Customer Tips

… for the user

Inbound Routing Using DTMF with FreeFlow Office Fax Pro

Purpose

This document describes how Office Fax Pro administrators can use DTMF digits to route inbound faxes to user's email addresses.

Note: DTMF (Dual Tone Multi-Frequency) is the system touch-tone telephones use that assigns a specific frequency (consisting of two separate tones) to each key. The tones are easily identified by the receiving equipment and associated with the number pressed.

Overview

DTMF codes are sent to the Office Fax Pro server in several ways:

- manually, or

- using telcom equipment

For more information, see "Sending DTMF Tones," later in this document.

An Office Fax Pro server can use the DTMF tones it captures from an inbound fax to route it to a specific location such as an email address or a printer. This document only discusses routing to an email address. To setup DTMF routing, perform the following tasks:

1. Set the Office Fax Pro Telco Properties to receive DTMF digits

2. Select and set up one of the following routing methods:

    a. Create an LDAP lookup, or

    b. Create an inbound DTMF routing rule

3. Enable IIS SMTP mail to pass from the Office Fax Pro server to the intended recipients.

This document applies to these Xerox products:

X	WC Pro 232/238/245/255/265/275
X	WC Pro C2128/C2636/C3545
X	WC Pro 165/175
	WC M165/M175
X	WC Pro 32/40 Color
X	WC Pro 65/75/90
X	WC Pro 35/45/55
	WC M35/M45/M55
X	DC 555/545/535
X	DC 490/480/470/460
X	DC 440/432/425/420
	DC 332/340
X	DC 265/255/240
	DC 220/230
	DCCS 50

Sending DTMF Tones

When the fax sender dials the fax number of the Office Fax Pro server it passes the DTMF digits in one of the two ways described in the following sections.

Sending DTMF Tones Manually

1. The sending fax machine dials the number for the Office Fax Pro server.

2. The Office Fax Pro server answers the call (goes off-hook) and waits a set amount of time for a set number of digits to arrive.

3. If you use a manual fax, press the DTMF routing digits. If a device is sending the fax (such as another fax server or a multifunction device), enter the fax number followed by a series of pauses (enough time for the Office Fax Pro server to ring and answer the call – the default timeout in Telco Properties is set to 30 seconds) and then the DTMF digits to route the fax.

4. The Office Fax Pro server starts the fax transmission and receives the inbound fax.

5. The Office Fax Pro server routes the fax based on the routing rule it matches or it performs an LDAP lookup of a directory that matches the DTMF digits with an email address.

Routing DTMF with Telcom Equipment

Often, companies have DID extensions for all of the voice phone lines. DID (direct inward dialing), is a service of a phone company that allows an organization to have a number of individual phone numbers for each person or workstation in its phone system that run off of a small block of dedicated telephone numbers. These DID extensions allow for each person to have a direct number to their desk phone.

The Office Fax Pro server can operate in much the same way, allowing each person to have a direct fax number to his or her own email address inbox.

Implementation of this type of routing requires a number of DID extensions that are assigned to fax machines, telcom equipment capable of converting DID to DTMF and the capability to perform a lookup (if one is used) to match the incoming digits to an email address for delivery. The following steps describe this process.

1. The sender of the fax dials the direct number assigned to the person they want to receive the fax (example: 1-603-890-1234).

2. The telcom equipment receives the call and the DID digits associated with that number (in most cases, it is the last 4 digits dialed, example: 1234).

3. The telcom equipment converts the digits received to DTMF tones and passes the call to the Office Fax Pro server. (In this example, the telcom equipment calls the Office Fax Pro server and sends the digits 1234 after the server picks up the call.)

4. The Office Fax Pro server receives the digits and begins the fax transmission.

5. The Office Fax Pro server routes the fax based on a routing rule associated with the digits (example: 1234) or performs a lookup to match the digits with an email address and then forwards the fax to the recipient's inbox.

Set the Telco Properties

1. Open the Omtool Administrator.

2. Select **Connectors**.

3. Right-click **Telco on the Server** and select **Properties**.

4. Select the **Channels** tab.

5. Highlight the channel(s) and click **Properties**.

6. Select the **Receive** tab.

7. Check the box to enable **Capture DTMF**.

8. Enter these settings:

    Length. The number of DTMF digits captured (default: 4).

    Timeout. How long the server waits for DTMF digits (default: 30 seconds).

9. Click [**OK**] twice to save changes and close the **Properties** window of **Telco on the Server.**

Select and Setup a Routing Method

Generally, the routing method you choose is based on the size of your organization.

- The LDAP lookup method is better suited for sites that have a large number of recipients because it avoids the time consuming task of creating multiple routing rules. See the instructions described in "Create an LDAP Lookup."

- The method that creates inbound DTMF routing rules is appropriate for sites with a small number of DTMF recipients because individual rules are set for each DTMF code. See the instructions described in "Create an Inbound Rule for DTMF Routing."

Create an LDAP Lookup

The following procedure sets up the Office Fax Pro server to perform an LDAP lookup. The lookup is based on a rule that checks the DTMF digits against the LDAP query to see if they match. When a match occurs, the recipient receives an email with the fax attached.

To use an LDAP lookup for Office Fax Pro inbound fax routing, each Office Fax Pro user's email address must contain their unique DTMF digits in the fax telephone number field of their user account. For example, if you have an Active Directory environment and use a Microsoft Exchange server as your LDAP server, enter the recipient's unique DTMF digits in the Fax field on the Telephone tab of the user account's Properties.

Set up DID/DTMF Lookup

1. Open the Omtool Administrator.

2. Select **Connectors**.

3. Right-click **SMTP on the Server** and select **Properties**.

4. Check the box to **Enable DID/DTMF Lookup via this connector**.

5. Select the **DID/DTMF Lookup** tab.

6. Click [**Add**].

7. Enter either the LDAP server name or IP address in the **Server Address** field (change the LDAP port, if necessary). If the LDAP server does not require authentication, proceed to step 10.

8. Select **User** in the Logon section.

9. Enter the Username and Password of a user account with permissions to perform an LDAP query.

10. Select the **Search** tab.

11. Enter the **Search Base** of the LDAP server (example: dc=exchangedomain,dc=company,dc=com). If you are unsure what to enter, have your Email Administrator help you with this or have them run an LDAP utility called LDP.exe and connect to the LDAP server. They should provide you the entry for **Search Directory Root**.

12. Click the drop down **Attribute holding fax number** to select the field with the DTMF digits (example: facsimileTelephoneNumber). If the correct field does not appear in the drop down, select **Use custom filter** to enter a custom filter with the correct field name.

13. Click [**Test**]. Type a DTMF number in the text box and click [**Search**]. The query results appear in the window below the Test button. Click [**Close**].

14. Click [**OK**] twice to save your search base and your changes to the **SMTP on the Server** connector.

Add Inbound Rule for DID/DTMF Lookup

Add this rule to enable an LDAP search to determine fax recipients.

1. In the Omtool Administrator, expand **Rules and Inbound**.

2. Right-click **Inbound** and select [**New, Rule**].

3. Click [**Add**] on the Criteria window.

4. Highlight **DTMF** and click [**Next**].

5. Select the **is** radio button, enter an * in the field, click [**Add**] and click [**Finish**].

6. Click [**Next**].

7. Under **Specify the Actions to take for this Rule** click [**Add**].

8. Highlight **Route to Lookup Manager** and click [**Next**].

9. Click [**Finish**].

10. Click [**Next**] twice.

11. Verify the rule is enabled and there is a check in **Stop processing other rules** and then click [**Finish**].

Create an Inbound Rule for DTMF Routing

The following procedure creates an inbound rule that maps the user's DTMF digits to their email address. There is no LDAP lookup involved when this rule is executed. When the Office Fax Pro server receives an inbound fax with a user's DTMF digits, it checks for this rule and maps the user's DTMF digits with their email address entered for the rule and sends them the fax via an attachment on an email message.

1. Open the Omtool Administrator.

2. Expand **Rules and Inbound**.

3. Right-click **Inbound** and select [**New, Rule**].

4. Click [**Add**] on the Criteria window.

5. Highlight **DTMF** and click [**Next**].

6. Select the **is** radio button, enter the DTMF digits you wish to match (the digits the sender dials), and click [**Add**].

7. Click [**Finish**].

8. Click [**Next**].

9. Click [**Add**] in the Action window.

10. Highlight **Route to Connector** and click [**Next**].

11. In the **Route to Connector** drop down, select **SMTP on the Server**, put a check in the **Destination** field and enter the email address associated with the DTMF digits entered in step 6.

12. Click [**Finish**].

13. Click [**Next**] twice.

14. Verify the rule is enabled and there is a check in **Stop processing other rules** and click [**Finish**].

Enable IIS SMTP

Install IIS SMTP as part of the Office Fax Pro installation. No other configuration is necessary in most environments.

Note: To confirm that SMTP can process emails properly, use SMTP to set up an Outlook Express client on the Office Fax Pro server and attempt to send a test email message to a recipient on your company mail server. If the test email succeeds, then SMTP can send outbound mail to a recipient on your company mail server. If it does not succeed, work with your email administrator to determine why and correct the situation before proceeding. Be aware that, even if the test succeeds, other issues may arise that prohibit the sending of email from the Office Fax Pro server through the SMTP mail server. Contact Xerox Customer Support if you require help troubleshooting inbound email routing.

Additional Information

Xerox Customer Support welcomes feedback on all documentation - send feedback via e-mail to: USA.DSSC.Doc.Feedback@mc.usa.xerox.com.

You can reach Xerox Customer Support at 1-800-821-2797 (USA), TTY 1-800-855-2880 or at http://www.xerox.com.

Other Tips about Xerox multifunction devices are available at the following URL: http://www.office.xerox.com/support/dctips/dctips.html.

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