browse...' button.
- Information:** An information icon (i) followed by the text: 'If a dial plan is selected, a default hunt group will be created to associate this new UM IP gateway to the specified dial plan. If no dial plan is selected, a hunt group must be created manually.'

At the bottom, there are four buttons: 'Help', '< Back', 'New', and 'Cancel'.

4. **Associate the dial plan with the unified messaging server:** Using the Exchange management console, select Server Configuration/Unified Messaging. Under actions click properties and then click the 'UM settings' tab. Under associated dial plans click the add button. Choose the

'pbxnsip' dial plan created in step two. Click OK.



5. **Enable mailbox recipients for unified messaging:** Using the Exchange management console, select Recipient Configuration/Mailbox. Select the mailbox you wish to enable and then under actions click enable unified messaging. Next to unified messaging mailbox policy click the browse button and then select the PBXnSIP default policy. Enter a mailbox extension for this user which matches their extension number on the pbxnsip server. Manually specify the PIN

and click enable. Repeat this step for each mailbox.

Enable Unified Messaging

Enable Unified Messaging
 Completion

Enable Unified Messaging
The selected mailbox will be enabled for Unified Messaging. Upon completion, an e-mail message will be sent to the mailbox notifying the user that they have been enabled for Unified Messaging. The message will include the PIN and the number to dial to gain access to their mailbox. By default, an extension number and PIN are automatically generated. You can also manually specify an extension number and PIN.

Unified Messaging Mailbox Policy:
pbxnsip Default Policy

Automatically generated mailbox extension
 Manually entered mailbox extension: 518

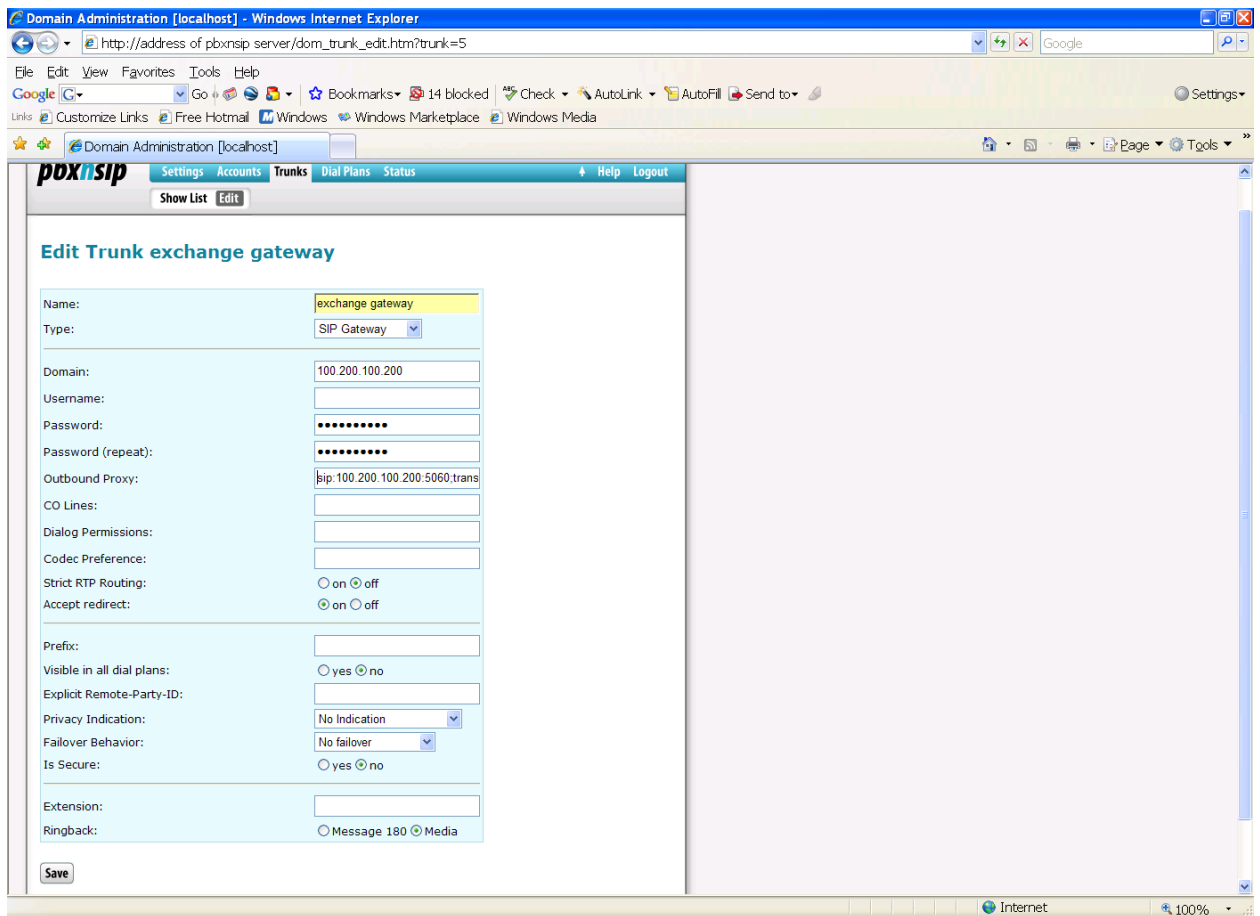
PIN Settings

Automatically generate PIN to access Outlook Voice Access
 Manually specify PIN: ●●●●●●
 Require user to reset PIN at first telephone logon

Unified Messaging is a premium feature and requires an Exchange Enterprise Client Access License (CAL) to enable it for the mailbox.

Configuring the pbxnsip Server for Exchange

- 1. Create a new trunk to connect to Exchange:** Using the pbxnsip Domain Administrator, select the Trunks tab. Name the new trunk 'exchange gateway' and set its type to SIP Gateway. Click the create button. Click the edit icon next to the Exchange Gateway. In the Domain box, enter the FQDN or IP Address of your Exchange Server (i.e., exchange.company.com). In the outbound proxy box, enter: sip:exchange.company.com:5060;transport=tcp but replace exchange.company.com with the FQDN or IP Address of your Exchange Server. The example below assumes the address is 100.200.100.200. Click the 'Accept redirect' radio button and then click save.



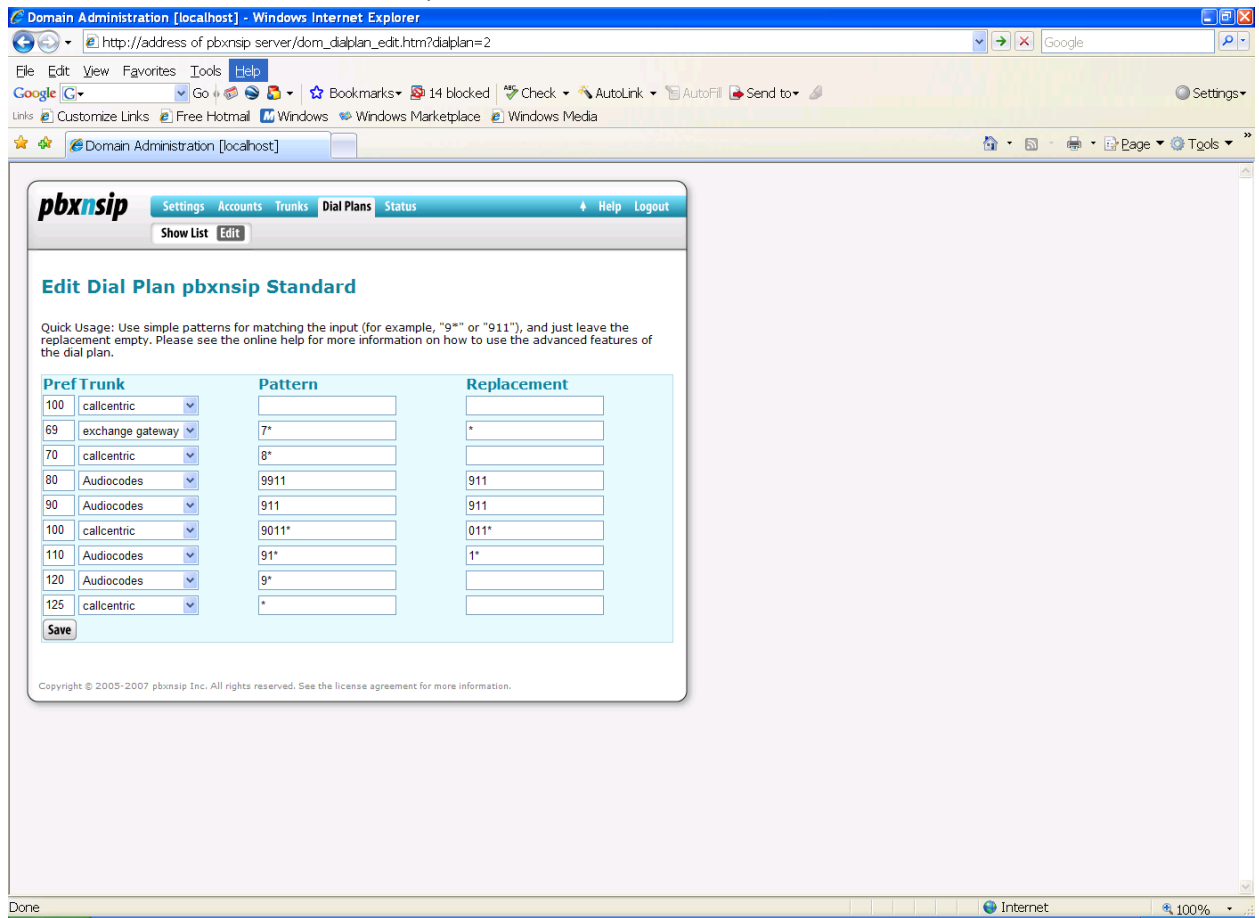
The screenshot shows a web browser window displaying the pbxnsip Domain Administrator interface. The page title is "Edit Trunk exchange gateway". The form contains the following fields and options:

Name:	exchange gateway
Type:	SIP Gateway
Domain:	100.200.100.200
Username:	
Password:	*****
Password (repeat):	*****
Outbound Proxy:	sip:100.200.100.200:5060;trans
CO Lines:	
Dialog Permissions:	
Codec Preference:	
Strict RTP Routing:	<input type="radio"/> on <input checked="" type="radio"/> off
Accept redirect:	<input checked="" type="radio"/> on <input type="radio"/> off
Prefix:	
Visible in all dial plans:	<input type="radio"/> yes <input checked="" type="radio"/> no
Explicit Remote-Party-ID:	
Privacy Indication:	No Indication
Failover Behavior:	No failover
Is Secure:	<input type="radio"/> yes <input checked="" type="radio"/> no
Extension:	
Ringback:	<input type="radio"/> Message 180 <input checked="" type="radio"/> Media

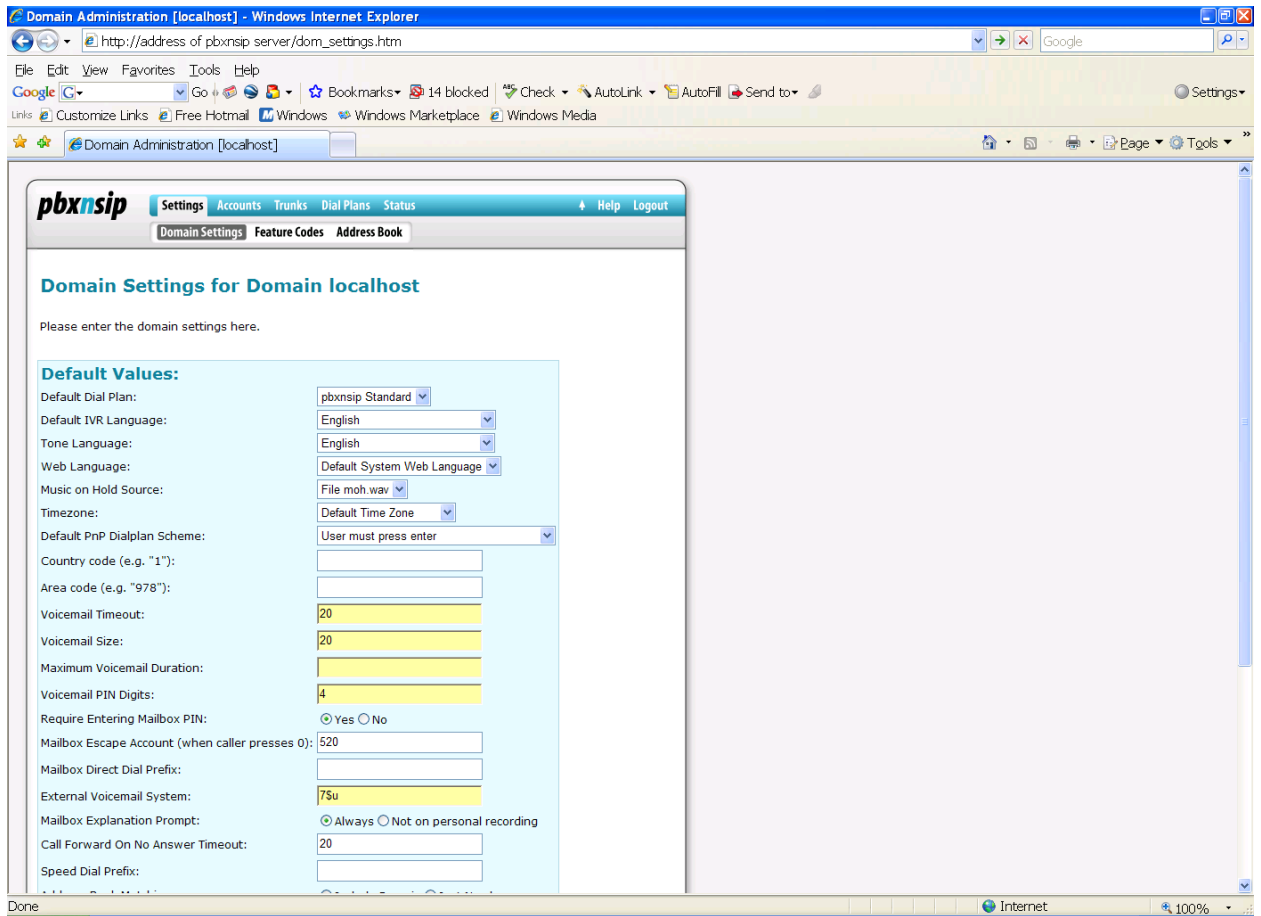
A "Save" button is located at the bottom left of the form.

- 2. Add the Exchange gateway to your current dial plan:** Click the dial plans tab and then click the edit icon next to your current dial plan. In the top dial plan slot, select 'Exchange Gateway',

enter 7* as the Pattern and * as Replacement. Click Save.



- Set the pbxnsip "External Voicemail System":** This Domain field value contains the number that will be dialed when the PBX wants to send a call to the mailbox. The redirection target should be a telephone number, not a SIP URI. It must be possible to dial that number through the dial plan and the extension must have the permission to do that. You can use the replacement fields known from the caller-ID representation in the trunks. For example, "\$u" is being replaced with the extension number. The redirection to the mailbox works only if the mailbox is enabled for that account.



4. **You must not use the "Mailbox Direct Dial Prefix":** In the Domain settings, make sure this field is empty because it would interfere with the mailbox redirection logic and create an endless redirection loop.