



Triton SSL/TLS Configuration Guide For DPL Customers

Proper SSL/TLS Setup for your Triton ATM
Using DPL's Hercules Wireless Modem



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Purpose

This guide instructs DPL customers on how to properly configure SSL/TLS on Triton ATMs using a Hercules wireless modem. This guide is based on the Triton Argo RL2413 – the required steps for your model may vary. The document will take you through:

- Setting up address-based host setup
- Enabling SSL/TLS

By the end of the document you will have a securely connected ATM that should be resilient to Man-in-the-Middle (MITM) attacks involving tampering of the Ethernet or modem.

Prerequisites

To successfully complete the following steps ensure your Hercules wireless modem and ATM have the latest firmware updates. If unsure, please contact DPL's technical support department. Examples of the required information will be provided in the steps below.

Steps

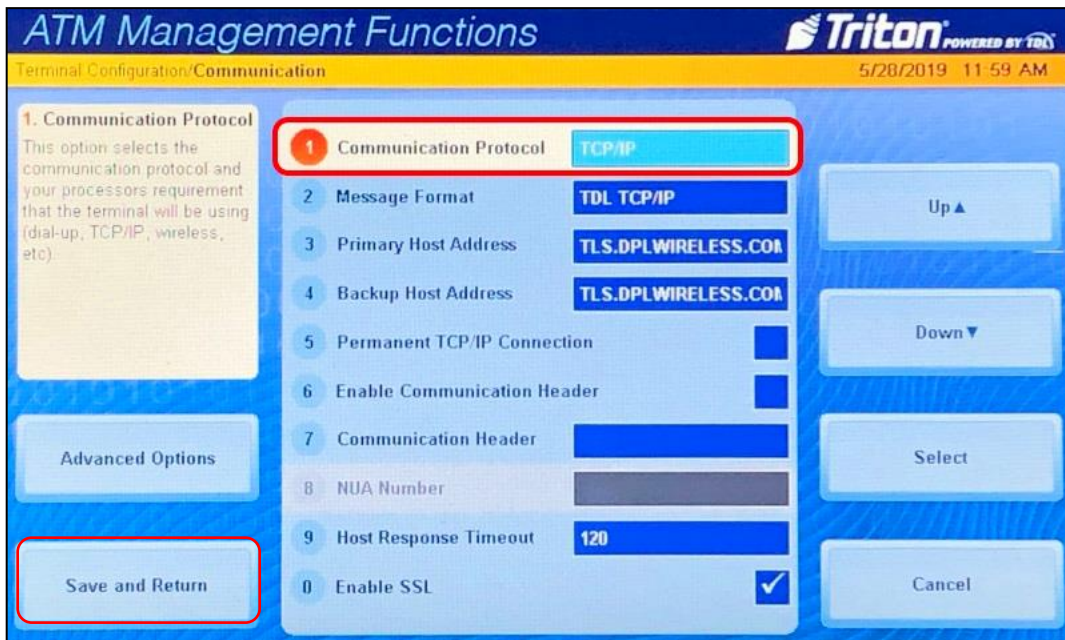
1. ATM TCP/IP Setup

Before setting up SSL/TLS, confirm you are on a TCP/IP ATM configured for DHCP or static IP as instructed below.

NOTE: DHCP will enable dynamic allocation of the IP address from the Hercules modem that the ATM is plugged into. This is preferred as it means changes to the ATM are not required if changes are made to the settings of the Hercules modem. Static IP can be more stable for some older ATMs but requires manual ATM reconfiguration if the Hercules modem is updated to new addresses (or other network topology changes).

- a) Open the communication menu and use the ATM Operator Menu to navigate to the **Communication** screen seen as below. From this screen, enable **TCP/IP** by pressing the **1** key and choosing **TCP/IP**.

ATM Operator Menu > Terminal Configuration > Communication



- b) Enable either DHCP (preferred for newer installations) or a static IP (using information provided by the Hercules modem) using the **6 key** on the keypad to toggle DHCP, then save using the **Save and Return** button on screen.

ATM Operator Menu > Diagnostics > Modem / Ethernet > Configure Ethernet Settings

The screenshot shows the 'ATM Management Functions' interface for 'Configure Ethernet Settings'. The screen is titled 'ATM Management Functions' and 'Triton POWERED BY TDS'. The current page is 'Terminal Diagnostics/Modem | Ethernet/Configure Ethernet Settings' with a timestamp of '3/19/2019 03:21 PM'. The interface is divided into several sections:

- 4. Primary DNS:** A text box explaining that this address is an internet service that translates domain names to IP addresses.
- 1 IP Address:** 0.0.0.0
- 2 Subnet Mask:** 0.0.0.0
- 3 Default Gateway:** (Empty)
- 4 Primary DNS:** 0.0.0.0 (highlighted with a red circle)
- 5 Primary WINS:** 8.8.4.4
- 6 Enable DHCP:** (highlighted with a red box)
- 7 Incoming Port:** 1000
- 8 Outgoing Port:** 0
- 9 Notify Triton Connect:** Notification Disabled
- 0 Configure Firewall:** (Empty)

Navigation buttons on the right include 'Up ▲', 'Down ▼', 'Select', and 'Cancel'. A 'Save and Return' button is located at the bottom left.

- c) Once your information has been input press **Save and Return** on the screen to save the changes.

NOTE: If you have switched from Static to DHCP or vice versa, you may need to reboot the ATM now or after completing the remaining steps. See how to reboot your ATM under "Testing SSL" below.

Alternative: Static IP Configuration

The Hercules can also be used with a static IP configuration. If that is required, use the information provided below and your ATM will be connected to the Hercules. Use the **Enable DHCP** check box to switch to static configuration and enter the following:

- **IP Address:** 192.168.0.55
- **Subnet Mask:** 255.255.255.0
- **Primary WINS:** Leave Blank
- **Gateway:** 192.168.0.1
- **Primary DNS:** 192.168.0.1

2. Enabling SSL/TLS Properly

In this section we will enable TLS 1.2 to secure the ATM against man-in-the-middle attacks on the Ethernet line.

- a) Navigate to the **Communication** screen using the path listed below, then check the **Enable SSL** box by pressing the **0** key on the keypad.

ATM Operator Menu > Terminal Configuration > Communication

The screenshot displays the 'ATM Management Functions' interface, specifically the 'Terminal Configuration/Communication' screen. The interface is titled 'ATM Management Functions' and 'Triton POWERED BY TDL'. The date and time are shown as '5/28/2019 11:59 AM'. The screen is divided into several sections:

- 1. Communication Protocol:** This section contains a description: 'This option selects the communication protocol and your processors requirement that the terminal will be using (dial-up, TCP/IP, wireless, etc)'. Below this are buttons for 'Advanced Options' and 'Save and Return'.
- Configuration List:** A list of settings with corresponding values:
 - 1 Communication Protocol: TCP/IP
 - 2 Message Format: TDL TCP/IP
 - 3 Primary Host Address: TLS.DPLWIRELESS.COM
 - 4 Backup Host Address: TLS.DPLWIRELESS.COM
 - 5 Permanent TCP/IP Connection:
 - 6 Enable Communication Header:
 - 7 Communication Header: [Empty field]
 - 8 NUA Number: [Empty field]
 - 9 Host Response Timeout: 120
 - 0 Enable SSL: (This row is highlighted with a red box)
- Navigation:** On the right side, there are buttons for 'Up ▲', 'Down ▼', 'Select', and 'Cancel'.

3. SSL Host Configuration

In this section we will configure the host addresses for SSL/TLS. For the Hercules the address field is **tls.dplwireless.com** and the port field is **8000**. Triton uses a URI instead of independent fields, for this reason, combine them to be **tls.dplwireless.com:8000** – this should be entered directly into the **Primary** and **Backup Host Addresses**. DPL manages the connection from the Hercules modem through our secure network to your payment processor. Please contact our technical support department to configure the payment processor information for your Hercules modem or log in to the Hercules Portal to configure it yourself ([learn how](#)).

- a) Configure the information using the data listed above. Navigate to the **Communication** screen and enter the host information.

ATM Operator Menu > Terminal Configuration > Communication

The screenshot shows the 'ATM Management Functions' interface for 'Terminal Configuration/Communication'. The page title is 'ATM Management Functions' and the logo is 'Triton POWERED BY TDK'. The date and time are '5/20/2019 11:59 AM'. The main content area is titled '1. Communication Protocol' and contains the following configuration options:

1	Communication Protocol	TCP/IP
2	Message Format	TDL TCP/IP
3	Primary Host Address	TLS.DPLWIRELESS.COM
4	Backup Host Address	TLS.DPLWIRELESS.COM
5	Permanent TCP/IP Connection	<input type="checkbox"/>
6	Enable Communication Header	<input type="checkbox"/>
7	Communication Header	
8	NUA Number	
9	Host Response Timeout	120
0	Enable SSL	<input checked="" type="checkbox"/>

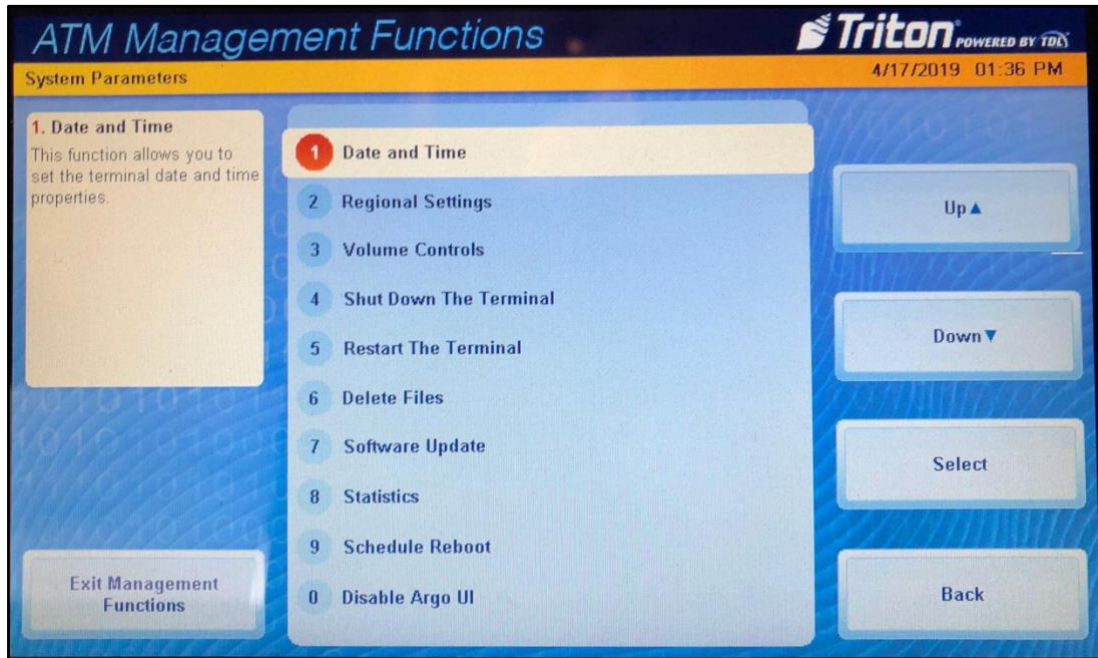
Navigation buttons on the right include 'Up ▲', 'Down ▼', 'Select', and 'Cancel'. On the left, there are buttons for 'Advanced Options' and 'Save and Return'.

4. Testing SSL

The easiest way to perform a test of your new SSL configuration for your is to perform a dummy transaction on your Triton Argo RL2413.

NOTE: If you encounter any issues use the **5 key** to **Restart The Terminal** on the **System Parameters** screen as seen below as seen below to reboot the ATM to ensure the TCP/IP information has taken effect.

ATM Operator Menu > System Parameters > Restart The Terminal



If there is a failure at this point, go back and double check all the configuration options from the previous steps.

Conclusion

After completing all the above steps your Triton ATM will be set to use SSL (TLS 1.2) on all transactions with the payment processor. This ensures that no third parties can listen on the line, get any usable data, terminate the SSL connection and proxy it out (MITM attack), or commit any other nefarious logical attack against outgoing data from your ATMs.