

# JDSU SmartOTU

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Optical Test Unit

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

User Manual



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

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This product should not be disposed of as unsorted municipal waste and should be collected separately and disposed of according to your national regulations. In the European Union, all equipment purchased from JDSU after 2005-08-13 can be returned for disposal at the end of its useful life. JDSU will ensure that all waste equipment returned is reused, recycled, or disposed of in an environmentally friendly manner, and in compliance with all applicable national and international waste legislation.

It is the responsibility of the equipment owner to return the equipment to JDSU for appropriate disposal. If the equipment was imported by a reseller whose name or logo is marked on the equipment, then the owner should return the equipment directly to the reseller.

Instructions for returning waste equipment to JDSU can be found in the Environmental section of JDSU's web site at [www.jdsu.com](http://www.jdsu.com). If you have questions concerning disposal of your equipment, contact JDSU's WEEE Program Management team at [WEEE.EMEA@jdsu.com](mailto:WEEE.EMEA@jdsu.com).



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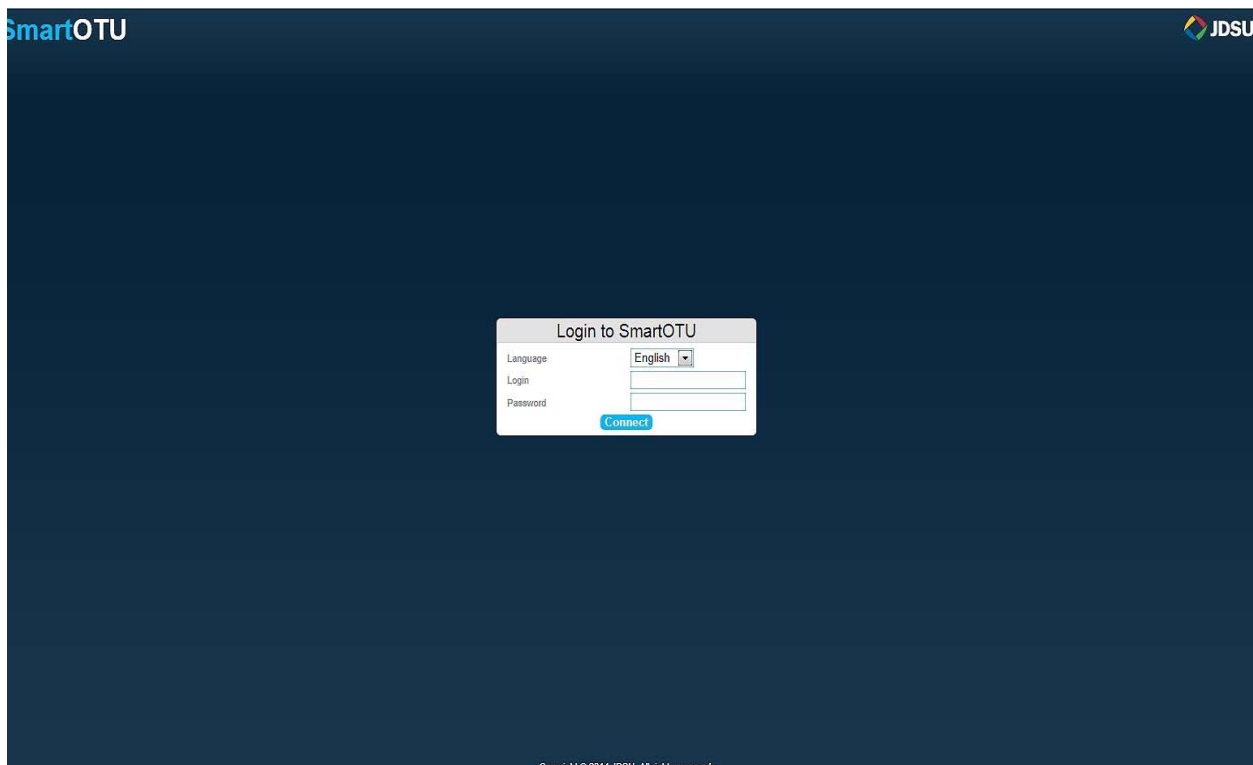
# 1 DESCRIPTION

## 1.1 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.






On the SmartOTU login page:

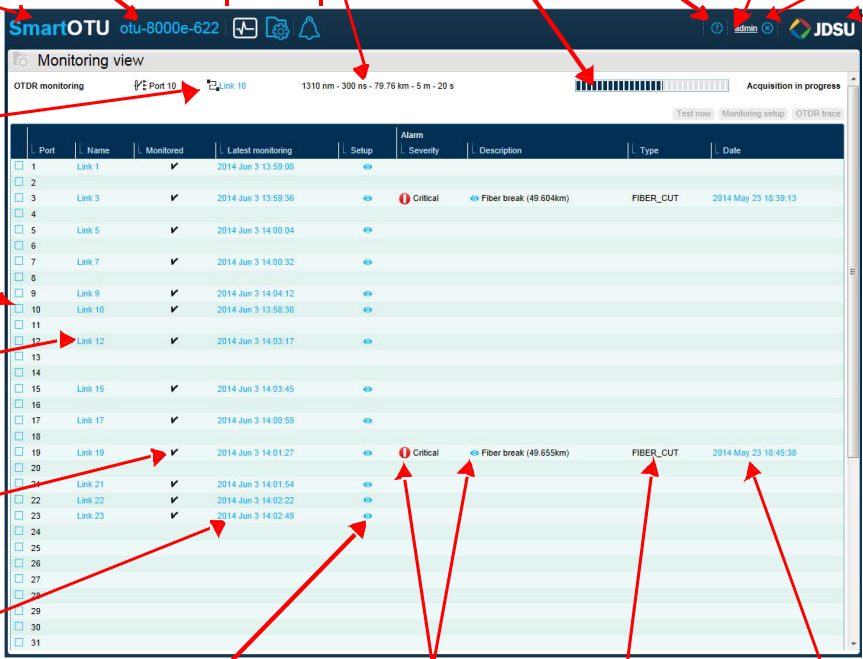
- 1 Select the language you wish to use, in the list.
- 2 Enter your Login: **admin**
- 3 Enter your Password: **password**.
- 4 Click on **Connect**.

The monitoring view page is displayed by default.

## 1.2 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.



Labels for the screenshot:

- Back to main screen and reload
- Quick access bar
- Current fiber
- Ports
- Fiber names (access monitoring setup)
- Fiber monitored
- Date and time of the last monitoring
- Review acquisitions parameters
- Display alarm Details
- Failure cause
- Alarm Date (Access alarm trace)
- Back to main screen
- Selected tab menu
- Current measurement parameters
- Mesurement in progress
- OTUversion
- Online help
- User Credentials
- Log out
- Access JDSU website
- Display bar
- Interactive screen for fiber monitoring

Port	Name	Monitored	Latest monitoring	Setup	Alarm Severity	Description	Type	Date
1	Link-1	✓	2014 Jun 3 13:59:06	ⓘ				
2	Link-2	✓	2014 Jun 3 13:59:06	ⓘ				
3	Link-3	✓	2014 Jun 3 13:59:36	ⓘ				
4	Link-4	✓	2014 Jun 3 13:59:36	ⓘ				
5	Link-5	✓	2014 Jun 3 14:00:04	ⓘ				
6	Link-6	✓	2014 Jun 3 14:00:04	ⓘ				
7	Link-7	✓	2014 Jun 3 14:00:32	ⓘ				
8	Link-8	✓	2014 Jun 3 14:00:32	ⓘ				
9	Link-9	✓	2014 Jun 3 14:04:12	ⓘ				
10	Link-10	✓	2014 Jun 3 13:58:38	ⓘ				
11	Link-11	✓	2014 Jun 3 13:58:38	ⓘ				
12	Link-12	✓	2014 Jun 3 14:03:17	ⓘ				
13	Link-13	✓	2014 Jun 3 14:03:17	ⓘ				
14	Link-14	✓	2014 Jun 3 14:03:17	ⓘ				
15	Link-15	✓	2014 Jun 3 14:03:45	ⓘ				
16	Link-16	✓	2014 Jun 3 14:03:45	ⓘ				
17	Link-17	✓	2014 Jun 3 14:00:59	ⓘ				
18	Link-18	✓	2014 Jun 3 14:01:27	ⓘ				
19	Link-19	✓	2014 Jun 3 14:01:27	ⓘ	Critical	Fiber break (49.655km)	FIBER_CUT	2014 May 23 16:45:38
20	Link-20	✓	2014 Jun 3 14:01:27	ⓘ				
21	Link-21	✓	2014 Jun 3 14:01:54	ⓘ				
22	Link-22	✓	2014 Jun 3 14:02:22	ⓘ				
23	Link-23	✓	2014 Jun 3 14:02:49	ⓘ				
24	Link-24	✓	2014 Jun 3 14:02:49	ⓘ				
25	Link-25	✓	2014 Jun 3 14:02:49	ⓘ				
26	Link-26	✓	2014 Jun 3 14:02:49	ⓘ				
27	Link-27	✓	2014 Jun 3 14:02:49	ⓘ				
28	Link-28	✓	2014 Jun 3 14:02:49	ⓘ				
29	Link-29	✓	2014 Jun 3 14:02:49	ⓘ				
30	Link-30	✓	2014 Jun 3 14:02:49	ⓘ				
31	Link-31	✓	2014 Jun 3 14:02:49	ⓘ				

### Quick access bar details

It offers a menu with the following actions:



Reload the page and display the main screen.



Display the main screen.



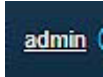
Selected tab menu: **Monitoring view** or **Main Screen**, **OTU Setup** and **OTU System alarm**: click on the icon, you should see a Pop up box with all OTU system alarms  
*(Icon colour change from blue (unselected) to blue/light blue (hover) and white (current selected)).*



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).



Edit user preference.



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



Quick Access for JDSU website

### Display bar

It shows the OTDR 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's necessary to select one port in the interactive screen (*grey buttons turn to blue*).

### 1.3 OTU Setup

Fiber monitoring is running      Optical Switch Setup      Maintenance Tools

Display bar

Ethernet Setup

OTDR module Setup

Email Setup

SMS Setup

Edit to modify Setup

Refresh autotest history

SNMP Setup

The screenshot shows the 'SmartOTU otu-8000e-sd' interface. At the top, there are navigation icons and a user profile 'admin'. The main area is titled 'OTU Setup' and contains several sections:
 

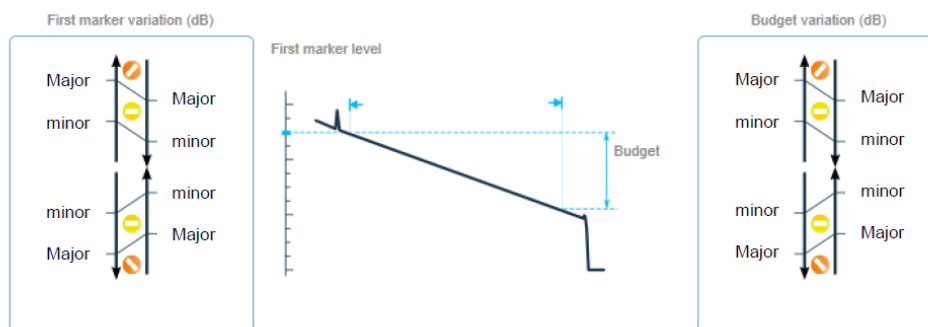
- Sequencer:** Running, OTU serial number: 04993, OTU version: V4.03, OTU type: OTU 8000E.
- Network:** HostName: otu-8000e-sd, IP4 settings (DHCP, Ip Address: 10.33.16.120, Subnet Mask: 255.255.252.0, Gateway: 10.33.19.254, Domain: ds.jdsu.net, DNS: 10.49.2.132), and IP6 settings (IP6 enabled: , Download OTU MIB).
- OTDR module:** A table with columns: Position, Type, Serial Number, Wavelength (nm), Serial Number, Inputs, Outputs. Row 1: MOD2, 811S D, 4, 1550, 1074, 1, 48.
- Email:** Email enabled: , SMTP Server: emearelay.ds.jdsu.net, File attachment: . A table shows email alerts: 1, otu-8000e-sd@jdsu.com, sylvain.desplat@jdsu.com, Alarm: otu-8000e-sd.
- SMS:** Sms enabled: . A table shows contact: 1, Phone number: 0611245678.
- Snmp:** Snmp v2 enabled: . A table shows configuration: 1, Manager: stes7-desplat, Community: OTU, Port: 162. Buttons: Delete, Test.
- Autotest:** Autotest history table with columns: Start autotest, Daily autotest start time. Row: June (1), 2014 Jun 18 13:41:19. Buttons: Start, Refresh.

## 2 FIBER MONITORING

### 2.1 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 1<sup>st</sup> 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.



First Marker level variation from reference	Conditions		Result	
	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

### 2.2 Initial setting of the reference trace

To set up the reference trace, from the **monitoring view** window, select the switch port and click on **monitoring setup**.

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

### OTDR measurement - Port 2

Port: Port-2

Wavelength: 1310 nm

Acquisition mode:  Auto  Manual

Pulse Width: Auto

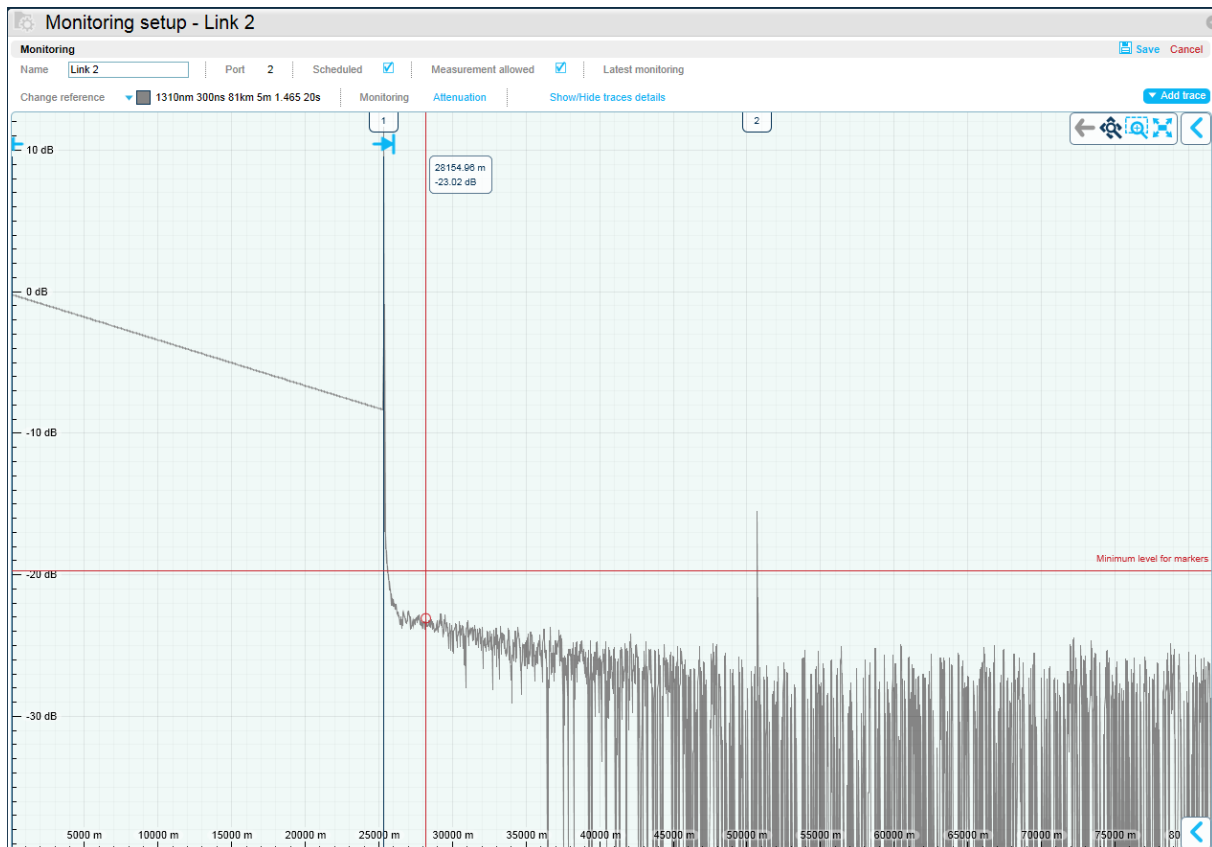
Range: Auto



Resolution: Auto

Fiber index: Auto

Acquisition time: Auto

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

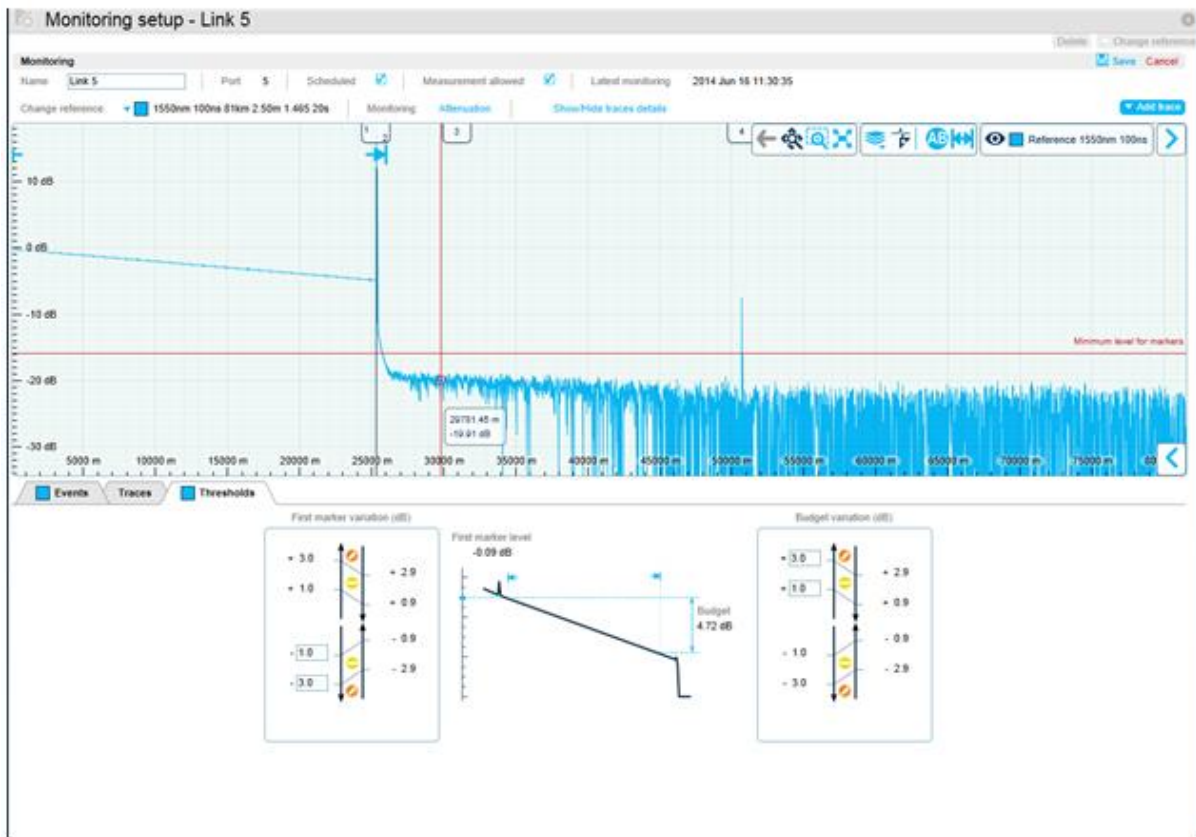


If desired the markers can be moved. Click on open menu  button at the right top corner of the trace then click on .



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**.

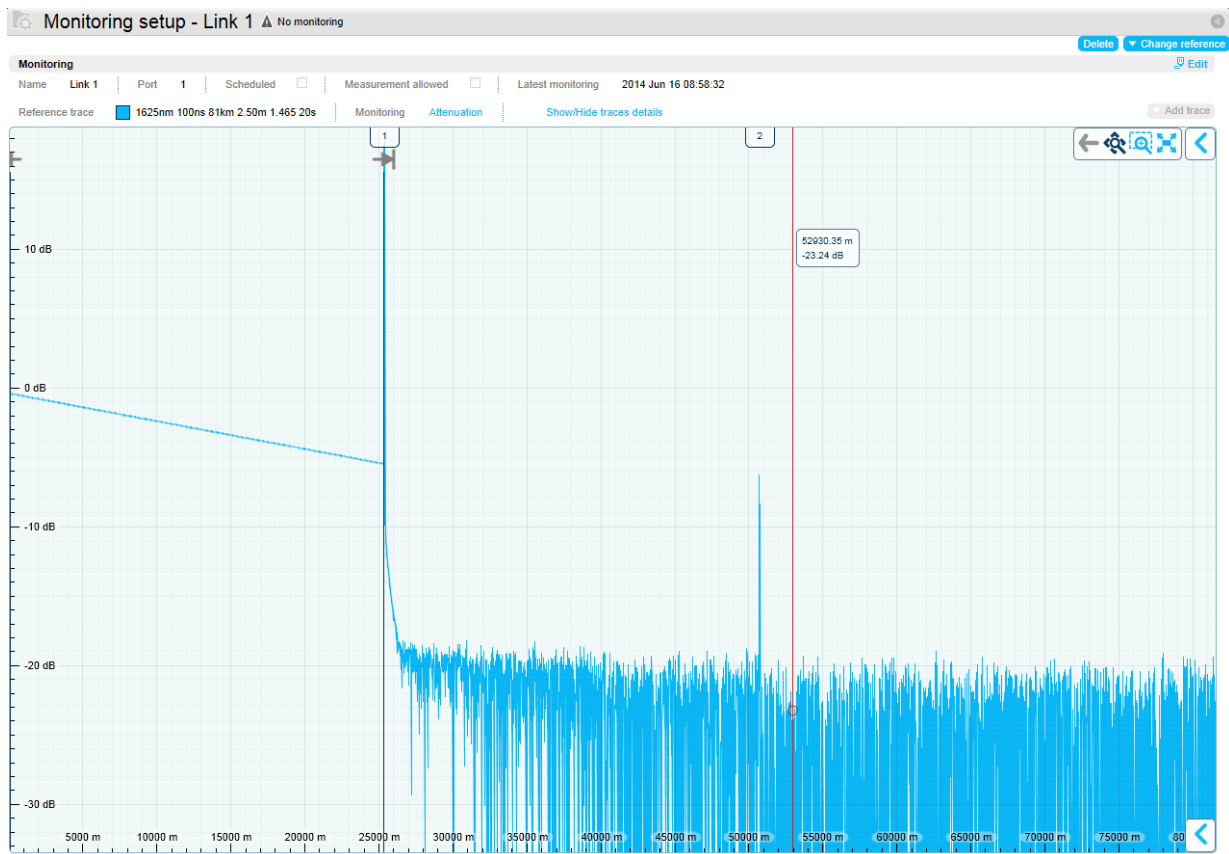


Once the change is made click on **Save** on the top right of the window.

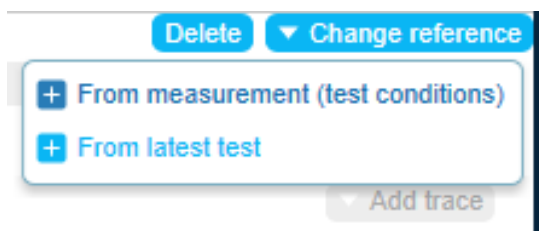
## 2.3 Change the reference trace

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

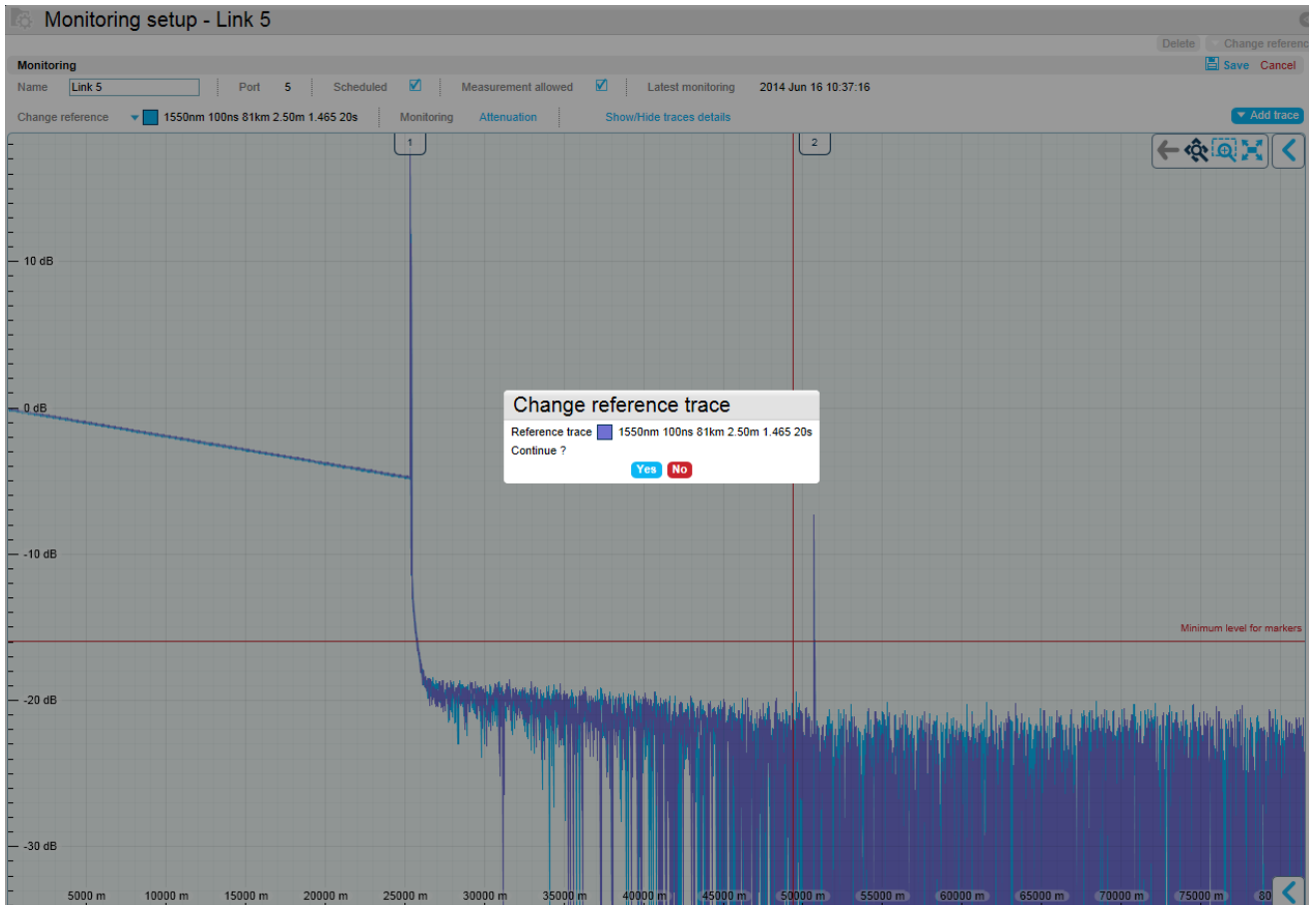
From the monitoring view window, click on the fiber name to display the current reference trace.



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.

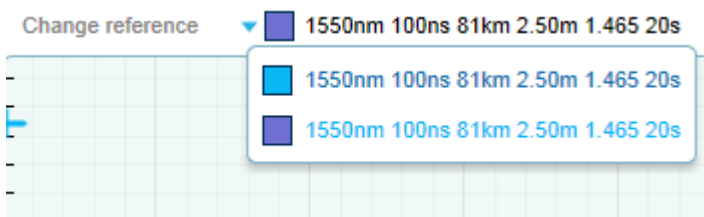


After the new trace is displayed in dark blue, the change needs to be confirmed.



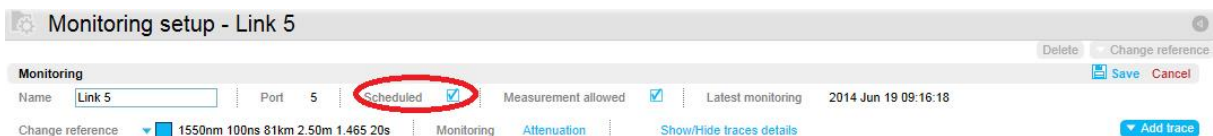
After it is confirmed, click on **Save** to finish the reference trace change.

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**.



## 2.4 Momentarily stop the monitoring

To stop the monitoring, from the monitoring view window, click on the fiber name to display the current reference trace, then click on **Edit** and unmark **Scheduled**. Click on **Save** to register the modifications.



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

## 2.5 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.



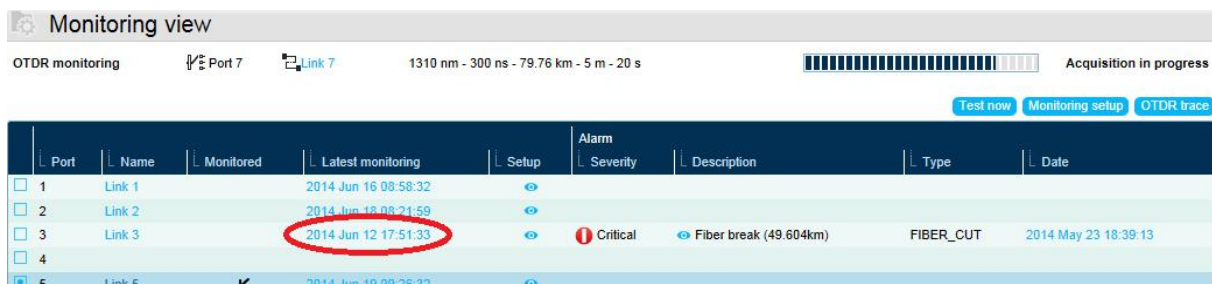
To prevent the measurements (monitoring or manual) on a fiber, from the Monitoring view window, click on the fiber *Name* to display the current reference trace, then click on **Edit** and unmark **Measurement allow**. Click on **Save** to register the modifications.

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

## 2.6 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.



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

## 2.7 Test a fiber immediately

To short cut the monitoring cycle, select the switch *Port*  to be tested and click on **Test now** button.

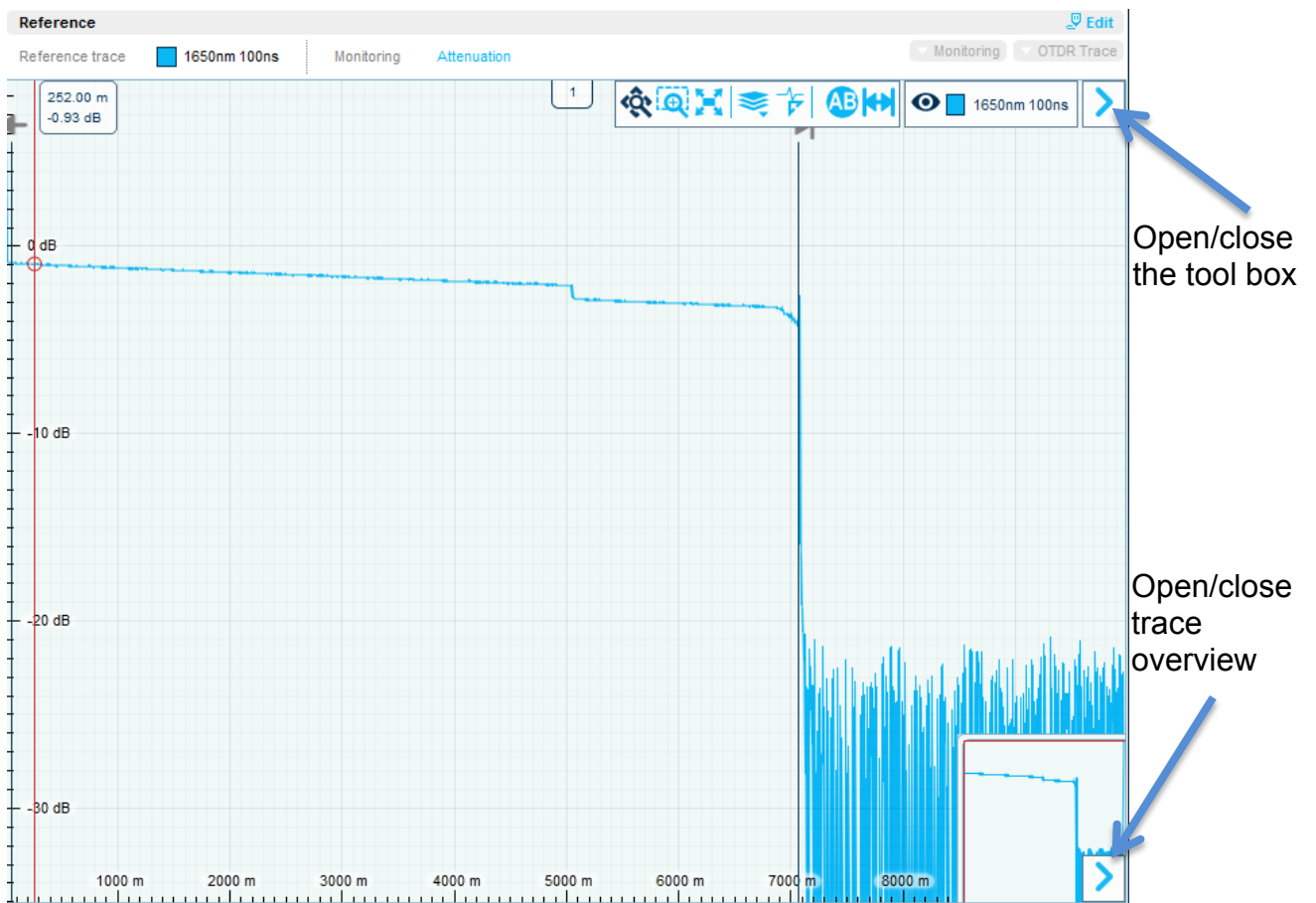


### 3 TRACE VIEWER

#### 3.1 OTDR trace color codes

- **Light Blue** : reference trace
- **Dark blue**: latest test
- **Red**: Alarm trace
- **Grey**: Measurement on demand


#### 3.2 Overview

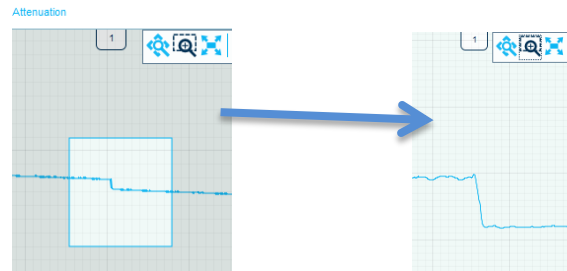



### 3.3 Trace Viewer Zoom



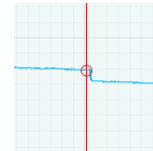
 Fit to content (zoom release)

 Zoom to selected zone

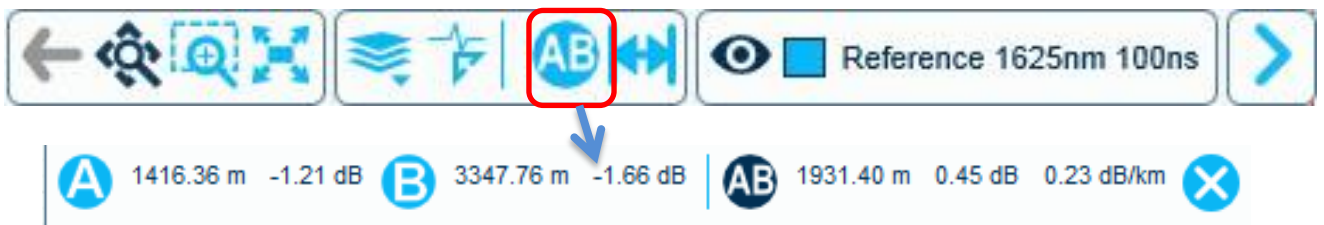


 Pan and zoom in /out with mouse wheel

- With any zoom tool, zoom in or out around the mouse location

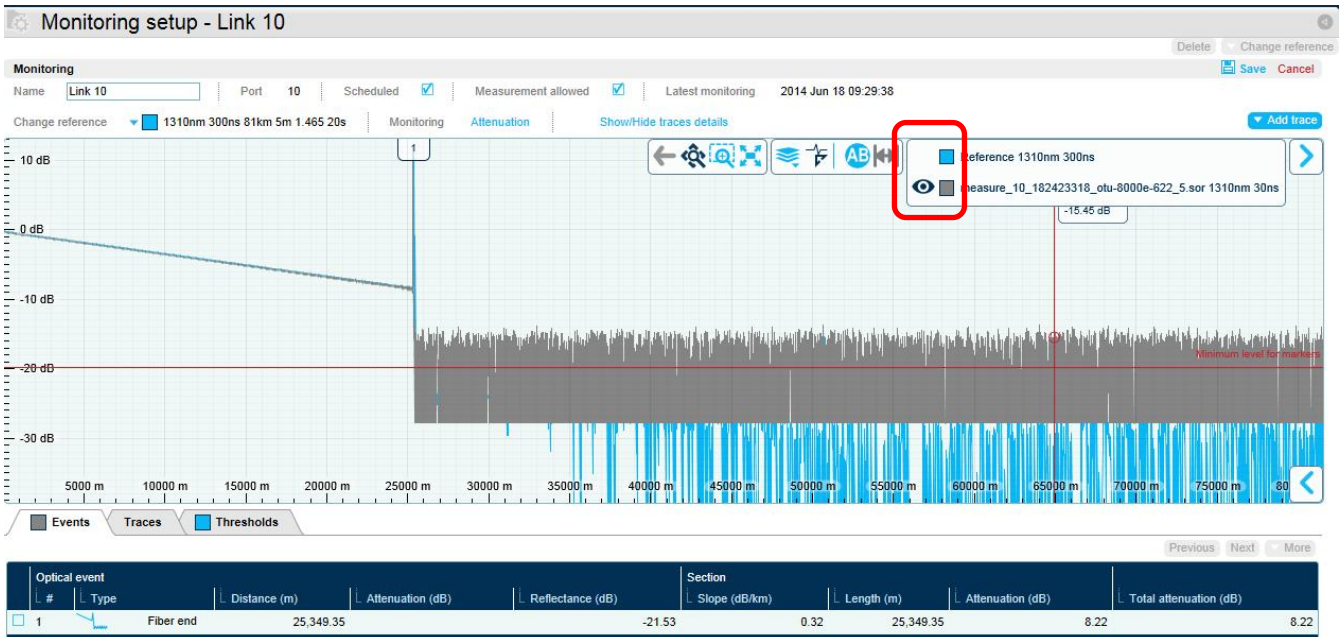


### 3.4 Trace Viewer A & B markers



- A** **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** **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
- AB** Distance, attenuation and slope between **A** and **B** markers

### 3.5 Multi trace



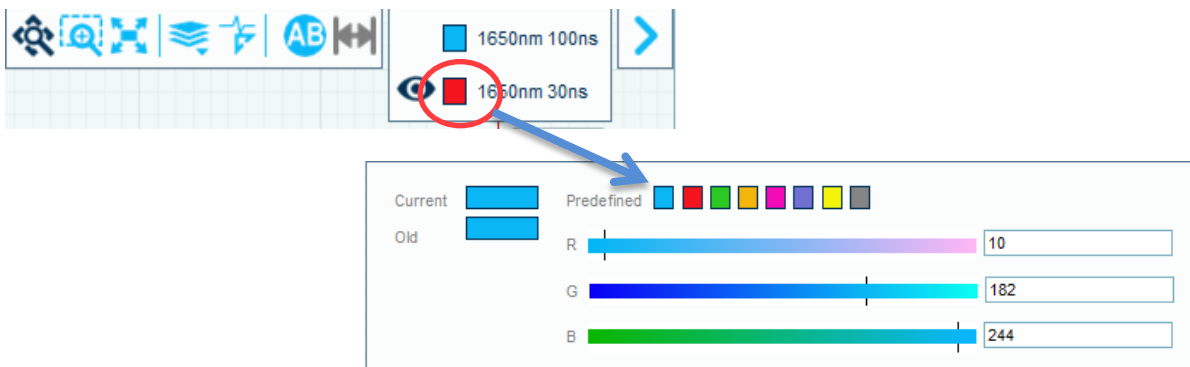
Events, results, acquisition details related to the selected trace

click in front of the to activate the blue trace

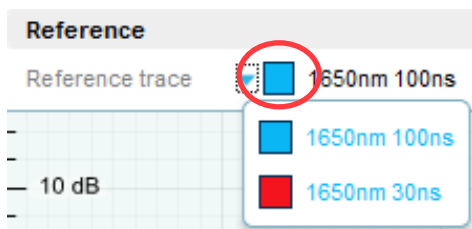


Can change selected trace by clicking in front of the colored square

### 3.6 Multi trace detail

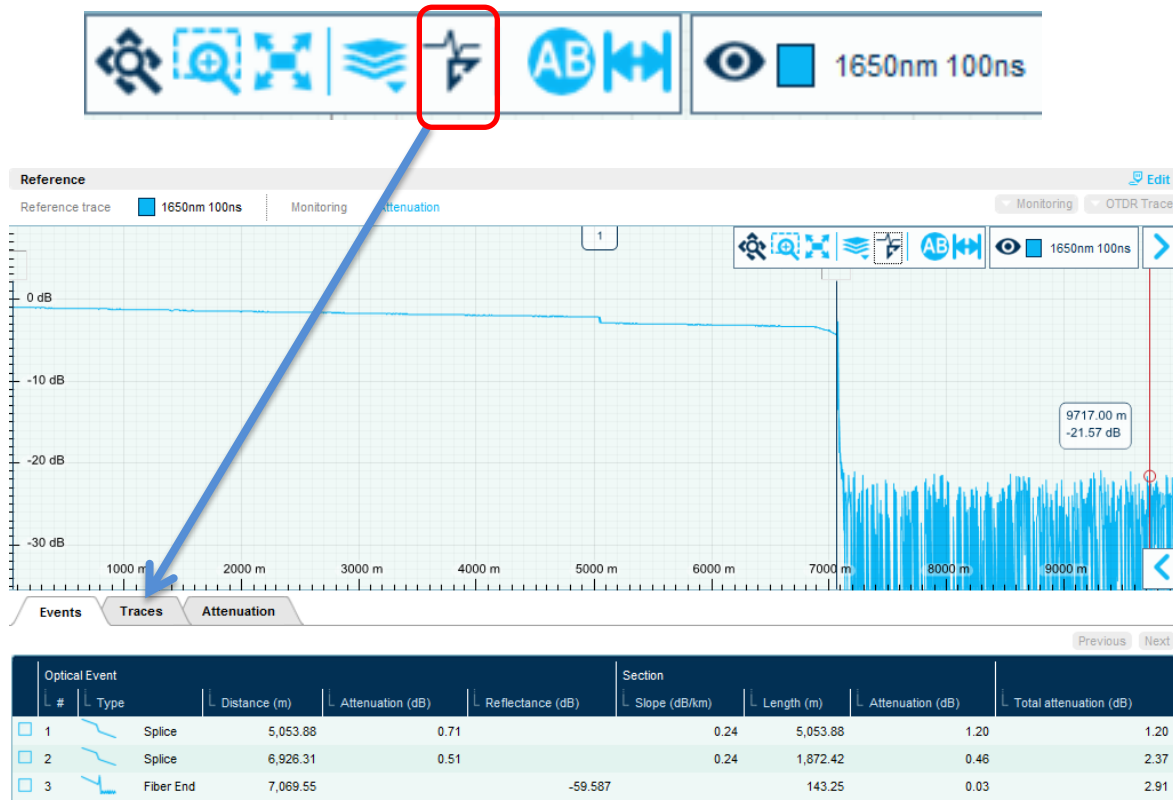


- Click on the color square to change the color of the trace

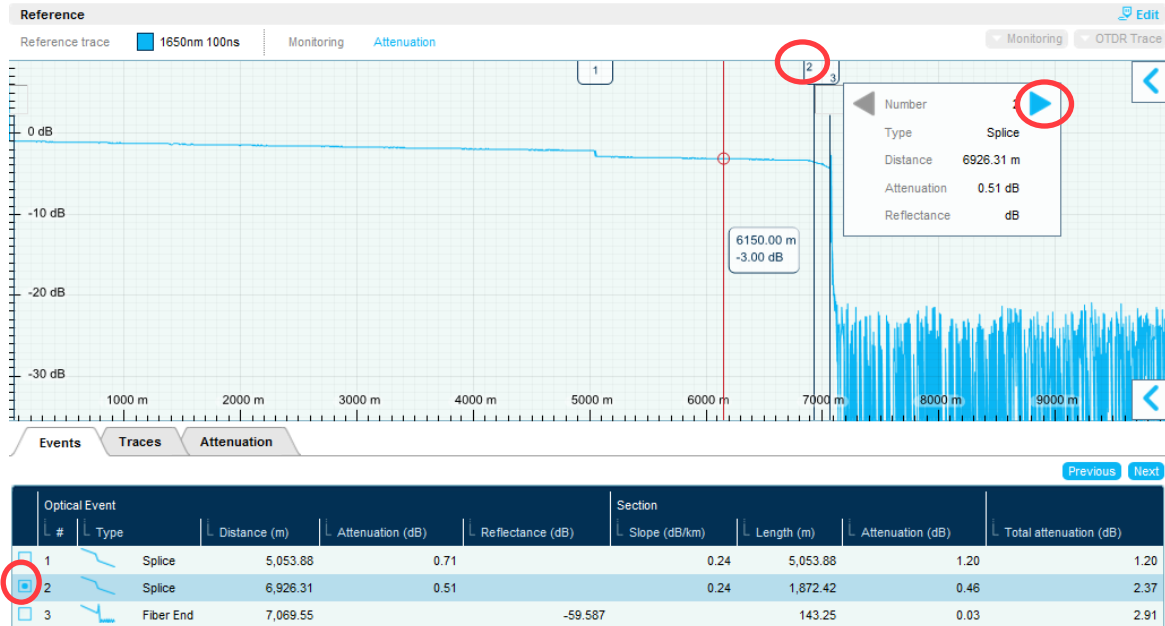


- Click on the arrow to change the Reference trace
- This will be modify the running test configuration

### 3.7 Detail on selected Trace

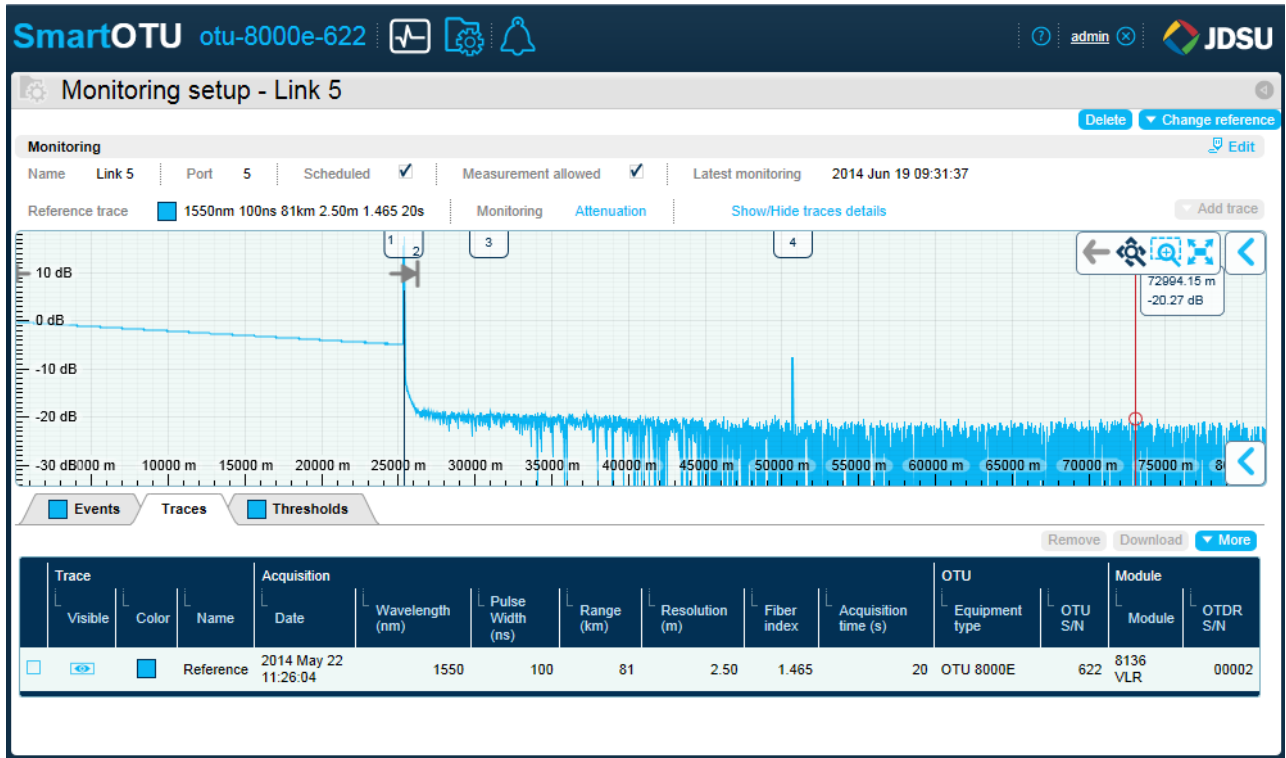


### 3.8 Event detail on selected trace



- 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

### 3.9 Setup detail on selected trace



- All acquisition parameters

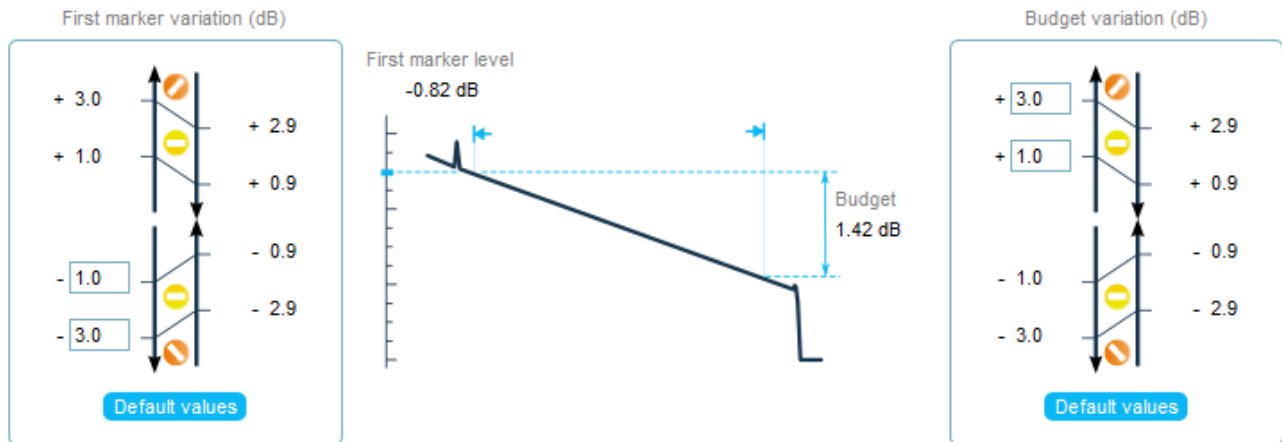
### 3.10 Trace Viewer First and last Markers - Only for the reference trace selection



- 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

### 3.11 Threshold adjustment only for reference trace

#### Attenuation




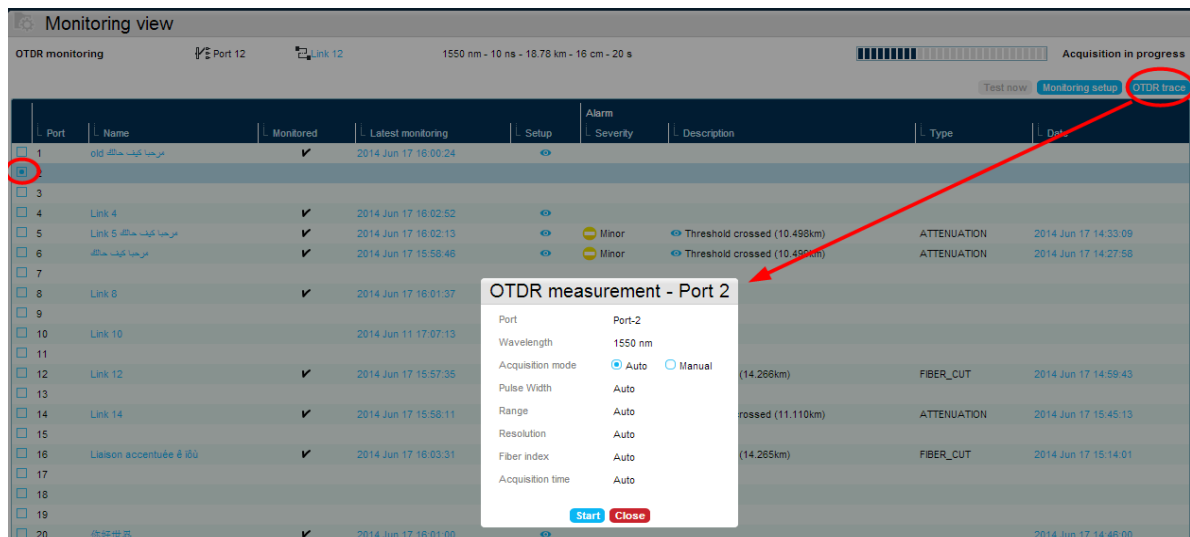
- Default values are 1 dB for minor, 3 dB for major
- Positive and negative variation detected
- First and last markers can be different setup

## 4 MEASUREMENT ON DEMAND

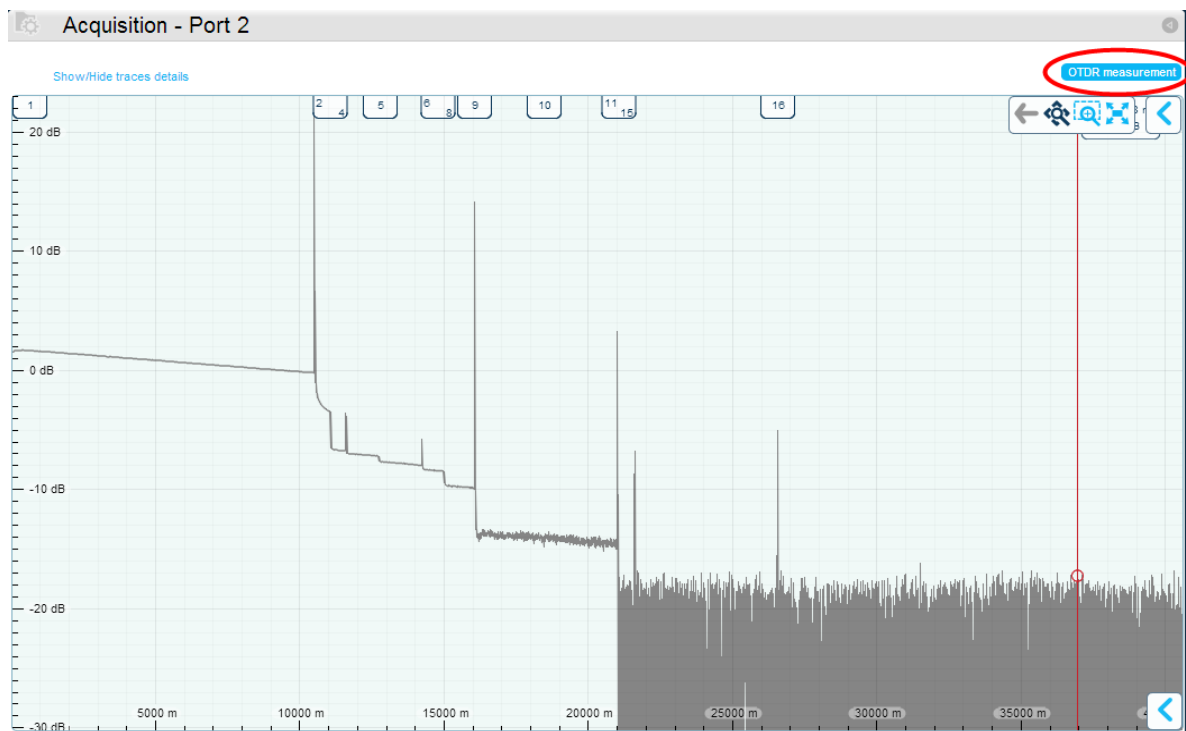
### 4.1 Measurement on a port without monitoring

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, select a monitored *Port* , without monitoring test, and click the button **OTDR Trace**.



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



## 4.2 Measurement on a port with monitoring tests

From the monitoring view main screen, select a monitored *Port* , and click the button **OTDR Trace**.

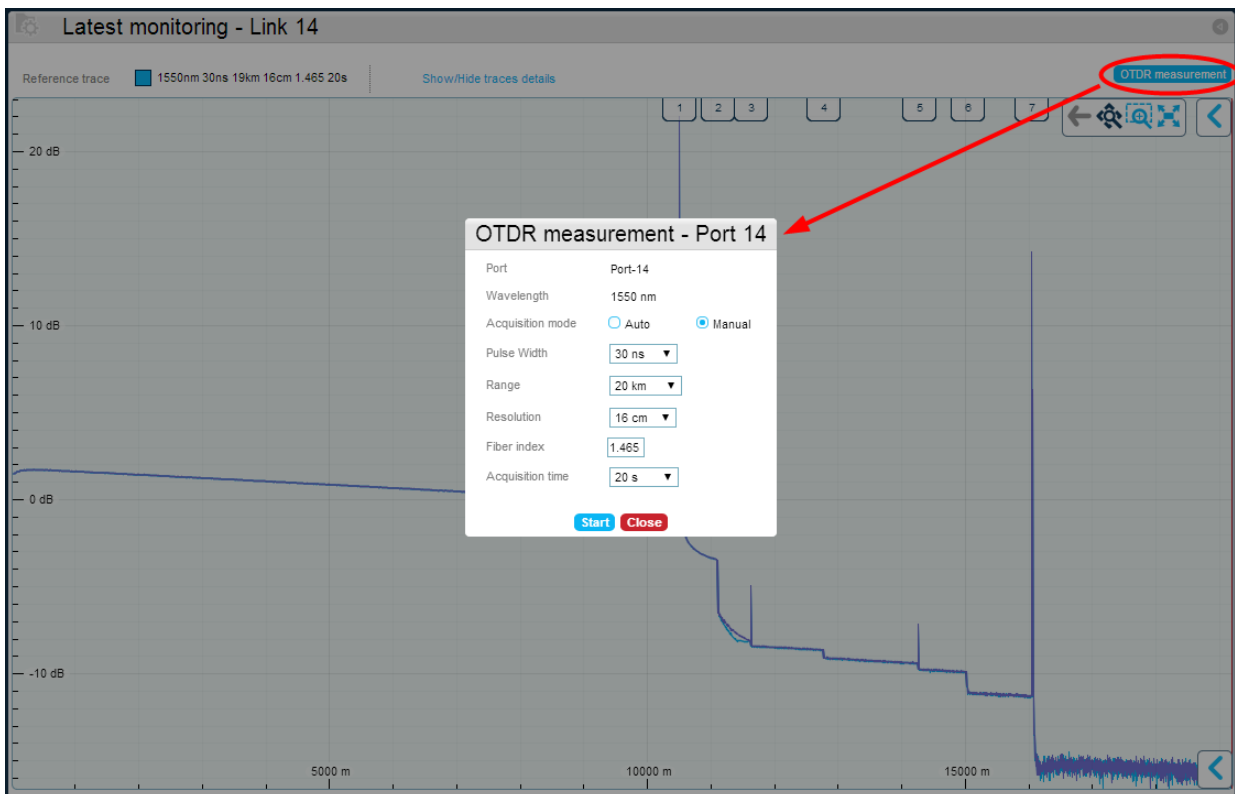
Monitoring view

OTDR on demand test Port 5 北京 - 上海 1550 nm - 10 ns - 19.71 km - 16 cm - 20 s Acquisition in progress

Test now Monitoring setup **OTDR trace**

Port	Name	Monitored	Latest monitoring	Setup	Alarm Severity	Description	Type	Date
1	old link 1	✓	2014 Jun 17 16:15:57	👁				
2								
3								
4	Link 4	✓	2014 Jun 17 16:10:40	👁				
5	北京 - 上海	✓	2014 Jun 17 16:10:02	👁	Minor	Threshold crossed (10.498km)	ATTENUATION	2014 Jun 17 14:33:09
6	مرحبا كيف حالكم	✓	2014 Jun 17 16:13:46	👁	Minor	Threshold crossed (10.499km)	ATTENUATION	2014 Jun 17 14:27:58
7								
8	Link 8	✓	2014 Jun 17 16:09:25	👁				
9								
10	Link 10		2014 Jun 11 17:07:13	👁				
11								
12	Link 12	✓	2014 Jun 17 16:11:56	👁	Critical	Fiber break (14.266km)	FIBER_CUT	2014 Jun 17 14:59:43
13								
<b>14</b>	Link 14	✓	2014 Jun 17 16:13:10	👁				2014 Jun 17 16:13:10

The last acquisition performed by the monitoring on that port is displayed and you can start a new measurement by clicking on **OTDR measurement** button. By default monitoring parameters are selected for the new measurement and can be modified.



## 5 ALARM

Optical alarms are detected by the OTDR monitoring of the fibers and System alarms by checking OTU unit configuration and operations.

Alarms are displayed in SmartOTU monitoring view and notified through Email, SMS and SNMP.

### 5.1 Optical alarms (alarms triggered by OTDR monitoring)

[@see FIBER MONITORING Principle](#)

### 5.2 System alarms

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

## 6 CONFIGURATION

### 6.1 LAN (IP address, etc...)

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

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

#### Lan settings 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.



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

#### **Edit** the Network settings:

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

## 6.2 SNMP

SmartOTU sends traps according to SNMP V2c

Snm	Manager	Community	Port
1	sted7-desplat	OTU	162

In OTU setup screen, 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:
  - 1 Select the Snmp **Edit** menu
  - 2 Activate Snmp v2 enabled
  - 3 You can activate the "I'm alive" trap to send an "I'm alive" trap every 10 minutes by default.
  - 4 Fill your snmp v2 manager hostname or IP (only one SMTP manager)
  - 5 You can change the community and default port to use
  - 6 Save the configuration and send a test trap with the **Test** button.

**Note:** Each SNMP trap sent by SmartOTU has 3 fields:

- the sequence number, to be able to check that no trap has been lost. The trap sequence number is incremented for each new alarm (but not incremented for "test" trap and not for "I'm alive" trap).
- the serial number of the OTU
- the third field contains the alarm detail. It's a binary field with a string encoded in UTF-8

Snmp alarm trap example:

```
#0 jdsuOtuAlarmEventEntrySequence: 341
#1 jdsuOtuAlarmEventEntryOtuSerialNumber: 04993
#2 jdsuOtuAlarmEventEntryTrapData: RTU : otu-8000e-sd (10.33.16.120)
Alarm type: OPTICAL
Timestamp: Jun 16 2014 - 11:18
Severity: CRITICAL
Link name: Link 25 - Port 25
Probable cause: Fiber Cut
Optical distance: 10.498KM
```

## 6.3 Email

**Email** Save Cancel

Email enabled

SMTP Server  File attachment

Port  No Security (Default) ▼

Login

Password

New Delete Test

Email	From	To	Subject
1	otu-8000e-sd_1@jdsu.com	sylvain.desplat@jdsu.com	Alarm: otu-8000e-sd_1

Email in OTU setup screen, setup the Email:

1. Select the **Edit** menu
2. Enable Email
3. 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.
4. 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).
5. If your SMTP server requires authentication, fill the login/password fields
6. Select whether you want to attach OTDR traces to alarm sent by Email
7. Add a new Email receiver by clicking on **New** button
8. Fill his email address
9. Update the Email alarm subject
10. **Save** the configuration and send a test Email by clicking on **Test** button.

**Email** Save Cancel

Email enabled

SMTP Server  File attachment

Login

Password

New Delete Test

Email	From	To	Subject
1	otu-8000e-sd@jdsu.com	sylvain.desplat@jdsu.com	Alarm: otu-8000e-sd

Email content example:

```
RTU : otu-8000e-sd (10.33.16.120)
Alarm type: OPTICAL
Timestamp: Jun 11 2014 - 11:18
Severity: CRITICAL
Link name: Link 16 - Port 16
Probable cause: Fiber Cut
Optical distance: 10.621KM
```

## 6.4 SMS

To setup the SMS, in OTU setup screen:

- Select the SMS **Edit** menu
- Enable Sms
- Add a new Sms receiver by clicking on **New** button

- Fill his phone number
- **Save** the configuration and send a test Sms by clicking on **Test** button.

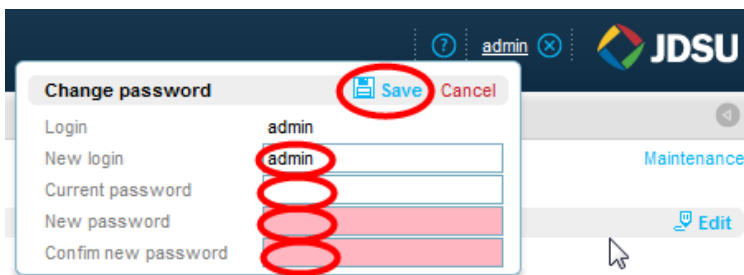
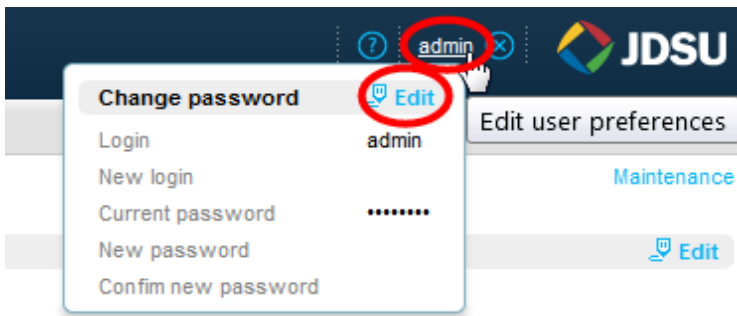


Sms content example:

otu-8000e-622–OPTICAL–19Jun2014 10:13-MINOR-Link 25–Port 25-10498m

## 6.5 Login/Password

From the top menu bar, click on user name and **Edit** your 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

## 7 DEVICE CONFIGURATION

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

### 7.1 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:

The screenshot shows the OTU Setup interface for device 'otu-8000e-sd'. At the top, a warning message 'Confirm new OTDR module detected' is highlighted with a red circle. Below this, the 'Sequencer' status is 'Stopped (no monitoring)' with a 'Start' button. The OTU serial number is 04993 and the version is V4.03.

The 'Network' section shows the following configuration:

Network			
HostName	otu-8000e-sd		
IPv4			
DHCP	<input checked="" type="checkbox"/>	Gateway	10.33.19.254
Ip Address	10.33.16.120	Domain	ds.jdsu.net
Subnet Mask	255.255.252.0	DNS	10.49.2.132

The 'OTDR module' section also displays a warning 'Confirm new OTDR module detected' (circled in red) and an 'Apply' button (circled in red). It contains two tables:

OTDR module			
Detection			
Position	Type	Serial Number	Wavelength (nm)
MOD2	8117R VLR	2025	1625
Configuration			
Position	Type	Serial Number	Wavelength (nm)
MOD2	8115 D	4	1550

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.

### 7.2 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:

The screenshot shows the SmartOTU interface for device 'otu-8000e-sd'. At the top, a warning message 'Confirm new internal switch detected' is highlighted with a red circle. The status bar shows 'Major: Switch autoconfiguration' with a bell icon. Below this, the 'OTU Setup' header also displays the warning 'Confirm new internal switch detected' (circled in red).

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

**Optical Switch**

⚠ Confirm new internal switch detected! Apply

Detection

Serial Number	Inputs	Outputs
104	1	4

Configuration

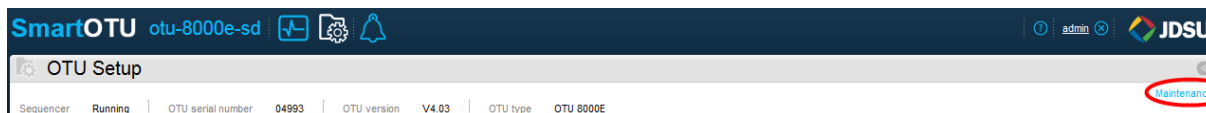
Serial Number	Inputs	Outputs
1074	1	48

**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.

## 8 MAINTENANCE

That window is for: OTU backup /restore of the configuration, upgrade, support...

To access the maintenance, select the **Maintenance** link from the OTU Setup screen.



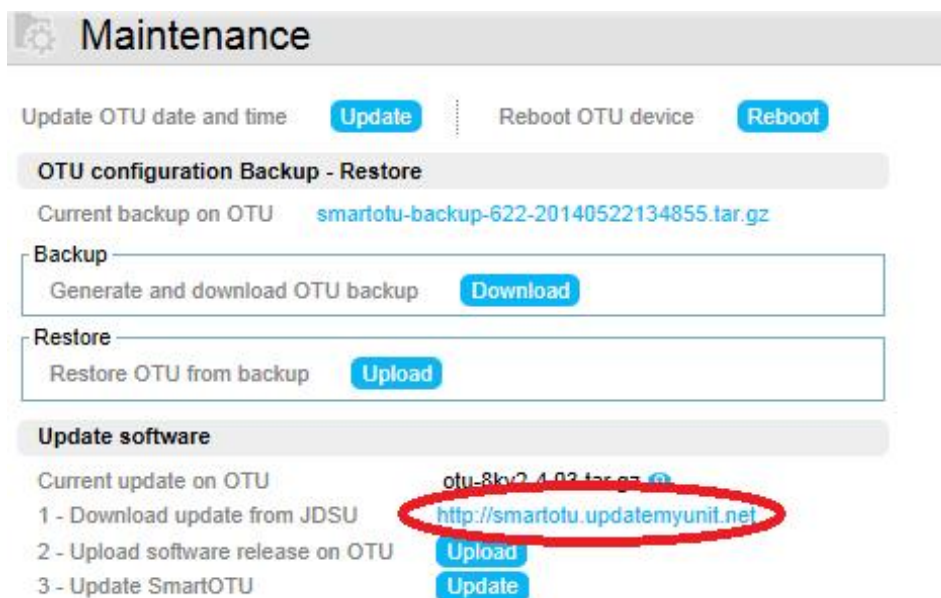
### 8.1 Update SmartOTU date-time

To update the OTU date-time, click the update button.

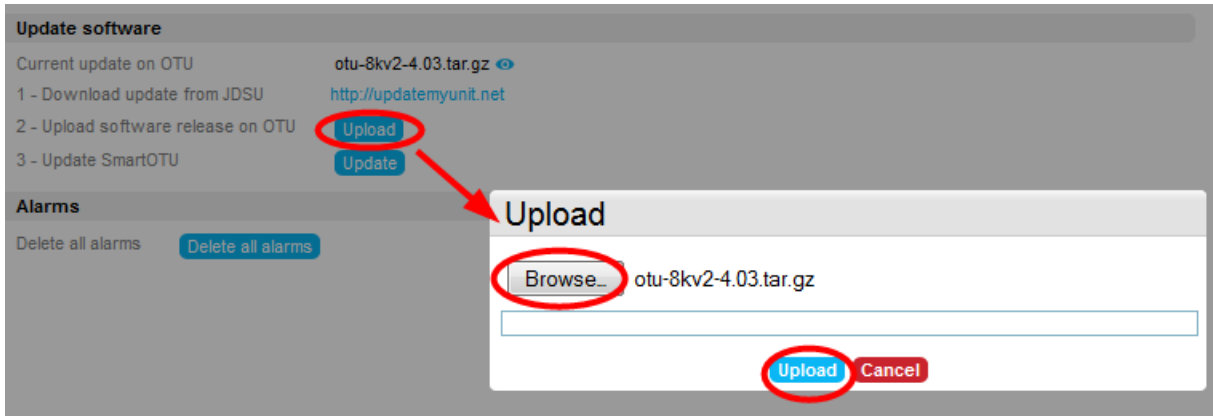


### 8.2 Software update

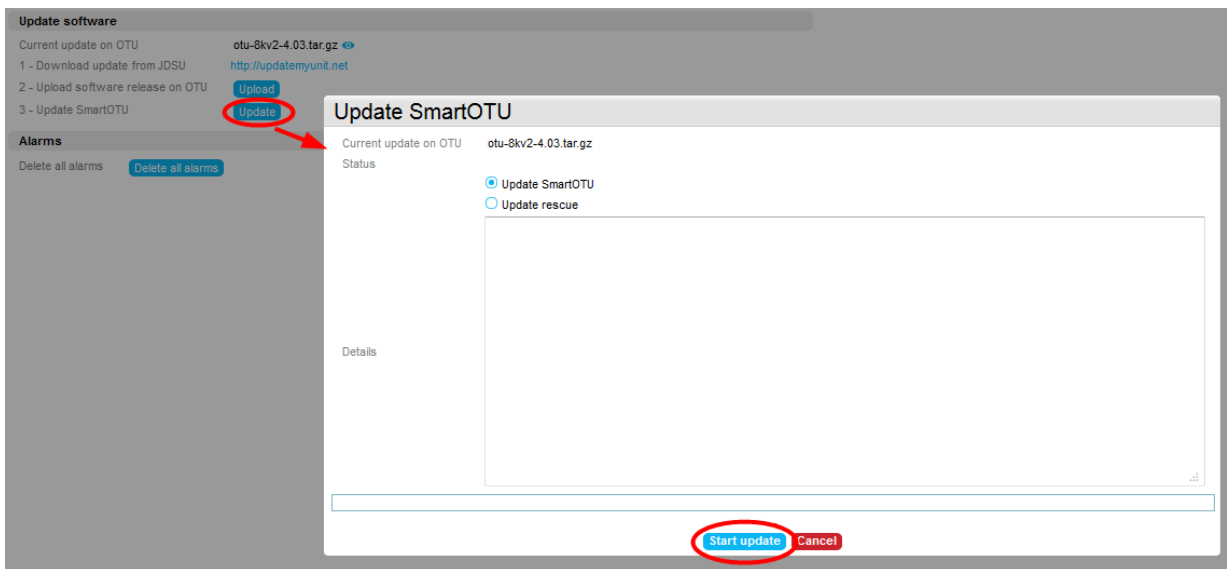
1 - From the Software update section of the Maintenance screen, download on your PC the new SmartOTU release from JDSU <http://smartotu.updatemyunit.net> site.



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



3 - When the upload is completed, close the upload dialog and select **Update** button. You are asked to start the update. Select the **Start update** button.

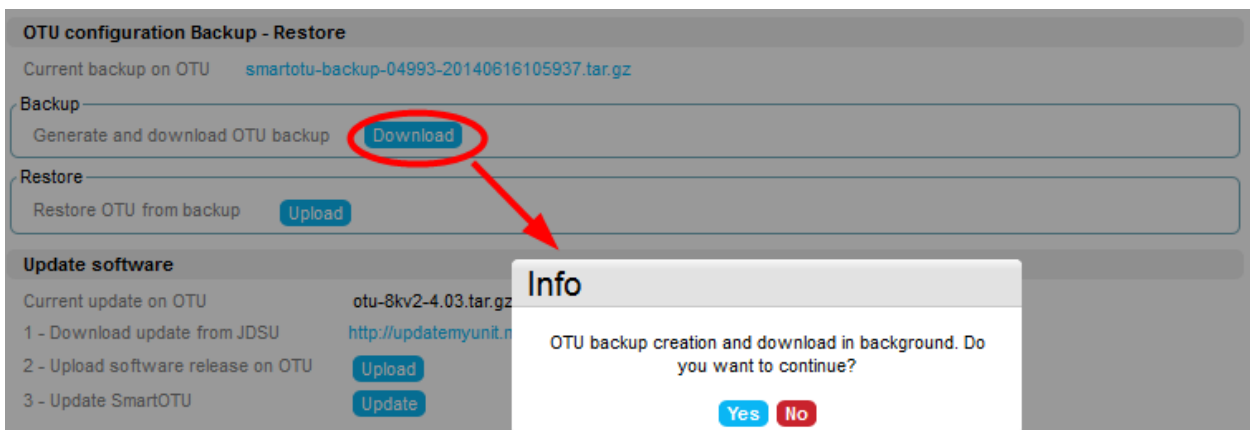


The OTU start the update and will reboot at the end of the update.

### 8.3 SmartOTU Configuration backup

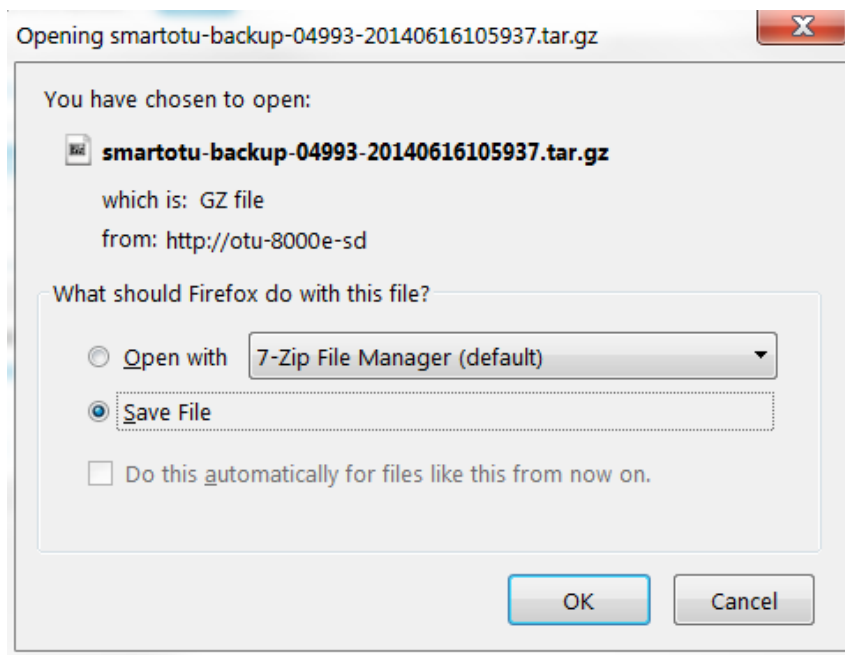
The full configuration of SmartOTU is backed up: monitoring setup, Email ,SMS, SNMP, Setup, Passwords...

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



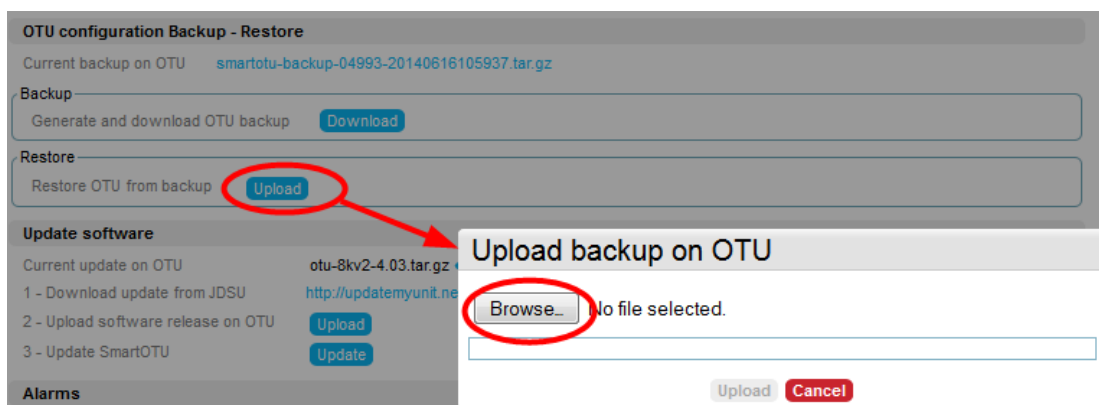
You are asked to confirm the generation of the backup of the SmartOTU configuration (monitoring tests, full SmartOTU setup).

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

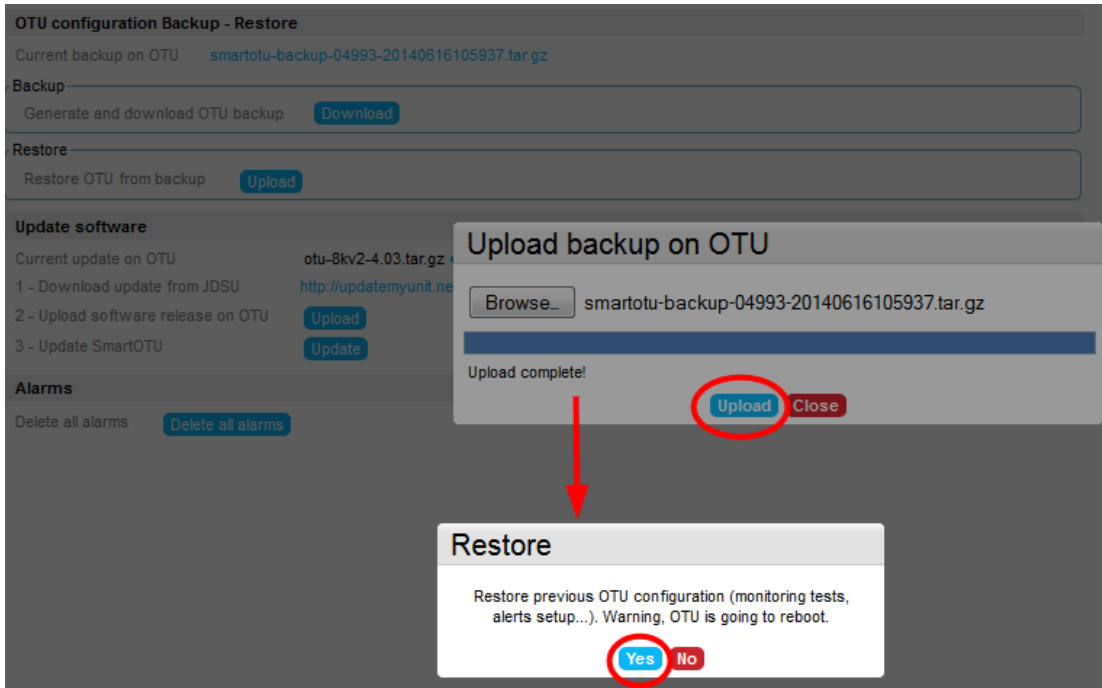


## 8.4 SmartOTU configuration restore

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



Choose the backup file you want to restore on OTU (**Browse** button) and click the **Upload** button. When the upload is finished, you must confirm the start of the restoration of the SmartOTU and the reboot.

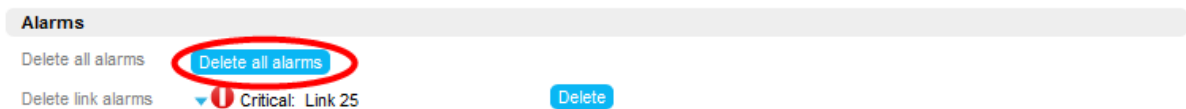


## 8.5 Alarms

### i. Clear all alarms to force a full resynchro

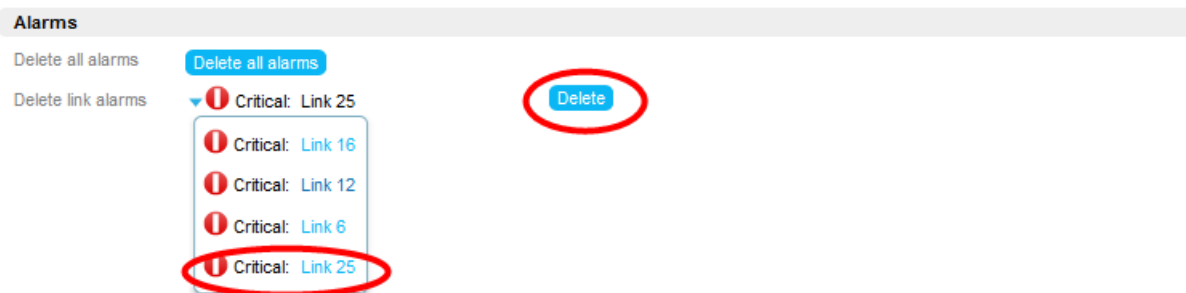
From the Alarms section of the Maintenance, select **Delete all alarms**. All OTU alarms will be removed. Optical alarms will be re-generated by monitoring.

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



### ii. Individually clear an alarm to force its detection

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



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



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