



Troubleshooting

This chapter enable the user to solve problems with the ONS 15302.

5.1 Introduction

The ONS 15302 is tested extensively and verify before leaving the factory. However, if your system appears to have problems during start up, use the information to help isolate the cause.

When the initial system boot is complete, verify the following:

- Power is being supplied to the system.
- System software boots successfully.

If the start-up sequence fails before these conditions are met, use the procedures in this chapter to isolate and, if possible, resolve the problem.

If you are unable to easily solve the problem, contact TAC for assistance and further instructions. Have the following information ready to help TAC assist you as quickly as possible:

- Date you received the equipment
- Chassis serial number
- Type of software and release number
- Brief description of the problem you are having
- Brief explanation of the steps you have already taken to isolate and resolve the problem
- Maintenance agreement or warranty information

5.2 Problem Solving

The key to problem solving the system is to try to isolate the problem to a specific subsystem. The first step in solving start-up problems is to compare what the system is doing to what it should be doing. Since a start-up problem can usually be attributed to a single component, it is more efficient to first isolate the problem to a subsystem rather than troubleshoot each separate component in the system.

The ONS 15302 consists of the following subsystems.

- Main Card
- WAN-module
- Optical system (protected or unprotected)

5.3 Identify Start-up Problems

LEDs indicate all system states in the start-up sequence. By checking the state of the LEDs, you can determine when and where the system failed in the start-up sequence.

When you plug in the power supply to start the system, the following should occur:

- The Power LED turns green when you plug in the connector.
- The Operation, Customer and Test LEDs operate as follows during equipment start-up.

All LEDs are lit simultaneously for a few seconds with an interval of ~1 minute during start-up. The start-up procedure takes approximately 3 minutes.

The LED indicators are used to visualize the ONS 15302 status:

Table 5-1 LED Functionality on the WAN Module Side

Identity	Color	State On	State Flashing	State Off
PWR (Power)	Green	Presence of power	NA	Power failure
OPER (Operation)	Red	Alarm detected on aggregate interface	NA	No alarm detected on aggregate interface
CUST (Customer)	Red	Alarm detected on tributary or LAN interface	NA	No alarm detected on tributary or LAN interface
TEST (Test)	Yellow		One or more test are activated	
LAN 1	Green	Link is present	Traffic is present	Link down
LAN 2	Green	Link is present	Traffic is present	Link down
LAN 3	Green	Link is present	Traffic is present	Link down
LAN 4	Green	Link is present	Traffic is present	Link down

Table 5-2 LED Functionality on the Connector Array Side

Identity	Position	Color	State On	State Flashing	State Off
PWR (Power)		Green	Presence of power	NA	Power failure
OPER (Operation)		Red	Alarm detected on aggregate interface	NA	No alarm detected on aggregate interface
CUST (Customer)		Red	Alarm detected on tributary or LAN interface	NA	No alarm detected on tributary or LAN interface
TEST (Test)		Yellow		One or more test are activated	

Table 5-2 LED Functionality on the Connector Array Side (continued)

Identity	Position	Color	State On	State Flashing	State Off
LANn (n-1,2,3,4)	Left	Green	100 MBits/s (Mbps)	NA	NA
LANn (n-1,2,3,4)	Left	Yellow	10 MBits/s (Mbps)	NA	NA
LANn (n-1,2,3,4)	Right	Green	Link OK	Ethernet traffic in operation	Link down

5.4 Restore Factory Pre-configuration

This section describes how to restore factory pre-configuration to the ONS 15302.

The simplest way to automatically configure an ONS 15302 is to take advantage of VT100 emulating software. From a VT100 terminal it is possible to send a text file (script) instead of manually writing paths and command(s) to change or add configuration on the device.

This procedure for restoring the factory pre-configuration assumes that the user has installed the HyperTerminal program on a common PC running Microsoft Windows 2000, but most of the content will work with any terminal emulation software. In addition it is necessary to use a console cable (CLI cable) according to the specification to connect a COM port on the PC with the VT100 interface on the ONS 15302.

5.4.1 Additional Terminal Settings

In addition to the standard parameters for communicating with the ONS 15302 ([Table 5-3](#)) it is also necessary to adjust the line delay (the time to wait between sending commands to the device), to allow for responses from the device. If the command issued results in the display of a long table, this will require more time than simple one-line responses. The optimal time might vary between PC, so you might have to try a couple of different settings. A good start value is 500 ms. In some cases increasing character delay to a few milliseconds might help too. Exactly where to adjust this in HyperTerminal see [Table 5-3](#).

Table 5-3 EIA/TIA 232 Interface

Parameter	Condition
Baud rate	19.2 kbaud
Data bits	8
Parity	None
Stop bits	1

[Figure 5-1](#), [Figure 5-2](#) and [Figure 5-3](#) describes how to configure the Line delay.

Figure 5-1 Select Properties

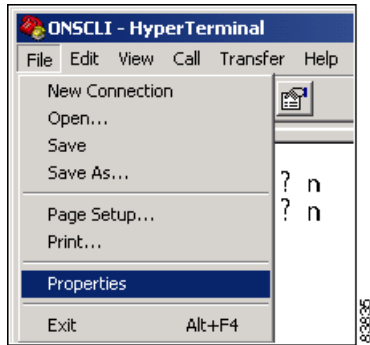


Figure 5-2 Select ASCII Setup

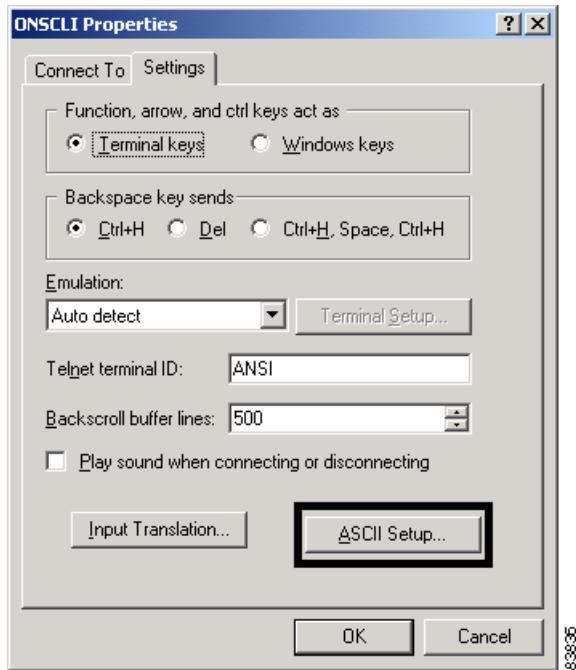
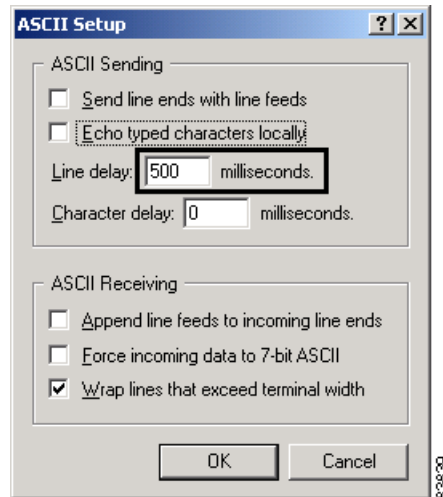


Figure 5-3 Configure Line Delay



5.4.2 Prepare the Script File

The script file can be prepared by using a text editor program, for example, Notepad for Windows computers. The content in a script file is only limited to valid commands and paths for ONSCLI. Examples below show the script files for the pre-configuration of the unprotected and protected versions that is to be used when installing a device from the factory.

Unprotected Version:

```
dev\vlan\vlan-t\add name=vlan1
dev\vlan\vlan-p\add if=100000 eth=1,2,3,4,5 tag=dis
port\agg\gen adm=en
port\eth\wan\add wan=5 nu=1
sec\commun\add man=0.0.0.0 comm=public acc=super tra=dis
```

Protected Version:

```
dev\vlan\vlan-t\add name=vlan1
dev\vlan\vlan-p\add if=100000 eth=1,2,3,4,5 tag=dis
port\agg\gen agg=1 adm=en
port\eth\wan\add wan=5 nu=1
sec\commun\add man=0.0.0.0 comm=public acc=super tra=dis
```

5.4.3 Erase a File (CDB file)

Since the purpose of this section is to restore factory pre-configurations the unit has most likely been configured with testing parameters. To make sure that CDB file is empty we recommend that it is erased before sending the text file down to the device. To perform this on the ONS 15302 follow the steps below.

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- Step 1** Login to command line interface by typing ONSCLI and ONSCLI again when prompted for password
- Step 2** Select the following command:
 >ONSCLI\Device\erase
 Typing **yes** when prompted!
- Step 3** To complete the CDB erase you will have to reboot the system. Write the following command:
 >ONSCLI\Device\reset
 Typing **yes** when prompted!
-

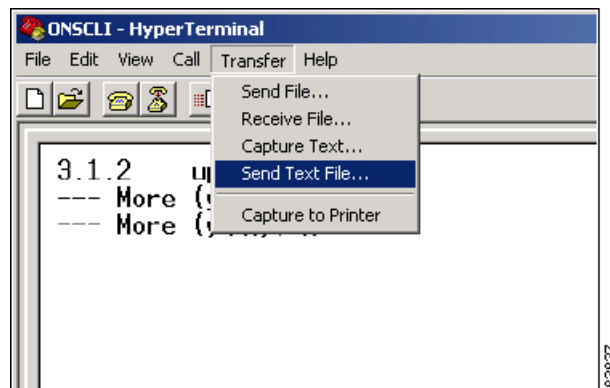
When the ONS 15302 has restarted you are ready to perform the procedure in [Send Scripts Procedure](#).

5.4.4 Send Scripts Procedure

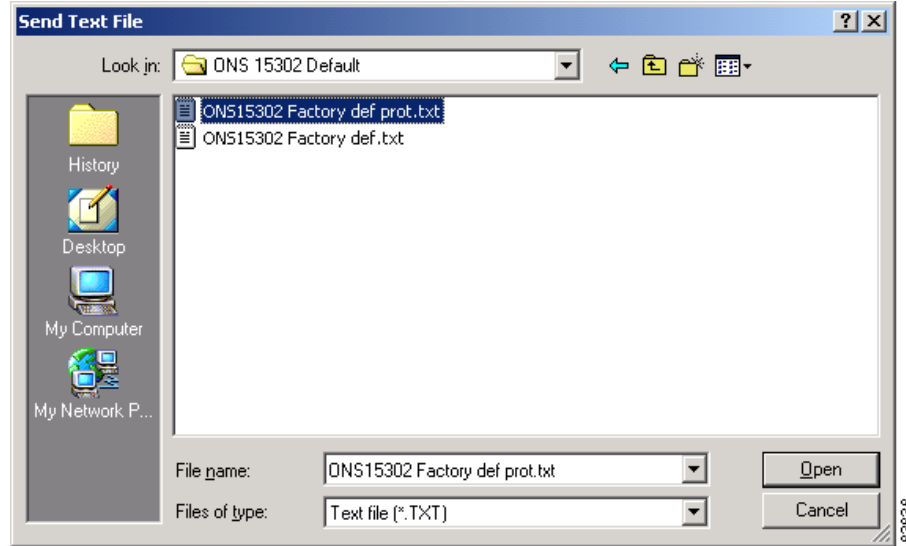
The procedure for sending scripts to the device is rather simple if the above preparations are completed. Please login to the ONSCLI, and follow these steps to accomplish the restoration of factory pre-configuration

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- Step 1** Select in the pull down menu transfer and the command send text file, [Figure 5-4](#).

Figure 5-4 Select Send Text File



- Step 2** Select in the send text file window the file that you want to download, [Figure 5-5](#).

Figure 5-5 Select the File

If all necessary preparations are performed as described in this section the ONS 15302 should now be successfully configured according to factory pre-configuration.

