Setting up a Dial In PPP Server for use with NX1500 series Nexion Data modems.

A Linux server can provide many network services and all of these can be accessed by users via a dial up connection.
Such services might include Email, Instant Messaging, BBS File Sharing and Internet access.

This document applies to Red Hat Linux 7.3 and details only PPP Dial In setup. It requires Mgetty and PPPd to be installed – PPPd is installed by default.

Mgetty.

Installation

To see if Mgetty is installed, run GnoRPM and click Find. Select Match Label from the list and enter mgetty. Click find.

No result means Mgetty is not installed.
Close the find window.
To install, insert the Red Hat CD, mount it by right clicking the desktop and choosing Disks, CD-ROM. Click the Install button in GnoRPM, find Mgetty in the list and install by following the prompts etc.
Unmount the drive the same way it was mounted.

Mgetty must be run against each port to be monitored for dial in. To run Mgetty on COM 1, the command would be
```
/sbin/mgetty –D ttyS0
```
where –D forces data mode (deny fax) and ttyS0 = COM 1.
(ttyS1 is equivalent to COM 2).

Most commonly the Mgetty command is added to /etc/inittab so it is automatically executed at startup and is also re-executed each time the process is terminated (modem hang up).
For a modem on COM 1, add the following line to /etc/inittab:
```
S0:2345:respawn:/sbin/mgetty –D ttyS0
```
The starting 'S0' is an arbitrary reference and can be any unique set of characters.

Configuration

/etc/mgetty+sendfax/mgetty.config sets global Mgetty configurations and also per comm. port configurations.
The port speed should be set here and the chat script modified.

The Chat script is a series of questions (sends) and answers (expects).

```
Eg. Send "ATZ" and expect "OK" as the reply.
```

Any break in the set chat sequence and the call is terminated.

For maximum compatibility Mgetty chats always begin with an empty expect.

In the following chat sequence, the last expected answer has been removed.
This example uses COM 1 / ttyS0.

```
# Setting for Nexion NX1500 19200 baud modem.
port ttyS0
  debug 6
  speed 19200
  term vt100
  data-only y
  init-chat "" ATZ OK ATQ0E1 OK ATS0=0
  answer-chat "" "" "" \c
```

PPP.

Some servers require adjustment to the PPP options. Try the following options if standard settings are troublesome.

Mostly the non-standard settings are the LCP and IPCP options many of which extend timeouts.

PPP Options

The options file is /etc/ppp/options.

```
# suggested ppp options for Nexion NX1500 series modems
# 22-10-2002
#
-detach
asyncmap 0
debug
# disconnect after n seconds
idle 300
# lock the port when in use
lock
# accept packets before authentication
noauth
# hardware control
modem
crtscts
# add to arp table
proxyarp
# login using system password database
login
# send lcp echo after n seconds of inactivity
lcp-echo-interval 30
# consider connection lost after n unanswered echos
# eg. 30 seconds x 10 = 5 min
lcp-echo-failure 10
# maximum configure request transmissions
# increase for slow connection - default=10
lcp-max-configure 30
# number of configure failures
lcp-max-failure 30
# maximum terminate requests
lcp-max-terminate 10
```

```
# retransmission timeout
lcp-restart 10
# ipcp retransmission timeout
ipcp-restart 8
```

CHAP / PAP Secrets

Assign a username, password and IP address in the /etc/ppp/chap-secrets and /etc/ppp/pap-secrets secrets files.

```
# client  server      secret            IP addresses
"user1"   *           "password"        192.168.136.101
"user2"   *           "password"        192.168.136.102
```

Dial In.

Most users will use a Windows ® Dial up connection.
Install Nexion NX1500 series modem as a standard modem. Some configurations may benefit from IP Header compression. The IP Header compression setting is in the advanced TCP/IP settings.

Summary

Install Mgetty.
Add `S0:2345:respawn:/sbin/mgetty -D ttyS0` to /etc/inittab.
Modify the Mgetty configuration script /etc/mgetty+sendfax/mgetty.config.
Modify /etc/ppp/options.
Add user details to Chap / PAP secrets files.
Configure Windows® dial up networking.

Service	Package	URL
Email	Sendmail (packaged with Red Hat)	http://www.sendmail.org/
Instant Messaging	Jabber	http://www.jabber.org/
BBS	Citadel UX	http://www.citadel.org/

For a list of Windows modem error codes see:
http://www.modemhelp.net/

http://www.nexiondata.com/support/ppp/CitadelCmd.doc