



Topic / Issue: DSL to ISDN Redundant Link Configuration- X1200

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Configuring Failover from DSL to ISDN and back to DSL

Primary service being DSL
Secondary service being ISDN

In the Following Example a Bridged service is used. This service is capable of running Routed Networks.

Note:

In a Routed Configuration the Fallback from ISDN to DSL does not require disconnection of the ISDN, and will occur transparently as soon as the DSL is online.

In NAT mode Fallback is less graceful as it must hold the ISDN for a preset time, then attempt connection via DSL. If DSL still fails it falls back to ISDN again.

Redundancy Characteristics when Routing (NAT is Disabled)

Failover time from DSL to ISDN is configurable from 3 seconds (minimum) - Recommend 9 or 12 seconds

Return to DSL from ISDN is almost transparent. (expect 1-2 seconds of disconnection)

Note: The DSL modem must first re-establish Sync with the exchange prior to the X1200 returning to DSL

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Failover from DSL to ISDN = 9 seconds.

Return to DSL is transparent.

Redundancy Characteristics when NAT is Enabled on both interfaces

Failover time from DSL to ISDN is configurable from 3 seconds (minimum) - Recommend 9 or 12 seconds

Return to DSL is checked at a defined interval, configurable from 3 seconds (minimum) - Recommend 5 or 15 minutes.

Note: Return to DSL requires failover ISDN service to be dropped, and DSL connection checked. If DSL is still off line, initial failover from DSL to ISDN is repeated.

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Failover from DSL to ISDN = 9 seconds.

Return to DSL check is 15 minutes.

If DSL is down for 24 hours, every 15 minutes there will be 9 seconds of disconnection.

This disconnection is while the ISDN is dropped, DSL is checked and ISDN is re-established.

Configuration Requirements:

- A) Your WAN IP address
 - B) Providers WAN IP address
 - C) WAN subnet mask
 - D) Your Username
 - E) Your Password
 - F) Providers ISDN phone number
 - G) One or more IP addresses to ping for Keepalive monitoring
(suggest Secondary Provider DNS server - Caution when ISDN failover is used, as this IP will not be available)
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Configuration Instructions:

1) Configure the LAN settings:

-Within the LAN Main Menu, Define your local IP address and Subnet Mask

2) Configure DSL settings:

-Within the xDSL Main Menu, Define "Your WAN IP" address, Define the "WAN subnet mask"

3) Configure WAN partner:

-Within the WAN Partner Main Menu,

-Define a New Partner

-Encapsulation should be "PPP"

-Within the PPP menu,

-Select Authentication type

-Leave Remote PPP ID as BLANK

-Set Local PPP ID as "Your Username"

-Set PPP password as "Your Password"

-Within the Advanced Settings menu,

-Select Call back as "NO"

-Select Static Short Hold (sec) as "3600" - This sets Idle time out value.

-Idle for Dynamic Short Hold (%) as "0"- Not used

-Delay after connection failure (sec) as "60" - If ISDN dial fails re-dial in 60 seconds

-Layer 1 Protocol as "ISDN 64 kbps"

-Within the WAN numbers menu,

-Add "Providers ISDN phone number" and direction "outgoing"

-Within the IP menu,

-Select IP Transit Network "YES"

-Enter Local ISDN IP Address as "Your WAN IP"

-Enter Partners ISDN IP Address as "Providers WAN IP address"

-Enter Partners LAN IP Address as "WAN network Address"

(For Example: WAN IP address = 192.168.1.6 mask 255.255.255.252 then "WAN network Address" would be 192.168.1.4)

-Enter Partners LAN Netmask as "WAN subnet mask"

4) Configure Routing Table:

-Within the IP Main Menu,

-Within the Routing menu,

-Add Route / Type = "Default" / Network = "WAN without Transit network" / Partner - Interface = "New Partner Name" / Metric = "10"

-Add Route / Type = "Default" / Network = "LAN" / Gateway IP Address = "Providers WAN IP address" / Metric = "15"

(Note: ISDN Default Route must have lower Metric than DSL Default Route)

-Add Route / Type = "Host Route" / Network = "LAN" / Gateway IP Address = "Keepalive monitoring IP address" / Gateway = "Providers WAN IP address" / Metric = "1"

(Note: This forces Keepalives to this host via the DSL interface - If multiple hosts are check then add one entry for each)

5) Configure Keepalive monitoring / Failover Settings:

-Within the System Main Menu,

-Within the Keepalive Monitoring menu,

-Add Entry / Group = "1" / IP address = "Keepalive monitoring IP address" / Interval = "3" / DownAction = "Up" / FirstIFIndex = 10001 / Range = 0

(Note: This defines the Keepalive failover checks, 3 failures will drop the DSL

Service for the ISDN.)

6) Configure ISDN Timeout Settings (Required for NAT mode, but Recommended also for Routing mode)

-Within the Credits Main Menu,

-Within the ISDN credits Menu,

-Within the PPP subsystem

-Select PPP credits as "ON"

-Select Measure time as "ISDN connect time + 10 seconds" (ie

"280")

-Select Maximum number of incoming connections as "OFF"

-Select Maximum number of outgoing connections as "OFF"

-Select Maximum charge as "OFF"

-Select Maximum time for incoming connections (sec) as "OFF"

-Select Maximum time for outgoing connections (sec) as "ON"

and then as "ISDN connect time" (ie "270")

-Select Maximum number of current incoming connections as

"OFF"

-Select Maximum number of current outgoing connections as

"ON" and then as "1" for 64K, "2" for 128K etc..

(Note: This defines the connect time of the ISDN for returning to DSL when the ISDN failover has occurred. 270 = 4.5 minutes)

7) Configure NAT - (Optional)

-Within the IP Main Menu,

-Within the Network Address Translation menu,

-Select the ISDN WAN Partner Name and enable Network Address

Translation.

-Select the EN3-0 Interface and enable Network Address Translation.

Summary:
(If required)