

Tech Notes

LT-3100 Windows Dial-up Networking

This Tech Note describes how to configure Windows Dial-up Networking to use the LT-3100 Iridium terminal.

The description and illustrations are based on MS Windows 10. However, earlier versions of MS Windows also support Dial-up Networking, though the configuration differ slightly.

Required Documentation

N/A

Requirements/Pre-requisites

Personal Computer or Laptop. The following Windows 32 and 64-bit versions are support: Windows Vista, 7, 8, 8.1, 10, Server 2003, Server 2008, 2008 R2, Server 2012, 2012 R2.

LT-3100 Satellite Communication System with software version 1.06 or later.

If using the Fabulatech Serial Port Redirector, it must be version 2.8.11 or later.

The PC and the LT-3100 Communication System shall be connected using an Ethernet cable – either directly or through a network (e.g. a router or switch).

Configuration Instructions

Right click on the network icon on the right side of the task bar (second to the right).



And select Open Network & Internet Settings.

Settings	- 0	×
ය Home	Status	
Find a setting	P Network status	
Network & Internet		
🖨 Status	Ethernet titrane.logal	
纪 Ethernet	You're connected to the Internet	
n Dial-up	If you have a limited data plan, you can make this network a metered connection or change other properties.	
% VPN	Change connection properties	
🕒 Data usage	Show available networks	
Proxy	Change your network settings	
	Change adapter options View network adapters and change connection settings.	
	Sharing options For the networks you connect to, decide what you want to share.	
	Network troubleshooter Diagnose and fix network problems.	

Figure 1 Network & Internet Settings

Select the *Dial-up* menu option.



Figure 2 Dial-up

Select Set up a new connection.

		_		×
~	Set Up a Connection or Network			
	Choose a connection option			
	Connect to the Internet Set up a broadband or dial-up connection to the Internet.			
	Set up a new network Set up a new router or access point.			
	Connect to a workplace Set up a dial-up or VPN connection to your workplace.			
		Next	Can	cel

Figure 3 Choose connection

Select Connect to the Internet and press Next

← 🔹 Connect to the Internet	_		×
You are already connected to the Internet			
i i i i			
\rightarrow Browse the Internet now			
\rightarrow Set up a new connection anyway			
		Can	cel

Figure 4 New connection to the Internet

Select *Set up a new connection anyway*. This window is only shown if the PC is already connected to the internet.

÷	🏟 Conn	ect to the Internet	_		×
	How do	o you want to connect?			
	۹	Broadband (PPPoE) Connect using DSL or cable that requires a user name and password.			
	٨	Dial-up Connect using a dial-up modem or ISDN.			
				Can	cel

Figure 5 Select Dial-up

Select Dial-up.

If more than one modem is installed, you will be asked to select a specific modem. Select the modem which is connected to the LT-3100 (by default it is the *Standard 2400 bps Modem*).

←	Connect to the Internet		– 🗆 X
	Type the information from	n your Internet service provider (ISP)
	Dial-up phone number:	008816000025	Dialing Rules
	User name:	[Name your ISP gave you]	
	Password:	[Password your ISP gave you]	
		Show characters	
		Remember this password	
	Connection name:	Dial-up Connection	
	Allow other people to use This option allows anyon	e this connection e with access to this computer to use this conn	ection.
	<u>l don't have an ISP</u>		
		с	onnect Cancel

Figure 6 Connect to Internet

Enter the *Dial-up phone number*: 008816000025 and change the default name of the connection, e.g. "LT-3100 Dial-up". Do not enter *User name* and *password*.

- **IMPORTANT**: Some applications (e.g. the e-catch application) require a specific name of the Dial-up connection.
- **NOTE**: It is possible to configure multiple Dial up connections (with different names) using the same modem.

Firewall configuration

The Windows dial-up networking establishes a connection to the Internet through the Iridium satellite network. It is a low bandwidth connection and the transmission rate is significantly less than the transmission rate of a normal LAN connection.

When the dial-up networking connection is established MS windows and several different applications will access the Internet on a regular basis. Due to the low bandwidth of the satellite connection it will most likely cause congestion, high latency and dropped IP packets.

It is recommended to set-up firewall rules that only allow exactly the type of protocols that are required for the specific applications to work.

In general, the rules should block all outgoing protocols with exception of some specific protocols.

The firewall rules should only be associated with the *Remote access* (RAS) type of interface (not to interfere with LAN and wireless networks).

NOTE: The firewall rule affects all Remote access type of connections, it is not limited to the specific Iridium RAS connection. If other type of RAS connections are defined the firewall rules must be enabled only when the Iridium dial-up connection is activated (see example below).

If for example, the dial-up networking connection is intended for sending and receiving e-mails using the POP3 and SMTP protocols on port 110 and 587, a firewall rule blocking for all outgoing TCP ports, except for TCP port 110 and 587 is required.

The firewall rules can be added by using the *Windows Defender Firewall* (GUI) application or by using the *netsh* command line application.

The example below shows how to setup two firewall rules using the *netsh* application. The firewall rules allow e-mail protocols at port 110 and 587 (TCP) and DNS at port 53 (UDP).

Open the *Command Prompt* in administrator mode (Run as administrator) and enter the following commands:

netsh advfirewall firewall add rule name="ras tcp block-all allow-email" dir=out action=block enable=yes profile=public remoteport=0-109,111-586,588-65535 protocol=tcp interfacetype=ras

```
netsh advfirewall firewall add rule name="ras udp block-all allow-dns" dir=out
action=block enable=yes profile=public remoteport=0-52,54-65535 protocol=udp
interfacetype=ras
```



Figure 7 Add e-mail/DNS firewall rules

In the example the firewall rules are enabled as they are defined (enable=yes). It is also possible to add the firewall rule, disable it by default (enable=no) – and then enable the rule, when a specific application is launched.

The following commands enable the e-mail firewall rule (assuming that the rule has been added previously), launch an application and disable the firewall rule when the application exits.

```
netsh advfirewall firewall set rule name="ras tcp block-all allow-email" new enable=yes
start /wait <the application>
netsh advfirewall firewall set rule name="ras tcp block-all allow-email" new enable=no
```

Verification Instructions

Open the *Network & Internet Settings* and select the *Dial-up* menu option.

Settings		8777	×
命 Home	Dial-up		
Find a setting ρ	Dial-up		
Network & Internet	Dial-up Connection		
로 Ethernet 🕾 Dial-up	Set up a new connection		
∞ VPN[™] Data usage[™] Proxy	Related settings Change adapter options Network and Sharing Center Windows Firewall		
	Have a question? Get help		
	Make Windows better		

Figure 8 Verification - dial-up

Then select the new dial-up connection and press Connect.

Connect	Dial-up Connection	3
User name: Password:		
Save this	user name and password for the follo ly e who uses this computer	wing users:
Dial:	008816000025	~
0.1		Hala

Figure 9 Verification - dial

Press the *Dial* button and verify that the a connect to internet is established. Do not enter user name or password.