SmartOTU (EOTU8000E)

Optical Test Unit
Rack-based optical test unit for RFTS (Remote Fiber Test System)

User's Guide

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Viavi Solutions
1-844-GO-VIAVI
www.viavisolutions.com

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Manual

This guide is a product of SmartOTU's Technical Information Development Department. This manual gives you the main information to install, start and use the SmartOTU.

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Instructions for returning waste equipment and batteries to Viavi can be found in the Environmental section of Viavi's web site at www.viavisolutions.com. If you have questions concerning disposal of your equipment or batteries, contact Viavi's WEEE Program Management team..

Table of Contents

About This Guide

Topics discussed in this chapter are as follows:

Purpose and scope

The purpose of this guide is to help you successfully use the SmartOTU features and capabilities. This guide includes task-based instructions that describe how to install, configure, use, and troubleshoot the SmartOTU. Additionally, this guide provides a complete description of Viavi's warranty, services, and repair information, including terms and conditions of the licensing agreement.

Assumptions

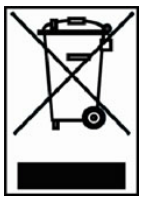
This guide is intended for novice, intermediate, and experienced users who want to use the SmartOTU effectively and efficiently. We are assuming that you have basic computer and mouse/track ball experience and are familiar with basic telecommunication concepts and terminology.

Technical assistance

If you require technical assistance, call 1-844-GO-VIAVI. For the latest TAC information, go to http://www.viavisolutions.com/en/services-and-support/support/technical-assistance.

Recycling Information

Viavi recommends that customers dispose of their instruments and peripherals in an environnmentally sound manner. Potential methods include reuse of parts or whole products and recycling of products components, and/or materials.



Waste Electrical and electronic Equipment (WEEE) Directive

In the European Union, this label indicates that this product should not be disposed of with household waste. Il should be deposited at an appropriate facility to enable recovery and recycling.

Conventions

This guide uses naming conventions and symbols, as described in the following tables.

Table 1 Typographical conventions

Description	Example
User interface actions appear in this **typeface**.	On the Status bar, click **Start**
Buttons or switches that you press on a unit appear in this **TYPEFACE**.	Press the **ON** switch.
Code and output messages appear in this `typeface`.	`All results okay`
Text you must type exactly as shown appears in this **`typeface`**.	Type: **`a:\set.exe`** in the dialog box.
Variables appear in this ***typeface***.	Type the new ***hostname***.
Book references appear in this ***typeface***.	Refer to ***Newton's Telecom Dictionary***
A vertical bar | means "or": only one option can appear in a single command.	`platform [a|b|e]`
Square brackets [ ] indicate an optional argument.	`login [platform name]`
Slanted brackets < > group required arguments.	<`password`>

Table 2 Keyboard and menu conventions

Description	Example
A plus sign + indicates simultaneous keystrokes.	Press **Ctrl+s**
A comma indicates consecutive key strokes.	Press **Alt+f,s**
A slanted bracket indicates choosing a submenu from menu.	On the menu bar, click **Start > Program Files**.

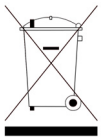
Table 3 Symbol conventions

This symbol represents a general hazard.

This symbol represents a risk of electrical shock.

NOTE

This symbol represents a Note indicating related information or tip.



This symbol, located on the equipment or its packaging, indicates that the equipment must not be disposed of in a land-fill site or as municipal waste, and should be disposed of according to your national regulations.

Table 4 Safety definitions

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

1

Description

This chapter describes the SmartOTU.

Topics discussed in this chapter are as follows:

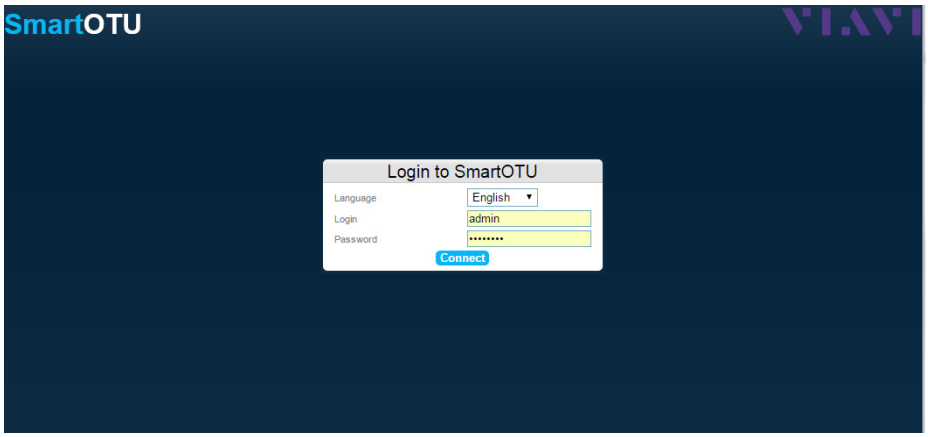
Introduction

Before using the SmartOTU web application, make sure your SmartOTU is correctly installed (see the"Quick guide").

Connect to the SmartOTU via your web browser (IE9 and higher, Chrome, Firefox) from your PC.

Open your web browser: fill your URL: http://otu-8000e-xxxx where xxxx is the serial number of your OTU (your OTU is in DHCP mode by default) or http://xxx.xxx.xxx.xxx where xxx.xxx.xxx.xxx is the SmartOTU IP address.

Figure 1 SmartOTU Login page



On the SmartOTU login page:

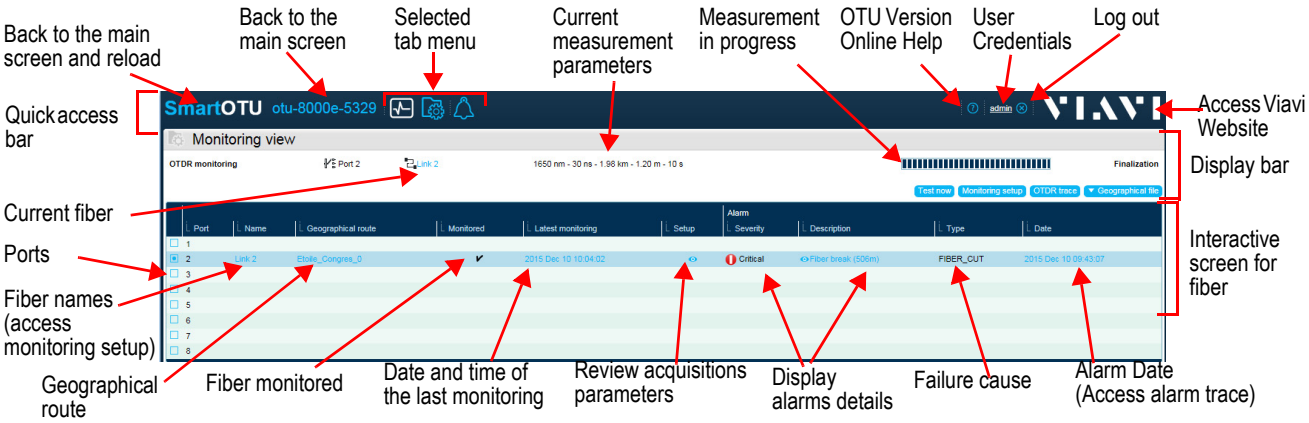
1. Select the language you wish to use, in the list.
2. Enter your Login: **admin**.
3. Enter your Password: **password**.
4. Click on **Connect**.
   The monitoring view page is displayed by default

Monitoring view

The SmartOTU monitoring view is divided into 3 parts:

- The Quick access bar provides shortcuts to the main screens:
  - monitoring view
  - OTU Setup
  - OTU system alarms
  - user credentials
- The display bar shows the current measure in progress with its parameter.
- The table lists all OTU ports with their OTDR monitoring and optical alarms

Figure 2 Monitoring view



Quick access bar details

It offers a menu with the following actions:

SmartOTU Reload the page and display the main screen.

otu-8000e-622 Display the main screen.

Selected tab menu: Monitoring view or Main Screen, OTU Setup and OTU Alarm: click on the icon, you should see a Pop up box with all OTU system alarms

(Icon color changes from blue (unselected) to blue/light blue (hover) and white (current selected)

Help Icon: A menu pop-ups with Online help and About SmartOTU choice menu. The first gives access to SmartOTU Online Documentation and the second notifies the SmartOTU version

Click on Close to return to the main Screen (Monitoring view).

admin Edit user preferences.

Click on Edit for modifying login and password. Click on **Save** to confirm your selection.

VIAVI Quick Access for Viavi website.

Display bar

It shows the ODTR Monitoring in progress with possibility of modifying and adjusting the current acquisition parameters.

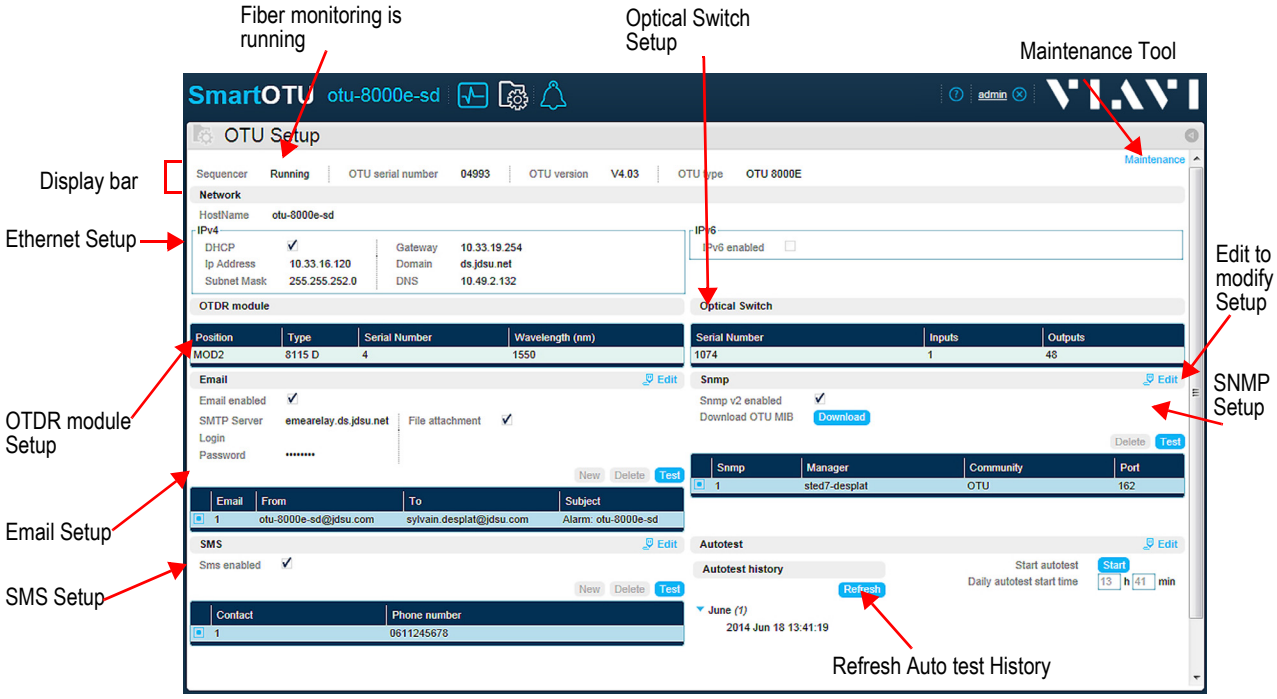
- Direct access to the Monitoring setup tools of the current selected port.

NOTE

To activate the three right buttons Test now, Monitoring setup and OTDR trace, it is necessary to select one port in the interactive screen (grey buttons turn to blue).

OTU Setup

Figure 3 OTU configuration



2

Fiber Monitoring

This chapter describes the SmartOTU.

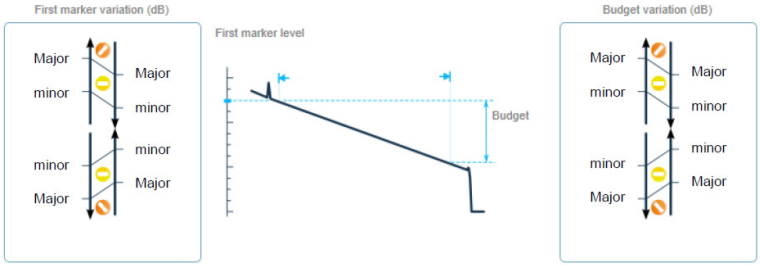
Topics discussed in this chapter are as follows:

Principle

These measurements are based on two markers: A first marker placed when the trace starts to be linear and a last marker placed at the end of the trace. The level of the 1st marker gives the level at the network input. The difference between the levels of the two markers gives the optical budget of the fiber.

The measurement deviation between the reference and the actual trace is compared against threshold. If a threshold is crossed, an alarm is generated with a severity according to the type of level (minor, major, critical) which is crossed.

Figure 4 Fiber Monitoring Principle



Conditions			Result	
First Marker level variation from reference	Last Marker level	Budget variation from reference	Severity	Additional text
Between minor and major threshold	above the noise floor	< Minor Threshold	minor	Injection
> Major Threshold	above the noise floor	< Major threshold	Major	Injection
below the noise floor	below the noise floor	Not measured	Major	Injection
< Minor Threshold	above the noise floor	Between minor and major threshold	minor	Attenuation
< Major Threshold	above the noise floor	> Major Threshold	Major	Attenuation
above the noise floor	below the noise floor	Not measured	Critical	Fiber Cut
above the noise floor	above the noise floor	> 6dB	Critical	Fiber Cut

Initial setting of the reference trace

To set up the reference trace, from the monitoring view window:

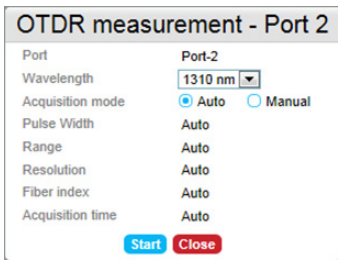
1 Select the switch port

2 Click on **Monitoring setup**.

A pop up window is displayed that proposes to setup the OTDR parameters automatically (Click on **Manual** to change it).

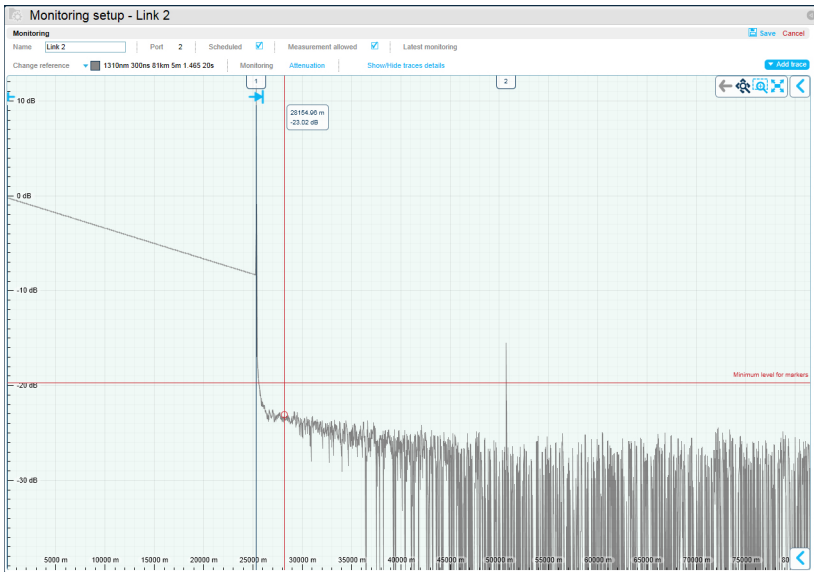
3 Click on **Start** to start the OTDR acquisition.

Figure 5 OTDR setup



After the OTDR acquisition is completed, it is displayed with the 2 markers automatically positioned (see principle).

Figure 6 OTDR acquisition



If desired the markers can be moved. Click on open menu button at the right top corner of the trace then click on .

Figure 7 Moving a marker

The name given to the monitored fiber can be changed. By default it is set to **Link** followed by the switch port number *(Ex: Link 2 for Port 2)*

The thresholds can be changed by clicking on **Attenuation**.

Figure 8 Attenuation thresholds

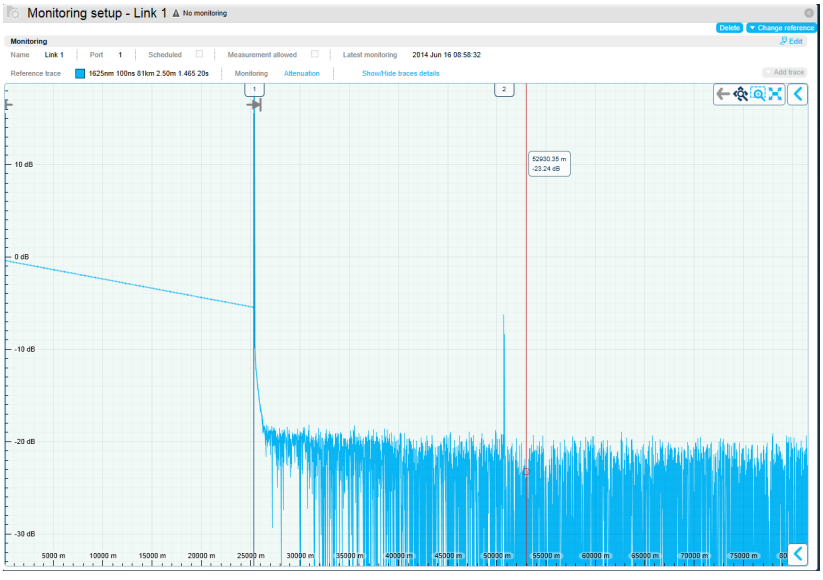
Once the change is made click on **Save** on the top right of the window.

Change the reference trace

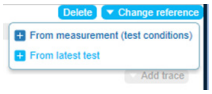
After the fiber is modified (repair, connection change) the reference trace must be modified to match the latest fiber change.

From the monitoring view window, click on the fiber name to display the current reference trace.

Figure 9 Reference Trace

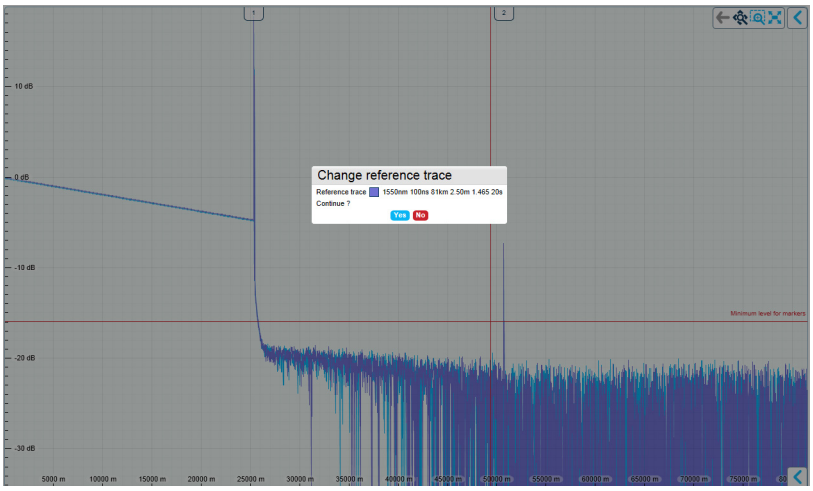


On the right top of the window click on Change reference. The current reference trace can be replaced either by a new measurement or by the latest trace obtained from the monitoring scheduled.



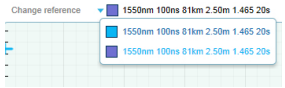
After the new trace is displayed in dark blue, the change needs to be confirmed:

Figure 10 Change reference trace confirmation



After it is confirmed, click on Save to finish the reference trace change.

If the change is not confirmed, additional OTDR traces can be displayed from the button Add traces. Among the displayed trace, the reference trace is selected with the button Change reference trace.

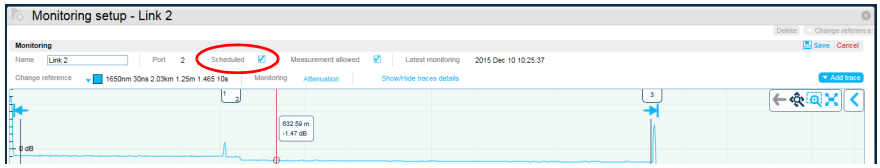


Momentarily stop the monitoring

To stop the monitoring, from the monitoring view window,:

1. Click on the fiber name to display the current reference trace
2. Click on **Edit**
3. Unmark **Scheduled** parameter.
4. Click on **Save** to register the modifications.

Figure 11 Monitoring Stop

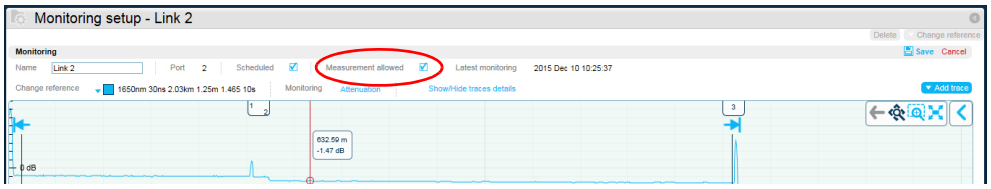


In the monitoring view the column Monitored is unmarked when the scheduling is stopped.

Prohibit OTDR measurements

When technicians work on the fiber, it may be safer to prohibit all the measurement on the fiber to prevent eye damage with the OTDR laser.

Figure 12 Prohibit OTDR measurements



To prevent the measurements (monitoring or manual) on a fiber, from the Monitoring view window, click on the fiber *Name* to display the current reference trace, then click on **Edit** and unmark **Measurement allow**. Click on **Save** to register the modifications.

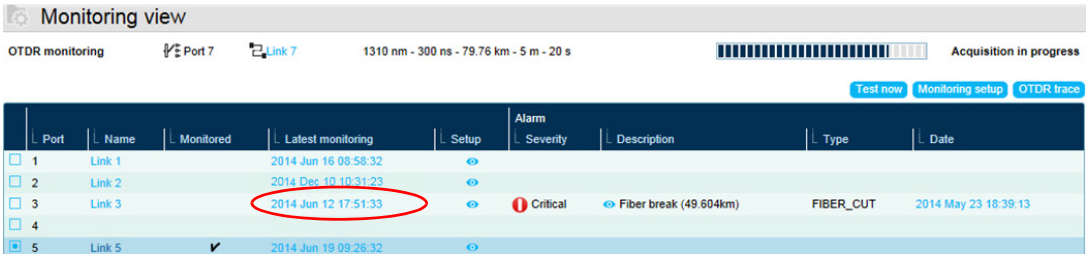
In consequence:

- In the monitoring view the column *Monitored* is unmarked when the measurement is blocked.
- The button OTDR trace measurement is not displayed from OTDR trace window
- The button **Test now** is not available from the monitoring view

View of the latest monitoring cycle trace

The OTDR trace obtained from the latest monitoring test is kept. It can be displayed by clicking on the *Latest monitoring* timestamp from the Monitoring view window.

Figure 13 Latest monitoring test - OTDR trace



It is useful to check the current trace after a repair or to understand why an alarm is not cleared.

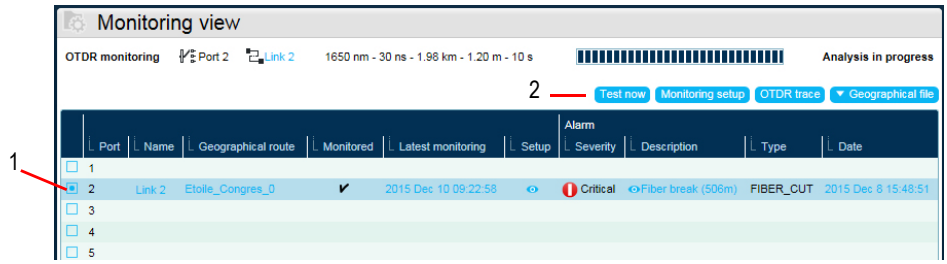
Test a fiber immediately

To short cut the monitoring cycle:

1 Select the switch **Port** to be tested.

2 Click on **Test now** button

Figure 14 Test a fiber



Short acquisition

If a near end fault is detected, an additional acquisition with the narrowest pulse width is automatically executed.

This acquisition is displayed in addition to the reference trace and the faulty trace obtained with the same pulse width as the reference trace. The view is zoomed at the near end.

Figure 15 Short acquisition

3

Trace Viewer

This chapter describes the trace viewer on the SmartOTU.

Topics discussed in this chapter are as follows:

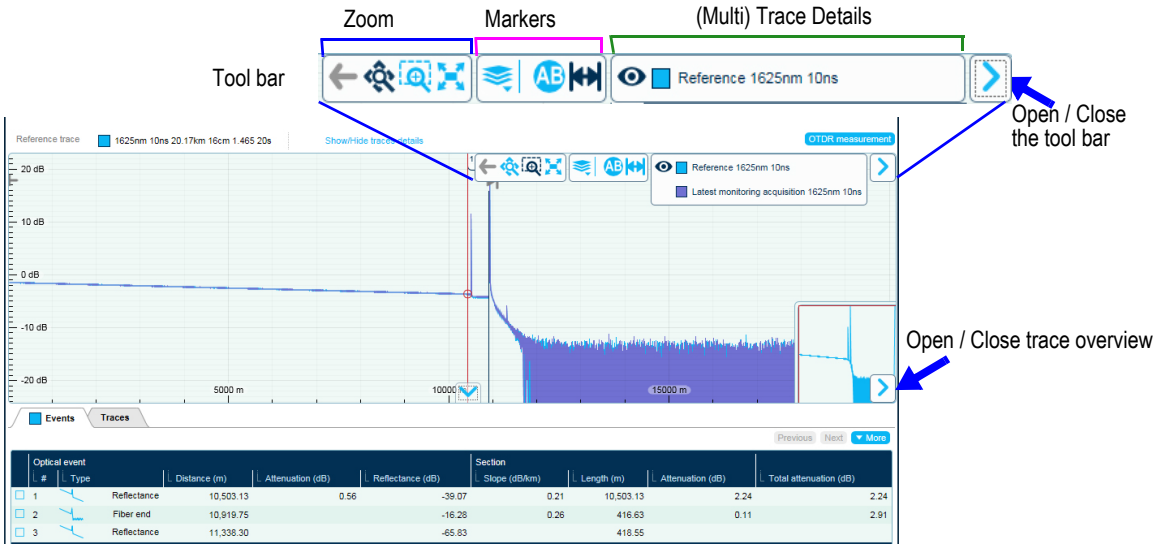
OTDR trace color codes

The color of the OTDR traces are different according to the type of trace:

- Light Blue: reference trace
- Dark blue: latest test
- Red: Alarm trace
- Grey: Measurement on demand
- Black: For injection alarm, additional acquisition to show the OTDR trace at the origin with the shortest pulse.

Overview

Figure 16 Trace overview

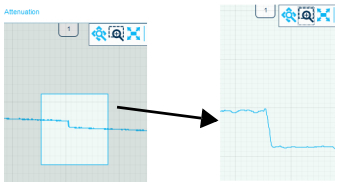


Zoom

The Zoom tool bar allows to apply different zooms on trace:

Table 1

	Fit to content (zoom release)
	Fit to content (zoom release)
	Pan and Zoom in/out with the mouse wheel
	– With any zoom tool, zoom in or out around the mouse location



A & B markers

The markers tool bar allows to get details on markers A & B positions on trace.

Figure 17 Markers details

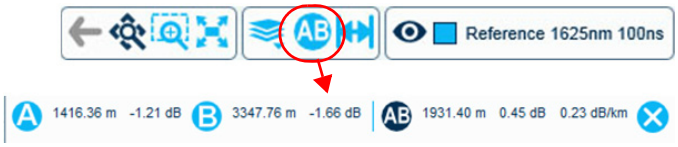


Table 2

	A marker detail with distance from origin and level Can select this tool to place **A** marker to a new position then drag and drop
	B marker detail with distance from origin and level Can select this tool to place **B** marker to a new position then drag and drop
	Distance, attenuation and slope between **A** and **B** markers

Multi trace

The multi-trace tool bar allows to change the active trace and to get details related to the selected trace.

Figure 18 Multi trace tool bar

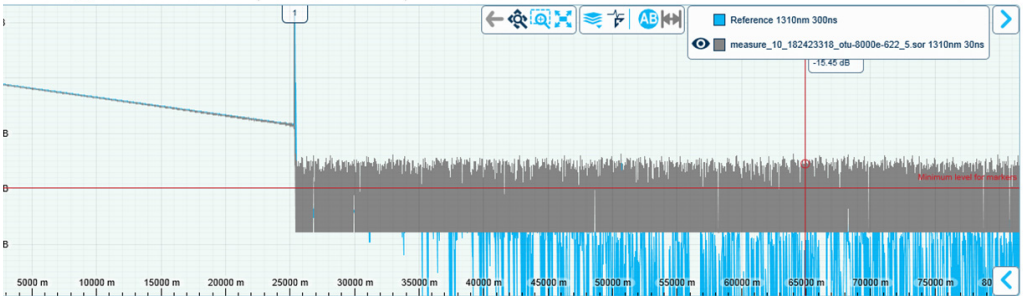


Table 3

	Events, results, acquisition details related to the selected trace Click in front of the to activate the blue trace
	Can change selected trace by clicking in front of the colored square

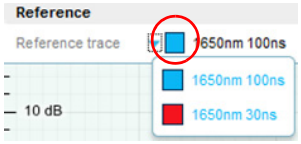
Multi trace details

- Click on the color square to change the color of the trace.

Figure 19 Change trace color

- Click on the arrow to change the Reference trace.
  This will be modify the running test configuration.

Figure 20 Change the reference trace



Details on selected Trace

Showing the events table

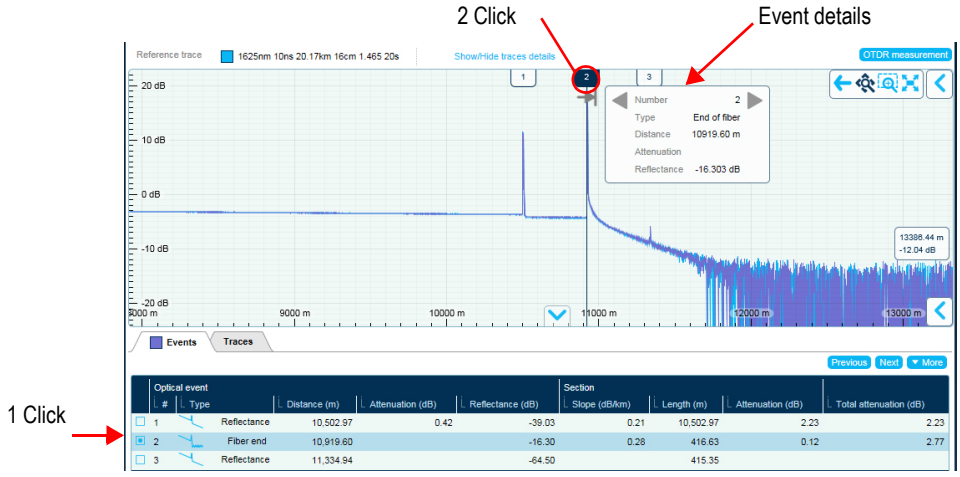
The Events table is accessible clicking on the icon at the bottom of the trace (click on the icon to hide the window).

Figure 21 Show the details on selected trace

Displaying the events details

1. Click on one event into the table to display a cursor line onto the event on trace.
2. Click on the event number on the cursor line to display the event details.

Figure 22 Event details on trace

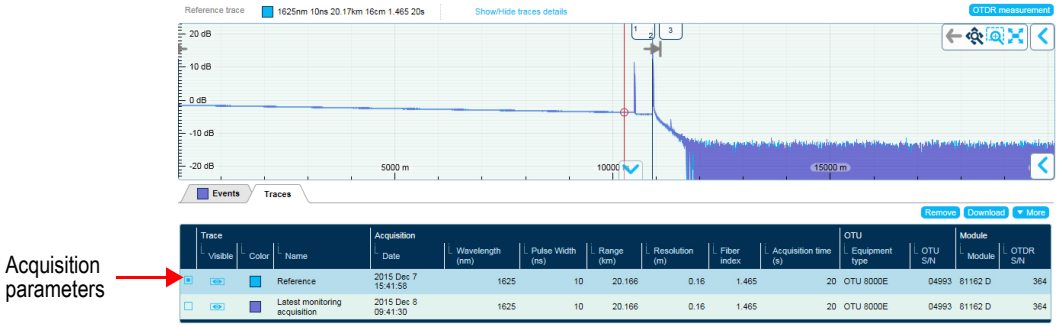


- Can get optical events detail from list, from box on the top
- When multiple events close, can move to the next event from the top box

Setup details

- To display the details on OTDR acquisition, click on the Traces tab.

Figure 23 Details on trace



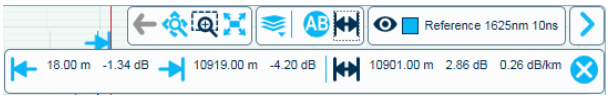
All the acquisition parameters are displayed for all the traces on screen.

First and Last markers

NOTE
This function is available exclusively for the reference trace.

Click on ⏭ to open the First and Last markers tool bar:

Figure 24 First and Last markers tool bar



This tool bar allows to get details on the first and last markers position on trace:

Table 4

⏮	First marker detail with distance from origin and level Can select this tool to place first marker to a new position then drag and drop it
⏭	Last marker detail with distance from origin and level Can select this tool to place last marker to a new position then drag and drop it
⏭	Distance, attenuation and slope between first and last markers

Adjusting thresholds for reference trace

To modify the thresholds of attenuation for a reference trace, click on the link Attenuation on the upper part of the reference trace or on the **Attenuation** tab under the trace.

The attenuation thresholds displays on the tab Attenuation, under the trace.

Figure 25 Attenuation thresholds

- Default values are 1 dB for minor, 3 dB for major
- Positive and negative variation detected
- First and last markers can be different setup

4

Measurement on demand

This chapter describes how to start a measurement from the SmartOTU.

Topics discussed in this chapter are as follows:

Measurement on a port without monitoring

OTDR measurement can be used prior the addition of monitoring tests to check that fibers are correctly connected and spliced.

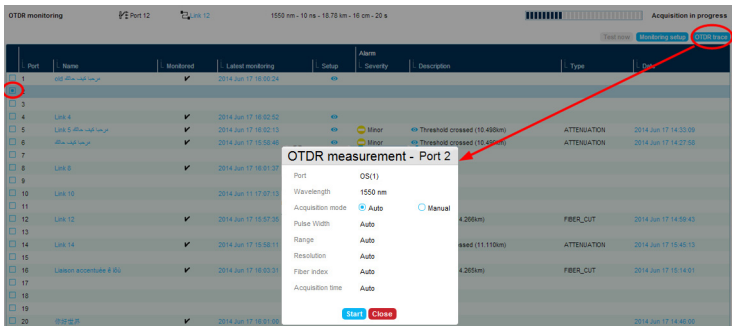
From the Monitoring view main screen:

1 Select a monitored *Port* , without monitoring test

2 Click the button **OTDR Trace**.

3 Modify if necessary the OTDR parameters for the acquisition to be performed.

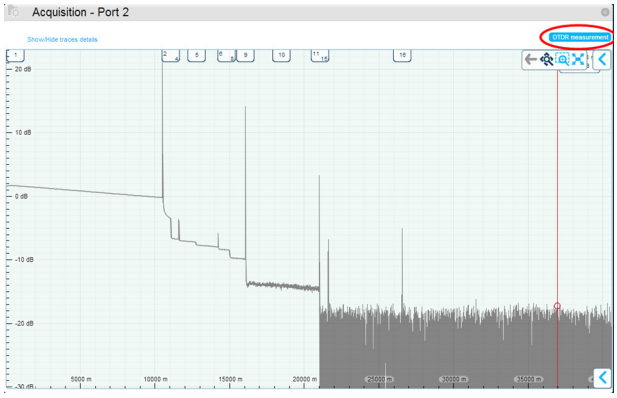
Figure 26 OTDR parameters for measurement on demand



4 Click on **Start** to launch the acquisition.

When the measurement is completed, the OTDR trace is displayed and a new measurement can be launched by clicking on OTDR measurement button.

Figure 27 OTDR Measurement result

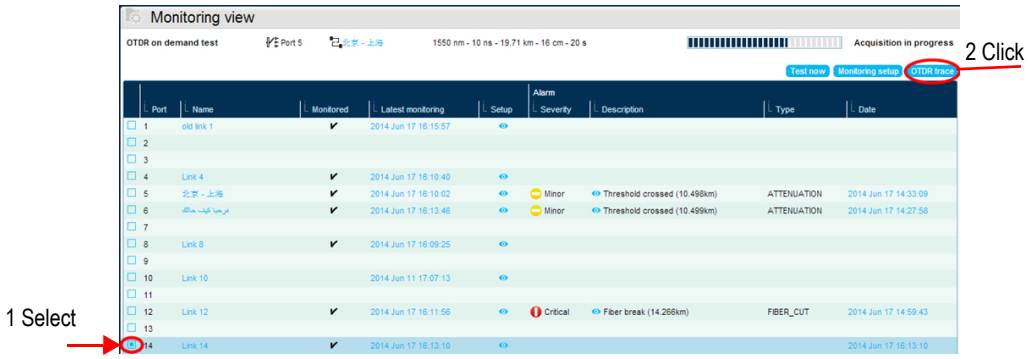


Measurement on a port with monitoring tests

From the monitoring view main screen:

1 Select a monitored *Port* .

Figure 28 Port selection



2 Click the button **OTDR Trace**.

The last acquisition performed by the monitoring on that port is displayed.

3 Start a new measurement by clicking on **OTDR measurement** button.

Figure 29 OTDR measurement

By default monitoring parameters are selected for the new measurement and can be modified.

5

Alarms Management

This chapter provides a description of the Alarms available from the SmartOTU.

Two kinds of alarms are available on the SmartOTU:

- the optical alarms
- the system alarms

Topics discussed in this chapter are as follows:

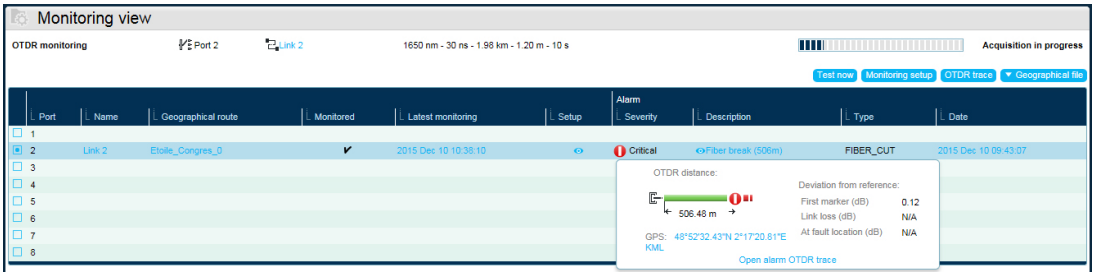
Optical alarms

The optical alarms are detected by the OTDR monitoring of the fibers.

When an optical alarm is triggered, the symbol displays in the Monitoring view, onto the line of the link onto which an optical alarm occured.

Click on the alarm icon to display a complete description of the alarm:

Figure 30 Optical Alarm in the Monitor view



Alarms are dsiplayed in SmartOTDR Monitoring view and notified through Email, SMS and SNMP.

System Alarm

From the Upper banner of the SmartOTU, click on the System Alarm icon to display a lost of system alarms. The available system alarms are:

Description	Severity
System file	MAJOR
Local mode (Connection on OTU local port)	WARNING
OTU inner application communication issue	MAJOR
Not enough hard disk space	MAJOR/CRITICAL
Module temperature	MAJOR/CRITICAL
Optical Switch internal error	MAJOR
OTDR Module internal error	MAJOR
OTDR Module auto configuration	MAJOR
Switch auto configuration	MAJOR
Missing reference file	MAJOR
Monitoring test drift	MAJOR
Initialization failure due to hardware	MAJOR

Description	Severity
Initialization failure due to software	MAJOR
Sequencer stopped	CRITICAL
Alarm overflow	MAJOR

6

Alarm Geo localization

A kml file containing an unique geographical route can be associated to a SmartOTU port. The route must be made of an unique kml polyline "linestring" and not composed of different polylines.

That kml file can be generated from any geographical system supporting this format (Legacy GIS, Google Earth, mapinfo, etc).

CAUTION

There must be only one route in the kml file.

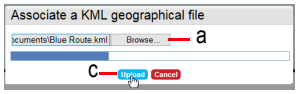
Topics discussed in this chapter are as follows:

Associating a kml file to a port

1 From the Monitoring view of the SmartOTU, select the port to which a kml file must be associated.

2 Click on the button **Geographical file** button and select **Associate geographical file**.

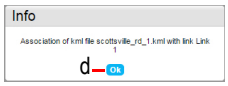
3 In the dialog box, select the kml file on your PC



a Click on **Browser** button

b Select the file

c Click on **Upload** button



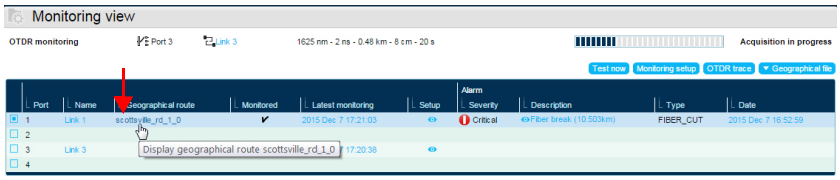
d An **Info** dialog box is displayed to inform the association was successful.

Displaying the current kml of the link

From the Monitoring View of the SmartOTU, click on the link in the column «Geographical route» of the port wished.

The route opens via the application selected for kml file creation.

Figure 31 Link of the geographical route



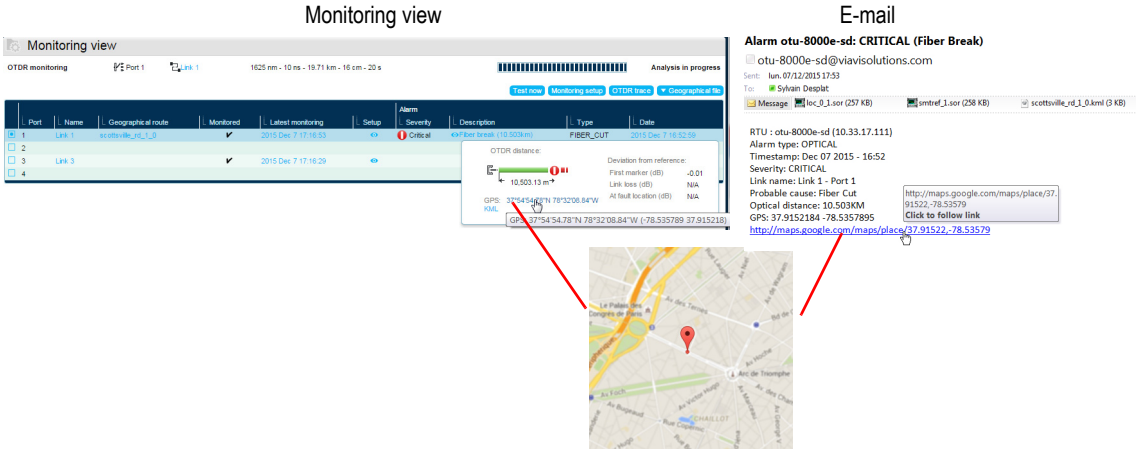
Displaying the alarm on a map or in the kml file

Once an alarm triggers on the link, this alarm can be geolocalized on any geographical system supporting kml format or in Google Map.

1 From the Monitoring View on SmartOTU, first click on the **Alarm severity** or **description** to display the details concerning the alarm.

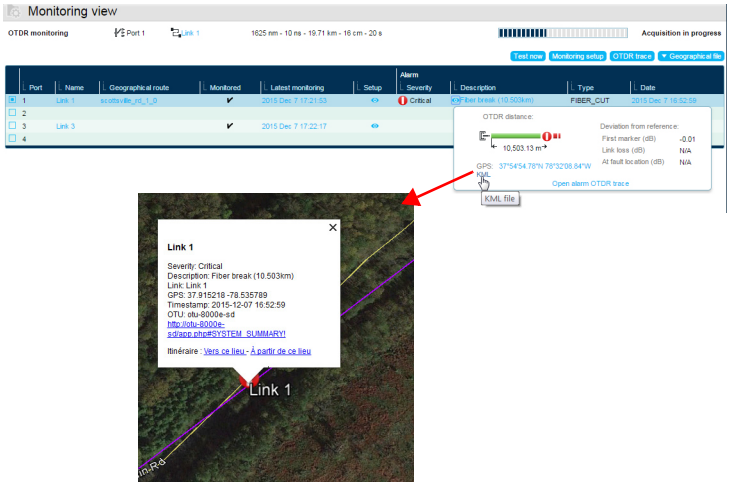
2 From the Monitoring View, the e-mail or the SMS, click on the Google Maps link (GPS coordinates) to display the alarm position in Google Maps.

Figure 32 Alarm position in Google Maps



3 From the Monitoring View, click on the KML link to display the alarm position in the geographical system supporting kml format or in Google Earth.

Figure 33 Alarm position in kml file



7

Configuration

This chapter describes the procedures for the SmartOTU configuration.

Topics discussed in this chapter are as follows:

Configuring the LAN

LAN settings are displayed in the Network Panel of the OTU Setup:

- hostname (used if DHCP enabled)
- DHCP enabled
- IP settings

1 Click on the icon  on the upper banner to access to the Network configuration:

Figure 34 Network configuration

LAN setting edition

To change LAN settings:

- OTU must be in local mode: your PC with the web browser must be connected on OTU local Ethernet interface (RJ45 "BCK/LOC") and you must push the Local button on OTU.

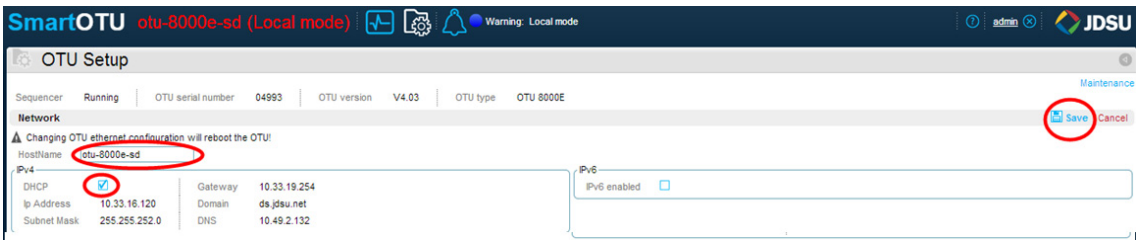
1 Connect to SmartOTU application on your web browser with the url: http://192.168.1.1.

2 Click on the icon  and click on **Edit** to configure Network Settings:

- the OTU hostname (used when DHCP is enabled)
- DHCP can be enabled/disabled
- If DHCP is disabled, IP settings can be modified

3 Click on **Save** to save the settings.

Figure 35 Network settings



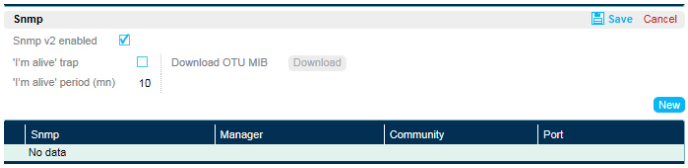
Configuring the SNMP

SmartOTU sends traps according to SNMP V2c.

1 Click on the icon 

2 Click on **Edit** from the SNMP window to modify the parameters

Figure 36 SNMP settings



3 Setup your SNMP manager.

– Download the OTU SNMP V2 MIBs to add it to your SNMP manager

– To setup SmartOTU SNMP trap, in OTU setup screen:

a Activate SNMP V2 enabled

b You can activate the "I'm alive" trap to send an "I'm alive" trap every 10 minutes by default.

c Fill your SNMP V2 manager hostname or IP (only one SMTP manager)

d You can change the community and default port to use

4 **Save** the configuration and send a test trap with the **Test** button.

A new SmartOTU SNMP mib is available since SmartOTU 6.0.

2 types of SNMP trap are sent:

– I'm alive trap (heartbeat): `jdsuOtuImAliveTrap`

– Optical and system alarms: `jdsuOtuAlarmEventTrap`

For a full description of the traps content please download the OTU mib from the OTU setup screen.

Traps description

Description of the `jdsuOtuImAliveTrap`

The trap has 2 fields: the OTU serial number and the latest alarm sequence number.

The latest alarm sequence number is incremented for each new alarm and for "test" trap.

Example

- `jdsuOtuAlarmEventEntryOtuSerialNumber: 04993`

- `jdsuOtuImAliveLatestAlarmEventSequence: 11`

Description of the `jdsuOtuAlarmEventTrap`

Alarm event trap unicity is given by`jdsuOtuAlarmEventEntrySequence` and `jdsuOtuAlarmEventEntryOtuSerialNumber`.

Alarm identifier is given by `jdsuOtuAlarmEventEntryAlarmSpecificProblem`; `jdsuOtuAlarmEventEntryAlarmResource` and `jdsuOtuAlarmEventEntryOtuSerialNumber`.

To discriminate optical and system alarm use the `jdsuOtuAlarmEventEntryAlarmType` with its enum values `JdsuOtuAlarmType`: optic(1) system(2).

The field `jdsuOtuAlarmEventEntryAlarmResource` give the name of the resource in alarm:

- for optical alarm: port=portNumber
- for system alarm:
  - module=moduleNumber
  - or switch=switchNumber
  - or test=testNumber
  - or cpu
  - or componentName
  - or otu

Specific problem for optical and system alarms in `jdsuOtuAlarmEventEntryAlarmSpecificProblem` is given by an enum `JdsuOtuAlarmSpecificProblem`:

For optical alarm specific problem:
attenuation(1)

For system alarm specific problem:
missingOrCorruptedFile(2), localMode(3), innerApplicationCommunicationProblem(4), harddiskSpace(5), temperature(6), switchProblem(7), moduleProblem(8), moduleCompatibility(9), switchCompatibility(10), communicationTest(11),missingReferenceTrace(12), hardwareProblem(13), softwareProblem(14), measurementCycle(15), alarmOverflow(16), genericAlarm(17),rebuildClear(18)

For optical alarms `jdsuOtuAlarmEventEntryOpticalAlarmSubProblem` give details about the optical problem given by an enum `JdsuOtuOpticalAlarmSubProblem`:
fiberCut(1), injection(2), attenuation(3)

Notes

- `jdsuOtuAlarmEventEntryTrapData` field is only given for backward compatibility with previous mib.
- If a field is not available, its value is not set.

Example:

jdsuOtuAlarmEventEntrySequence: 12

jdsuOtuAlarmEventEntryOtuSerialNumber: 04993

jdsuOtuAlarmEventEntryTrapData: RTU: otu-8000e-sd (10.33.17.111):
Alarm type: OPTICAL:
Timestamp: Dec 07 2015 - 15: 51:
Severity: CRITICAL:
Link name: Link 1 - Port 1: Probable cause: Fiber Cut: Optical distance: 10.503KM:

jdsuOtuAlarmEventEntryAlarmSpecificProblem: 1

jdsuOtuAlarmEventEntryAlarmResource: port=1

jdsuOtuAlarmEventEntryAlarmType: 1

jdsuOtuAlarmEventEntryAlarmSeverity: 5

jdsuOtuAlarmEventEntryAlarmTimestamp: 2015-12-7,15: 51: 15.0

jdsuOtuAlarmEventEntryOtuName: otu-8000e-sd (10.33.17.111)

jdsuOtuAlarmEventOpticalAlarmSpecificInfos.jdsuOtuAlarmEventEntryOpticalAlarmLinkName: Link 1

jdsuOtuAlarmEventOpticalAlarmSpecificInfos.jdsuOtuAlarmEventEntryOpticalAlarmSubProblem: 1

jdsuOtuAlarmEventOpticalAlarmSpecificInfos.jdsuOtuAlarmEventEntryOpticalAlarmLeveldB:

jdsuOtuAlarmEventOpticalAlarmSpecificInfos .jdsuOtuAlarmEventEntryOpticalAlarmDistanceKm: 10.503

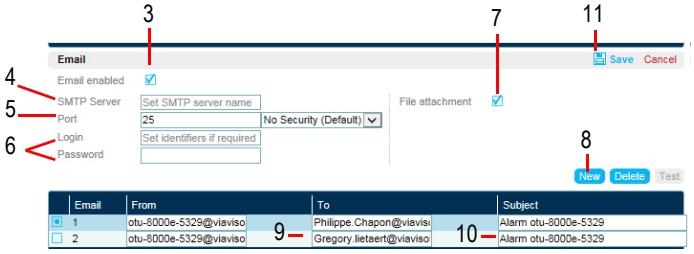
jdsuOtuAlarmEventOpticalAlarmSpecificInfos.jdsuOtuAlarmEventEntryOpticalAlarmGpsLatLong: 37.9152184 -78.5357895

Configuring Email

1 Click on the icon 

2 Click on **Edit** from the Email window to modify the parameters

Figure 37 Email configuration



3 Enable Email

4 Fill your SMTP server hostname or its IP address (ask your IT); if you let it empty, it tries to find a smtp server on the network.

5 Set the SMTP server port (25 by default). If your SMTP requires secured protocol, you can select STARTTLS (port 587) or SSL/TLS (port 465).

6 If your SMTP server requires authentication, fill the login/password fields.

7 Select whether you want to attach OTDR traces to alarm sent by Email.

8 Add a new Email receiver by clicking on New button.

9 Fill his email address.

10 Update the Email alarm Subject.

11 Save the configuration and send a Test Email by clicking on Test button.

Email content example:

```
RTU : otu-8000e-sd (10.33.17.111)
Alarm type: OPTICAL
Timestamp: Dec 07 2015 - 16:52
Severity: CRITICAL
Link name: Link 1 - Port 1
Probable cause: Fiber Cut
Optical distance: 10.503KM
GPS: 37.9152184 -78.5357895
http://maps.google.com/maps/place/37.91522,-78.53579
```

NOTE

OTDR acquisition traces and optional kml file of the route are given as an attachment of the email, if email file attachment is enabled.

Configuring SMS

To setup the SMS, in OTU setup screen:

1 Select the SMS **Edit** menu

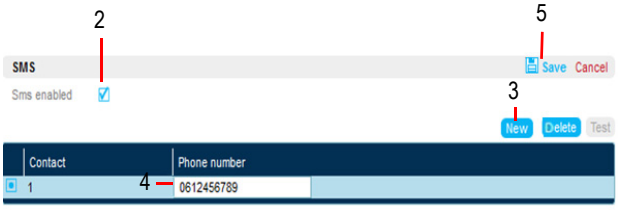
2 Enable Sms.

3 Add a new Sms receiver by clicking on **New** button.

4 Fill his phone number.

5 **Save** the configuration.

Figure 38 SMS configuration



6 Send a test Sms by clicking on **Test** button

SMS content example

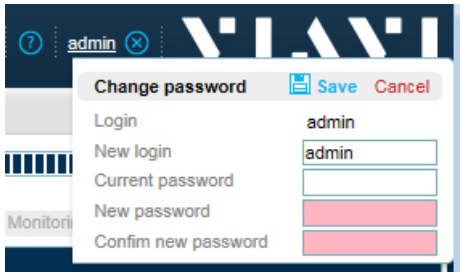
```
otu-8000e-622-OPTICAL-07Dec2015 10:13-CRITICAL-Link 1-Port 1-
10503m-http://maps.google.com/maps/place/37.91522,-78.53579.
```

Configuring the Login and password

1 From the top menu bar, click on user name

2 Click on **Edit** to modify your credentials.

Figure 39 User credentials



NOTE

If user credentials are lost, in OTU Local Mode, user credentials can be changed without giving the old password and current user login is retrieved.

8

Device Configuration

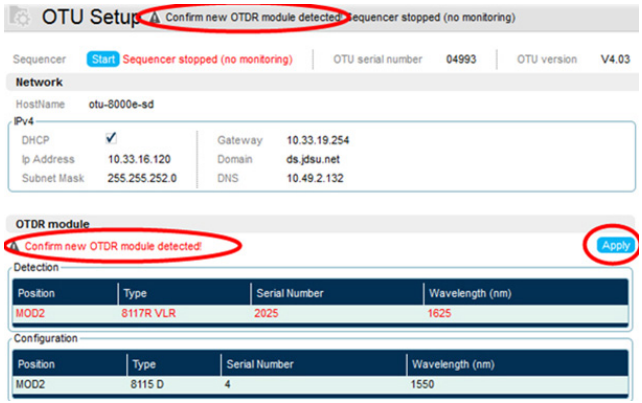
That section is useful if you have to replace your OTDR module or your optical switch.

Topics discussed in this chapter are as follows:

Apply a new OTDR module

If a new OTDR module is detected, an alarm **Module Autoconfig** is sent and the web application automatically displays the OTU Setup screen with a warning:

Figure 40 New OTDR Module



You must confirm the new OTDR module by clicking on Apply button.

NOTE

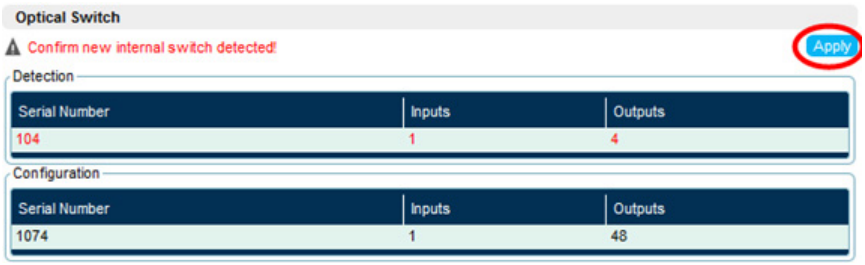
If the OTDR type is changed, the reference trace has to be changed.
See Monitoring setup

Apply a new optical switch

If a new optical switch is detected, an alarm "Switch Autoconfig" is sent and the web application automatically displays the OTU Setup screen with a warning:

You must confirm the new optical switch by clicking on **Apply** button.

Figure 41 Confirm optical swtich detected



NOTE

If monitoring was already setup and you change the optical switch by a switch with fewer outputs, an **error message** will inform you that monitoring tests on ports no longer available must be removed.

LAN setting edition

To change LAN settings:

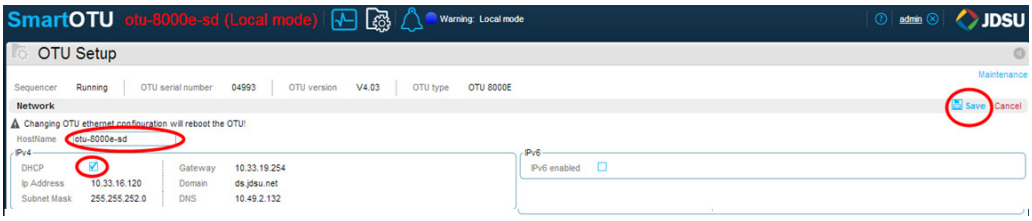
- OTU must be in local mode: your PC with the web browser must be connected on OTU local Ethernet interface (RJ45 "BCK/LOC") and you must push the Local button on OTU.

1 Connect to SmartOTU application on your web browser with the url: http://192.168.1.1.

2 Click on the icon and click on **Edit** to configure Network Settings:
   – the OTU hostname (used when DHCP is enabled)
   – DHCP can be enabled/disabled
   – If DHCP is disabled, IP settings can be modified

3 Click on **Save** to save the settings.

Figure 42 Network settings

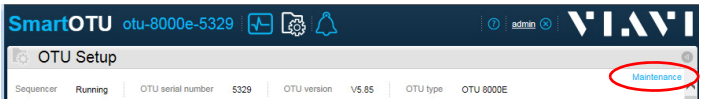


9

Maintenance

This chapter describes the maintenance procedures for the SmartOTU.

To access the maintenance, click on Maintenance link from the Setup screen:

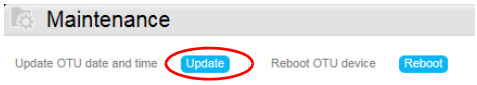


Topics discussed in this chapter are as follows:

Update SmartOTU date-time

To update the OTU date-time, from the SmartOTU Maintenance page:

1 Click the **Update** button on the parameter **Update OTU date and time**.

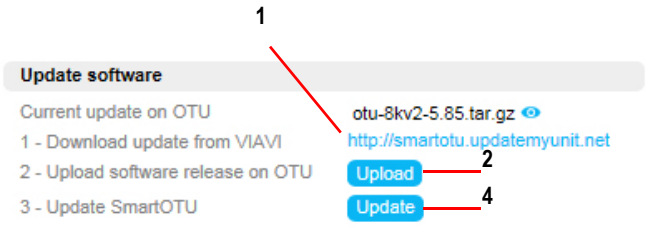


The date and time will be updated according to the computer date and time.

Software update

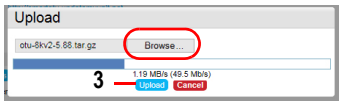
1 From the Software update section of the **Maintenance** screen, download on your PC the new SmartOTU release from Viavi http://smartotu.updatemyunit.net site.

Figure 43 Update software



2 Select the **Upload** button to upload the release from your PC to the OTU.

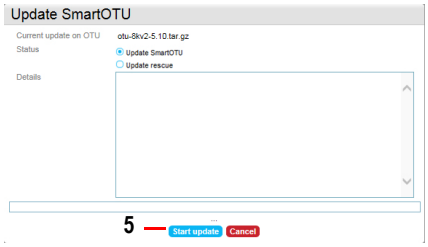
You are asked to select the release to upload to the OTU with the **Browse** button.



3 Select the release (of the form *.tar.gz) and upload it.

4 When the upload is completed, close the upload dialog and select **Update** button.

You are asked to start the update.



5 Select the **Start update** button.

The OTU start the update and will reboot at the end of the update.

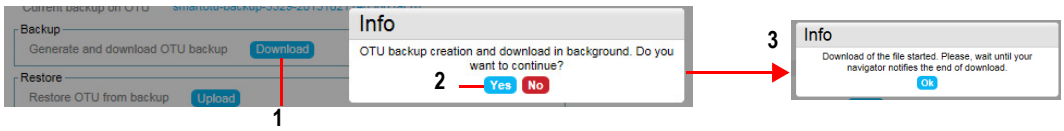
SmartOTU Configuration backup

The full configuration of SmartOTU is backed up: monitoring setup, Email ,SMS, SNMP, Setup, Passwords…

1 From the **Backup/Restore** section of the Maintenance screen, select the **Download** button.

2 Click on **Yes** in the dialog box to confirm the generation of the backup of the SmartOTU configuration (monitoring tests, full SmartOTU setup).

Figure 44 Backup download



3 A dialog box informs the downloading is in progress. Click **Ok** to close the window.

When the download is finished, the browser proposes to save the file

SmartOTU configuration restore

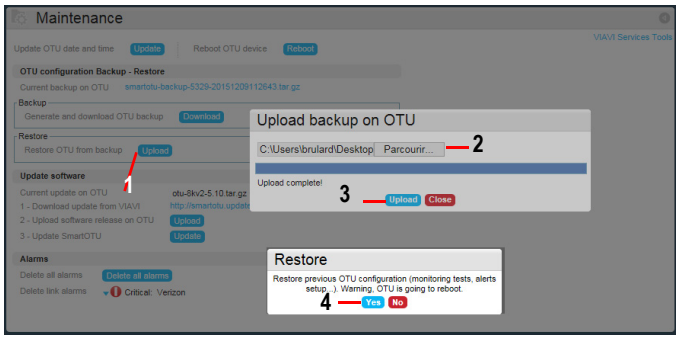
1 From the **Backup/restore** section of the Maintenance, select the **Upload** button.

2 Click on **Browse** button to choose the backup file you want to restore on OTU

3 Click the **Upload** button.

4 When the upload is finished, click on **Yes** confirm the start of the restoration of the SmartOTU and the reboot.

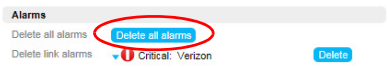
Figure 45 Restore configuration



Alarms

Clear all alarms to force a full resynchro

From the **Alarms** section of the Maintenance, select **Delete all alarms**.



All OTU alarms will be removed.

Optical alarms will be re-generated by monitoring.

NOTE

If you have a snmp manager you should also remove all alarms from your manager to be synchronized.

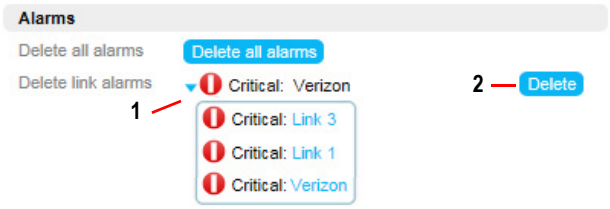
Individually clear an alarm to force its detection

From the **Alarms** section of the Maintenance screen, you can individually delete an optical alarm.

1 Click on the blue arrow and select an alarm in the parameter Delete link alarms.

2 Click on Delete button o nthe right of the screen.

Figure 46 Select one alarm and delete it



NOTE

If you have a snmp manager you should also remove that alarm from your manager to be synchronized

7OTU80091
Rev. 000
English

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