Pine−Exchange mini−HOWTO

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This HOWTO documents the configuration of the Pine email client to be used with a Microsoft Exchange Server.

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1. Introduction

This HOWTO will provide you the required information on setting up Pine to connect seamlessly to an Exchange Server. The services include the following:

- The ability to send and receive email with Pine through an Exchange Server.
- Access to all your Exchange INBOX and specialized folders and messages.
- Configuration of specialized folders (Drafts, Sent Items, Public, etc).
- Access to the Global Address List on the Exchange Server.
- Seamless configuration meaning that you can switch between Exchange/Outlook/Pine clients without any problems. (Pine will not mess up your existing configuration if you wish to revert back to Outlook)

NOTE: This configuration will not allow you access locally created Exchange files (ie. .pst, .pab, etc)

2. Requirements

I assume if you are reading this HOWTO, you probably already meet the requirements, but here they are anyhow:

- Have a working knowledge of the Pine email client (There is little to no documentation in this HOWTO on using Pine). If you need more information on using Pine, check out their main website. (see Resources)
- A username/password in order to log into the Exchange Server (Exchange servers run in a Microsoft domain, so your Exchange logon will be the same as your domain logon).
- Befriend the SysAdmin of your Exchange Server (You may or may not need the help of this person depending on which services are running).
- The Exchange Server must be version 5.5 or greater (Exchange did not support IMAP until 5.5).
- Pine started supporting IMAP with v2.0 and LDAP with v4.0. I would recommend upgrading to the newest version, at the release of this document v4.44 or at least v4.0 or greater.

3. Communication

These are the protocols that will facilitate communication between the Pine client and the Exchange Server: IMAP, SMTP, and LDAP. (see Resources)

- IMAP (Internet Message Access Protocol) – This protocol will provide you access to all your messages and folders on the Exchange Server.
- SMTP (Simple Mail Transfer Protocol) – This protocol will allow you to send outgoing Internet email.
- LDAP (Lightweight Directory Access Protocol) – This protocol will provide you access to the Global Address List on the Exchange Server.

4. Exchange Server Configuration

Before starting to work on your Pine configuration, you must make sure that the Exchange Server is configured correctly. This is where your SysAdmin comes in to play. You need to make sure the IMAP, SMTP, and LDAP services are all running. These services could potentially be running on separate servers, so you need to consult your SysAdmin.

On Exchange Server 5.5, IMAP and LDAP are installed and running in the default installation. SMTP has to be installed separately, and comes in an add−on package called Microsoft Exchange Connector, specifically for sending mail on the Internet.

NOTE: You can manually check to see if these services are running by telneting to their respective ports. (ie. IMAP:143, SMTP:25, and LDAP:389)

5. Pine Configuration

Pine has three types of configuration files we will concern ourselves with. Each of them can contain all the same settings, but with varied syntax. The decreasing order of precedence for each setting is as follows: /etc/pine.conf.fixed, ~/.pinerc, and /etc/pine.conf. Basically this means if Pine is looking for a specific setting it first checks pine.conf.fixed, if it does not exist it checks ~/.pinerc, if it does not exist it finally checks /etc/pine.conf.

- ~/.pinerc −− This is the local user copy of the configuration file. It is located in the root of the users home directory it only affects that user. You should use this configuration if you do not have superusers/root access on the computer on which you are using Pine. To generate a new configuration file of this type, you issue the command 'pine −pinerc .pinerc.new'.
- /etc/pine.conf −− This is the site−wide Pine configuration file, so it affects all the users running Pine on that machine (It can only be installed by the superuser/root account). The syntax is slightly different than the ~/.pinerc file since it has to represent all the users on the system, not just one. To generate a new configuration file of this type, you issue the command 'pine −conf > pine.conf.new'.
- /etc/pine.conf.fixed −− This has exactly the same purpose and syntax as the /etc/pine.conf file, except for one property. This file is not overridden by the users ~/.pinerc file. Basically all the settings in this file are enforced, and cannot be changed by the user. Initially this file should be empty. You should add settings to it as needed.

Each of these files contain settings in the form of "key=value" pairings. You can change these settings with your favorite editor (ex. vi). For the ~/.pinerc file the user can change the settings directly from Pine, by going into (S)etup then (C)onfig. For LDAP settings go into (S)etup then (D)irectory.

Here are the important settings for communicating with the Exchange Server:

NOTE: The syntax of each setting will be shown in the Example configuration.

- user−domain −− The domain name portion of your email address (So if your email address is user@yourcompany.com, then yourcompany.com would be your user−domain).
- customized−hdrs −− This is the actually "From:" header that will appear in the message that you compose before you send it out. If you don't specify this header, the user and full name are taken from the system /etc/passwd file. There are other variations to setting up the "From:" header (see Resources).
- smtp−server −− The hostname of your SMTP server. This may or may not be the same as your Exchange Server. (With SMTP Authentication you will need to specify a "/user" parameter on the end of this setting).
- inbox−path −− This contains the default path to your INBOX. (This should point to the remote INBOX on your Exchange/IMAP server).
- folder−collections −− This contains points to other folder collections you wish to view. There are only two sets you should concern yourself with. The first is your INBOX folders (personal folders you create in your INBOX), and the second is your Mailbox folders, which are default folders (ie. Sent Items, Deleted Items, Drafts, Outbox, Public Folders, etc.)
- default−fcc −− This folder contains a carbon copy of all messages that you sent out. (This should point to the "Sent Items" folder on the Exchange server)
- postponed−folder −− This folder contains postponed messages, that you wish to finish later. (If you are using Outlook, this should point to the "Drafts" folder on the Exchange server, otherwise you can create your own on the server)

- ldap−server −− This is the hostname of your LDAP server. There are many parameters available for which you should consult your Pine documentation. (This will be used to access the Global Address List on the Exchange Server).
- rsh−open−timeout −− Pine will use rsh to connect to IMAP by default. This is an Integer value which represents the timeout period. (Since Exchange servers don't run rsh, we are going to want to disable this feature by setting this value to 0).

One potential problem that you may run into is SMTP Authentication. Basically, this means that you need to provide a username and password to use SMTP to send email. I have found no official documentation which states that Pine supports SMTP Authentication (more so on the contrary). The closest thing I've found is the possibility of a /user Parameter to the smtp−server setting, which was mentioned briefly in the change log from version 4.20 to 4.21. It was also brought up a couple of times on the listserv. (see Resources)

If you still have problems with it, here is an alternative which I ended up using. You can have your SysAdmin add your IP address to the Exchange Server to allow you to bypass the SMTP authentication.

6. Example Configuration

This example should help carify the syntax of the settings defined in the previous section, with a set of artificial data.

6.1. Gather your information

Let us assume the following default information (You may provide your own if you have it available):

```
Printed Name = "Foo Foo"
Account/User Name = "foofoo"
Domain Name = "foofoo.org"
Exchange/IMAP/LDAP Server = "192.168.1.25"
```

NOTE: In order for the transition to be seamless, you have to make sure you match the information precisely as it is stored on the Exchange Server. (ie if your name on the Exchange server is "John B. Doe", make sure you set your printed name to the exact value)

Let us also assume, you have been using Outlook up to this point, and you have accumulated some messages in your "INBOX", "Sent Items", and "Drafts". Not too mention a couple of personal folders you created in your "INBOX" on the server to categorize your mail: "TODO", "DONE", and "Personal".

6.2. Setting up a local ~/.pinerc configuration file

Here are the settings you should find in your ~/.pinerc file. In most cases, each setting will be empty (ie "key=" with no value specified). Here is what they would look like plugging in the default information.

```
user-domain=foofoo.org
smtp-server=192.168.1.25
inbox-path={192.168.1.25/user=foofoo}INBOX
folder-collections="INBOX Folders" {192.168.1.25/user=foofoo}inbox/[],
                   "Mailbox Folders" {192.168.1.25/user=foofoo}[]
default-fcc="{192.168.1.25/user=foofoo}Sent Items"
postponed-folder={192.168.1.25/user=foofoo}Drafts
customized-hdrs=From: Foo Foo <foofoo@foofoo.org>
ldap-servers=192.168.1.100 "/base=/impl=1/rhs=0/ref=0/nosub=0/type=
           /srch=contains/time=/size=/cust=/nick=/matr=/catr=/satr=/gatr="
rsh-open-timeout=0
```

NOTE: If you want to try SMTP Authentication with the above configuration, you would replace:

```
smtp-server=192.168.1.25
```

with:

```
smtp-server=192.168.1.25/user=foofoo
```

6.3. Setting up a site−wide Pine configuration

This configuration affects all the users on the system and requires a bit more work to setup. Only a UNIX SysAdmin should attempt this configuration.

NOTE: In order for this configuration to work properly, the Microsoft domain account information must be synced up with the Unix account information (ie. usernames and full names must match).

Looking at the default provided information you should notice that "Printed Name", and "Account/User Name" now have to be generalized. For "Printed Name", in removing it from the configuration file, Pine will default to the personal name found in the /etc/passwd file. For "Account/User Name", you can use "${USER}", which points to the environment variable which holds the users login name. So with that you get the following configuration:

```
user-domain=foofoo.org
smtp-server=192.168.1.25
inbox-path={192.168.1.25/user=${USER}}INBOX
folder-collections="INBOX Folders" {192.168.1.25/user=${USER}}inbox/[],
                   "Mailbox Folders" {192.168.1.25/user=${USER}}[]
default-fcc="{192.168.1.25/user=${USER}}Sent Items"
postponed-folder={192.168.1.25/user=${USER}}Drafts
#customized-hdrs=From: Foo Foo <foofoo@foofoo.org>
ldap-servers=192.168.1.100 "/base=/impl=1/rhs=0/ref=0/nosub=0/type=
           /srch=contains/time=/size=/cust=/nick=/matr=/catr=/satr=/gatr="
rsh-open-timeout=0
```

NOTE: In this configuration we want to comment out the "customized−hdrs" setting since we want the user information to be retrieved from the system /etc/passwd file.

The last step in this configuration is determining whether to put the settings in /etc/pine.conf or /etc/pine.conf.fixed. That choice is yours, and depends on how much control you need to give to the users. If your company only uses Exchange, maybe all the settings should go in fixed, but then users couldn't use Pine for anything else. Remember, if you put a setting in pine.conf.fixed, the user does not have the option to change it.

6.4. Logging into the Exchange/IMAP server

When you first start up Pine, with your new configuration file (You can use the command 'pine −p .pinerc.new−config' if you have multiple), Pine will automatically try to connect to your Exchange/IMAP Server. After establishing a connection, using the provided username from the configuration file, it will prompt you for your password. This will be your network logon password on the Microsoft domain. Once you get authenticated, you should be ready to go.

6.5. Accessing your Folders with IMAP

When you first open your folder list, you should see three folder collections. Incoming Folders(INBOX), INBOX Folders(personal folders), and Mailbox Folders specialized folders).

Even though this is not a Pine HOWTO, there is one thing I want to point out about navigating the folders. When viewing the contents of a folder, if you want to view the list of messages in the folder, hit the "ENTER" key, if you want to view the list of folders(subdirectories) in the folder, hit the ">" key. If you need more information on using Pine, check out their website (see Resources).

6.6. Accessing your Global Address List with LDAP

Using the default configuration provided in this example, when you compose a new message, and type in a name in the "To:" box. Pine will first check your local addressbook for the nickname. If it doesn't find it, it will then run an LDAP query by default, using the default name you typed as the search string. Depending on the speed of the LDAP server, you should get a response relatively quickly. From the results you can choose the entry you were looking for, and continue writing your email.

NOTE: If you type in an email address in the "To:" box, it will NOT do an LDAP search or any other addressbook search (ie. user@smtp.email.org).

If you just want to do a search, without actually composing a new message, you can go directly to your addressbook, select the LDAP server, and type the search string from there (ie (M)ain, (A)ddressbook).

In case you do not want Pine to do an automatic LDAP lookup everytime you compose a new message, you can change the parameter "/impl=1" in the "ldap−server" setting to "/impl=0". This will allow you to do a manual LDAP query if you wish.

6.7. Sending an email with SMTP

This procedure does not change from normal Pine usage. You can start composing your message right away. When you send the message it will get sent through the provided SMTP server.

7. Resources

- Pine Information Center
- Pine mailing list
- Pine Frequently Asked Questions
- Current Pine Distribution Documentation
- Pine Version Changes
- Changing Your From Header in Pine
- Internet Message Access Protocol
- Lightweight Directory Access Protocol
- Simple Mail Transfer Protocol
- SMTP Authentication RFC

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8. Acknowledgements

Thanks to Hugo van der Kooij for mentioning that Exchange version 5.5 or greater was not in the Requirements section. Thanks to Y Giridhar Appaji Nag for suggesting I add support for a Site−Wide Pine configuration.

9. Disclaimer

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