

SentiLink  
User Manual V 1.0



User manual update log

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# 1. Introduction

SentiLink is a computer application whose exclusive purpose is to connect one or more Sentinel panels over an IP network for the remote configuration, syncing and viewing of test logs/errors. If enabled, the SentiLink application can email test reports and errors that may occur on any of the Sentinel panels.

## 1.1. Features

- Can link a total of up to 15 Sentinel panels
- Shows live status of a Sentinel panel
- Synchronises test logs from linked Sentinel panel and stores them in local database
- Allows the user to view and export historic logs from local database
- Sends out test reports and error notifications of each of the linked Sentinel panel to a maximum of 4 Email recipients
- Supports end to end encrypted connection with the Sentinel panel
- Provides functionality to remotely configure Sentinel Panel
  - To setup automatic tests
  - To initiate manual test
  - To request results of duration, function and status tests
  - To change the name of individual or multiple luminaire names
  - To view detail status of an individual luminaire

## 2. Network Setup

The SentiLink application communicates with a Sentinel panel over an IP network with 2 possible networking scenarios.

1. The computer hosting the SentiLink application and Sentinel panel resides locally and communicates using a private IP network
2. The computer hosting the SentiLink application and Sentinel panel resides remotely from each other and communicate using a public IP network (internet)

For further details on how to setup networking connection refer to appendix section 6.2

### 2.1. Private Network Requirement

If operating in a private network, setup the Sentinel panel\* as follows:

- Assign a unique static IP address (typically starts with 192.xxx, 172.xxx, 10.xxx) to the Sentinel panel
- Keep the “SentiLink Server Port No.” of each Sentinel panel to the default 50,000
- Use the IP address and the port no. to link the Sentinel panel with the SentiLink application by referring to section 3.1.1

### 2.2. Public Network Requirement

If operating over public network (internet) setup Sentinel panel\* as follows:

- Assign a unique static IP address (typically starts with 192.xxx, 172.xxx, 10.xxx) to the Sentinel panel
- Assign a unique “SentiLink Server Port No” to each assigned IP address
- To direct public network traffic to the Sentinel panel, configure the router/modem port forwarding using IP address and port no. as created from the above steps
- Use the IP address and port no. from above steps to link Sentinel panel with SentiLink application by referring to section 3.1.1

\*For details on how to setup network configuration of Sentinel refer to user manual of Sentinel panel

## 3. Configuring SentiLink

### 3.1. Remote Panel Configuration

#### 3.1.1. Add New Panel

To add a Sentinel panel to SentiLink, perform steps 1 to 3 as shown in Figure 1

- In the SentiLink application, on the menu bar select View > Settings option
- In the “Remote Panels” tab in the provided fields, insert IP address, select port no, type the password of the Sentinel panel and a name for the building location. The building location name entered here is used to group one or more Sentinel panels together in a ‘treeview’ which is available on SentiLink’s main window.
- If the Sentinel panel is to be synchronised right away, check the Monitor tick box
- Press the “Add New Panel” button
- Confirmation of addition will be displayed in message box, and a new entry will be added to the list.

Note: During the addition of a new panel, the remote panel’s unique MAC address is retrieved and checked against any existing panels. A new entry will only be added if a panel with the same MAC address is not already in use.

#### 3.1.2. Remove Existing Panel

To remove an existing panel from list, perform steps 4 and 5 as shown in Figure 1

- In the SentiLink application on menu bar select View > Settings option
- In the “Remote Panels” tab and from the provided list, select the required panel that is to be removed
- Press “Remove Panel” button, confirmation of removal will be displayed in message box

Note: Removing existing panel will NOT remove any past synced test log from the local database.





### 3.1.3. Edit Configuration of Existing Panel

To edit the configuration of an existing panel, perform steps 1 to 4 shown in Figure 2

- In the SentiLink application on menu bar select View > Settings option
- In the “Remote Panels” tab select the required panel entry from list and press “Edit Selection” button, this will copy the editable data to the field above
- Make the required changes to the panel’s configuration, and enter the password of the remote panel
- Press “Apply Changes” button
- Confirmation of update will be displayed in message box

Note: During updating process the remote panel’s unique MAC address and panel location is retrieved and checked against existing panel. The entry will only be updated if its MAC address matches the existing one.



## 3.2. Email Settings Configuration

To enable the SentiLink application to send out emails of test report and errors, the application requires details of the sender's account from the SMTP mail service provider. It is advisable to create a new mail account from the SMTP mail service provider for this purpose, so that this sender's account will be used to e-mail the intended recipients.

To set email configuration follow steps 1 to 5 as shown in Figure 3

- In the SentiLink application on the menu bar select View > Settings option > "Email Configuration" tab
- In the mailbox settings group box enter details of sender's account. "SMTP Server" and "SMTP Port No" which is provided by mail service provider
- In the recipients group box enter one or more recipients e-mail addresses
- To enable/disable mail sending select the "On"/"Off" radio button
- Optionally check entered mail settings by pressing "Send Test Mail" button to send test mail to entered recipients
- Finally press "Apply" button to commit changes

Note: Mails sent by SentiLink application are forwarded to SMTP mail server and inbox of sender's mail account is not monitored; therefore it is crucial to enter recipients address correctly so that "Invalid Recipient" error mail from mail server does not get sent to sender. It is advisable to use the send test mail function after any changes to mail settings to confirm changes.

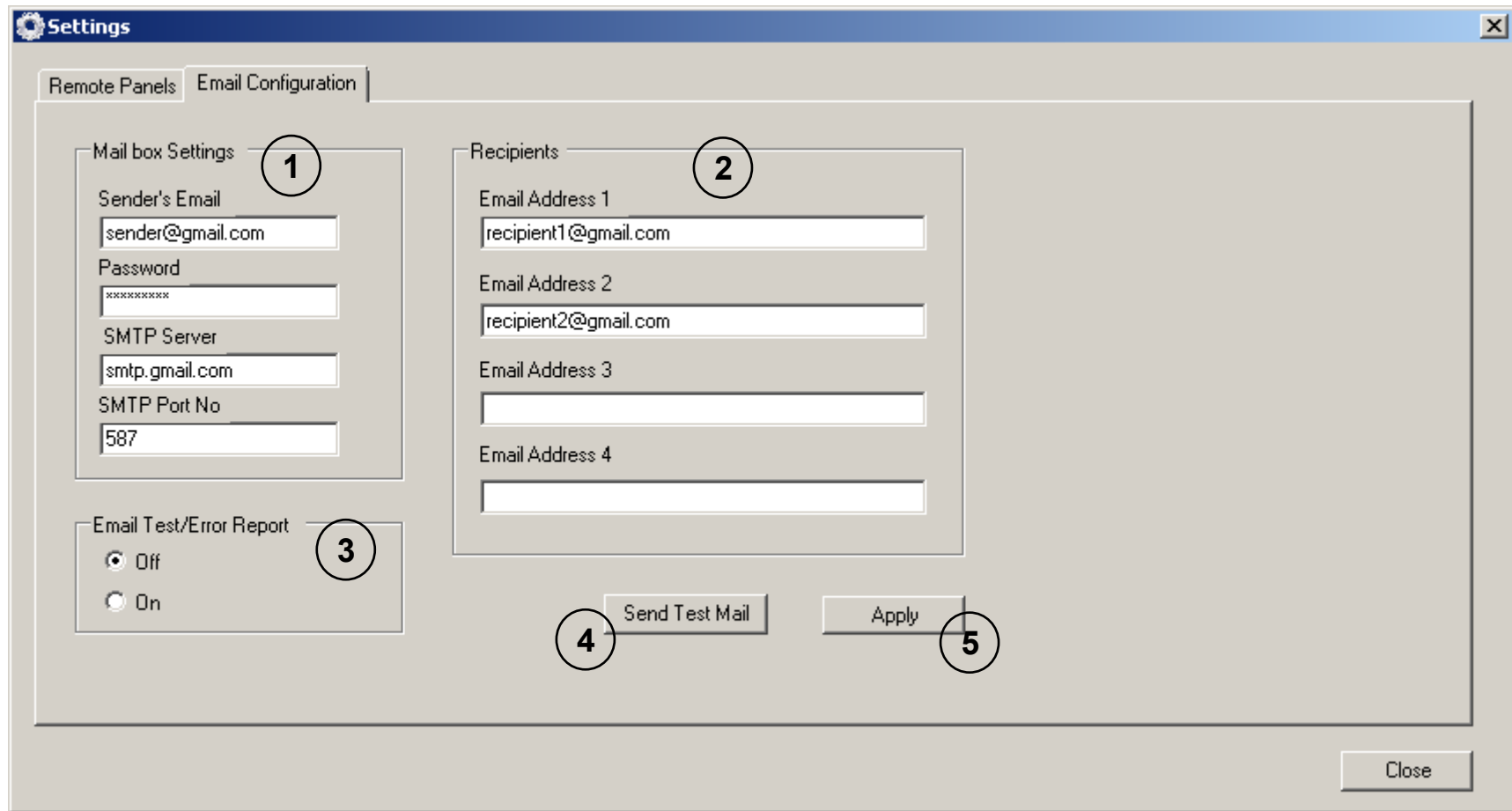


Figure 3 Set Email Configuration

## 4. Access Remote Sentinel Panel

Each Sentinel panel linked in SentiLink application using section 3.1 can be accessed remotely from main window of the SentiLink application. The following Figure 4 shows an overview of the main window of the SentiLink application.

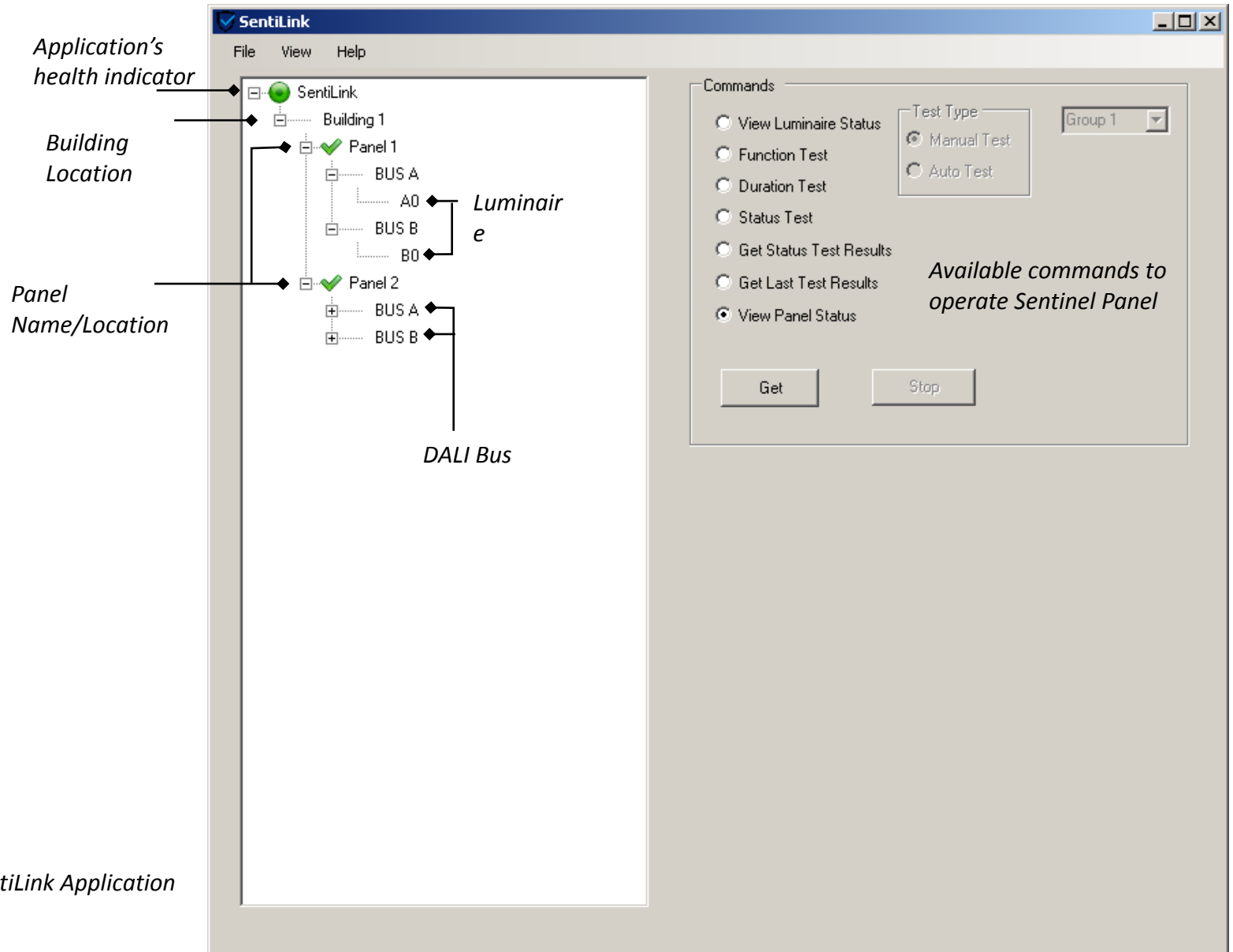









Figure 4 Main window of SentiLink Application

Each Sentinel panel will reflect its current status using the icons listed in following Table 1

Sentinel Panel Status Icon	Description	Action to take
	Sentinel panel is unconnected	Check network connectivity with Sentinel panel
	Sentinel panel is connection or syncing	Wait for panel to connect or finish syncing process
	Sentinel panel is healthy (has no errors)	None(Ideal status)
	Sentinel panel is unhealthy (has one or more errors)	Find out error(s) of Sentinel panel using section 4.2
	Sentinel panel's authentication failed	Confirm/Update remote Sentinel panel's password using section 3.1.3

*Table 1 Status of Sentinel Panel*

To reflect the ability of SentiLink application to send emails (if enabled) one of two following icons are used

SentiLink Application status Icon	Description	Action to take
	SentiLink application is healthy	None(Ideal status)
	SentiLink application is unable to send emails	Check email configuration using section 3.2

*Table 2 Status of SentiLink application*

Upon start up the SentiLink application shows the main window shown in Figure 4, this can be switched to show minimum information by toggling to status view window.

To switch to status view window, on the menu bar select “View > Switch To Status Window” option. Application will then show status window shown in Figure 5, to switch it back to main window press the “Switch To Main Window” button.





## 4.1. Configure Sentinel Panel

SentiLink application allows the setup of automatic Function tests and Duration tests as well as starting manual Function/Duration/Status tests of the remote Sentinel panel.

### 4.1.1. Setup Automatic Function Test

To setup an automatic Function test for a remote Sentinel panel perform following steps shown in Figure 6

- On the main window of the SentiLink application select “Function Test” command
- In the Test Type option select the “Auto Test” radio button
- Highlight the required Sentinel panel in the treeview widget
- Press “Setup” button
- In the date and time selection dialog box select the required date and time. Optionally acquire the date and time current settings of remote panel by pressing “Get Current Settings”
- Select new state of test On/Off and press “Apply” button
- Result of setup will be shown command progress dialog box

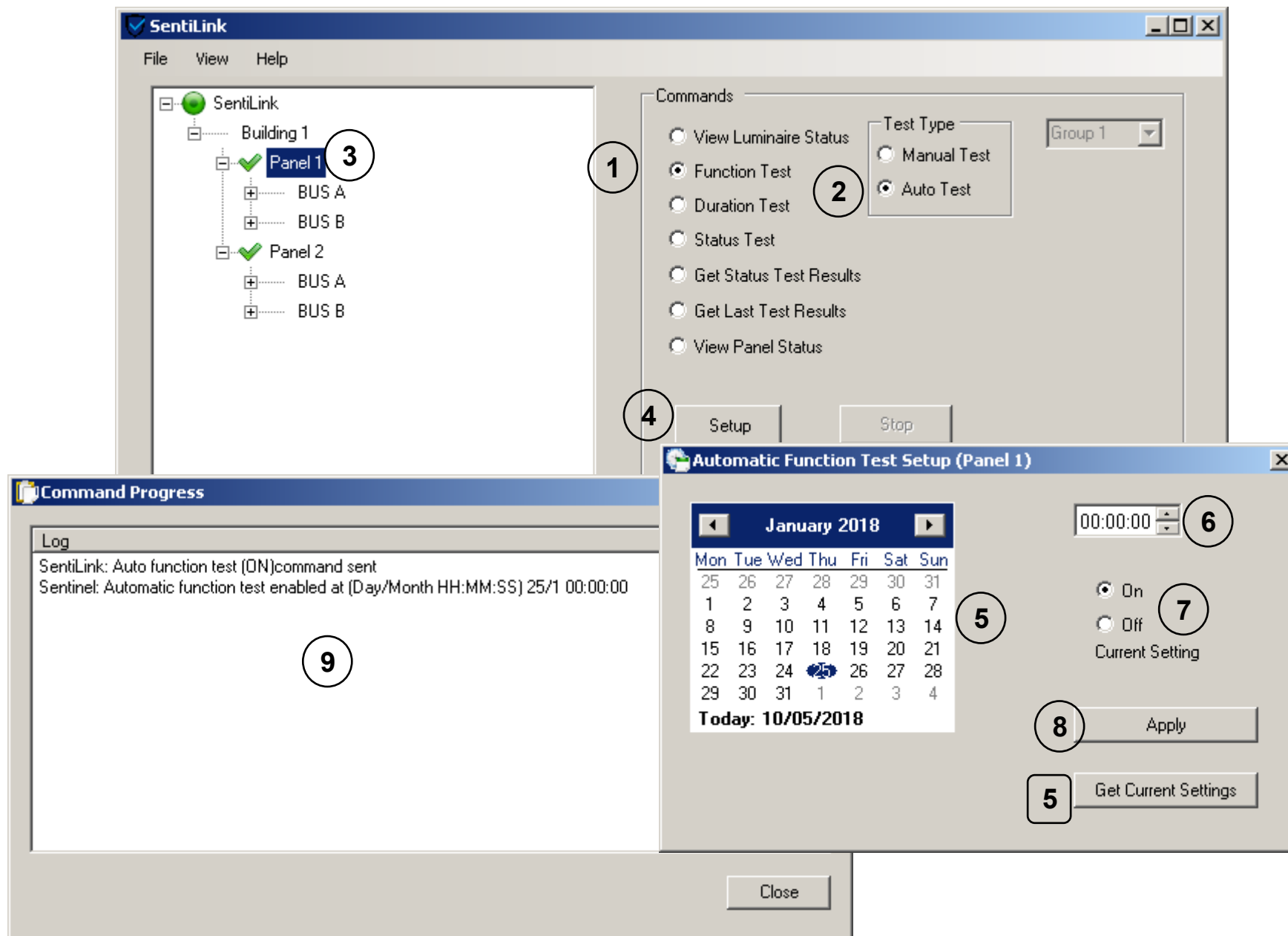


Figure 6 Automatic Function Test Setup

#### 4.1.2. Setup Automatic Duration test

The automatic duration test for each Sentinel panel can be split into 4 possible groups thereby avoiding initiation of a duration test for all luminaire at same time. It is responsibility of configuration engineer to select (if possible) the duration test time when the premises are not occupied and assign physically adjacent luminaires into different groups.

To setup an automatic Duration test of a remote Sentinel panel perform following steps shown in Figure 7

- On the main window of the SentiLink application select “Duration Test” command
- In Test Type option select “Auto Test” radio button
- Select one of 4 possible group selection from the drop down menu
- Check required luminaire(s) to assign to a selected group
- Highlight required Sentinel panel in treeview widget
- Press “Setup” button
- In the date and time selection dialog box select required date and time. Optionally acquire the current date and time settings of remote panel by pressing “Get Current Settings”
- Select new state of the test On/Off and press “Apply” button
- Result of the setup will be shown command progress dialog box

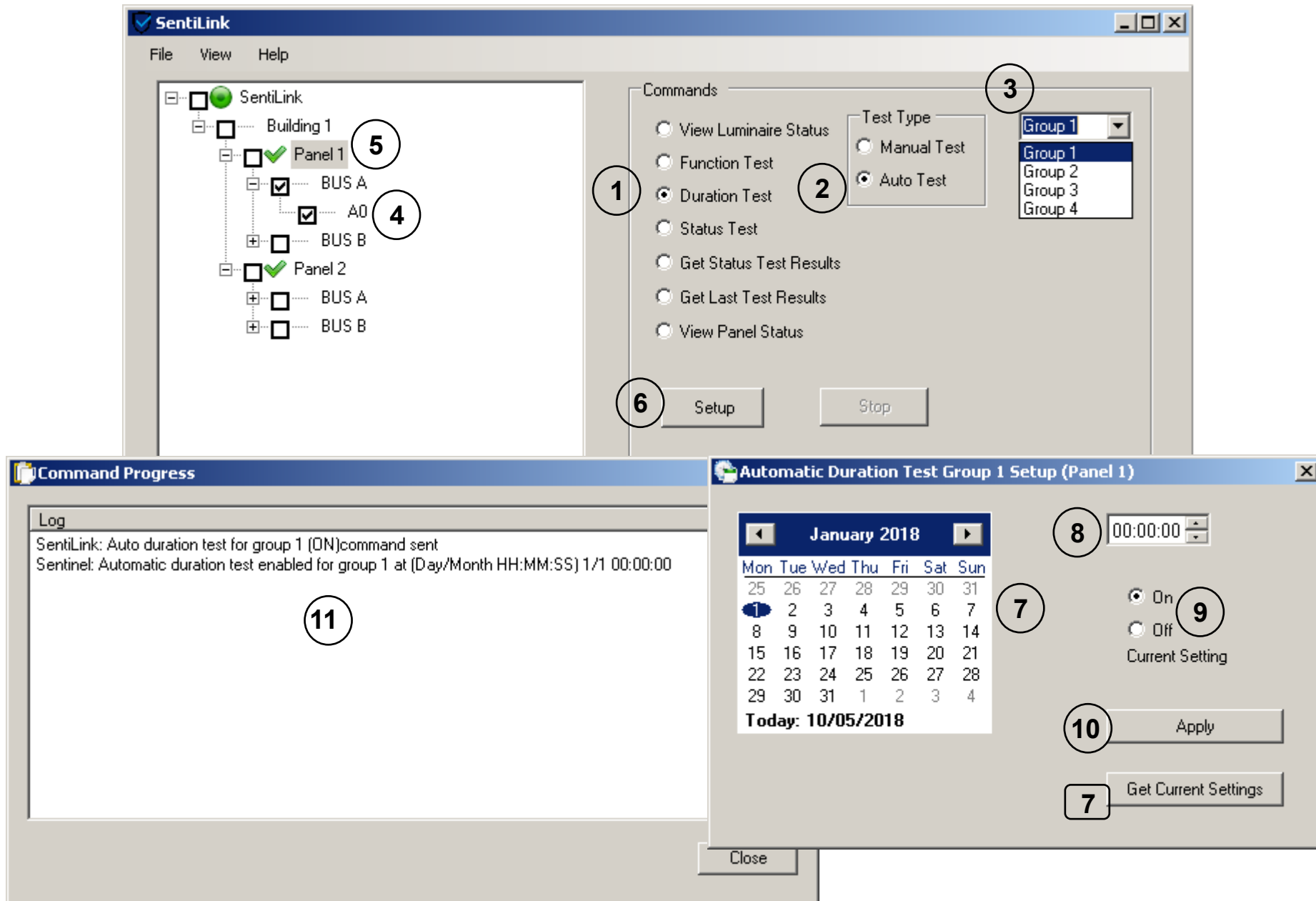


Figure 7 Automatic Duration Test Setup

### 4.1.3. Start Manual Function Test

To start manual Function test on remote Sentinel panel perform following steps shown in Figure 8

- On the main window of SentiLink application select the “Function Test” command
- In the Test Type option select the “Manual Test” radio button
- Check the required luminaire(s) required. **Note:** Selection of all Sentinel panels will be considered to start test simultaneously
- Press “Start” button
- Result of the command will be shown command progress dialog box

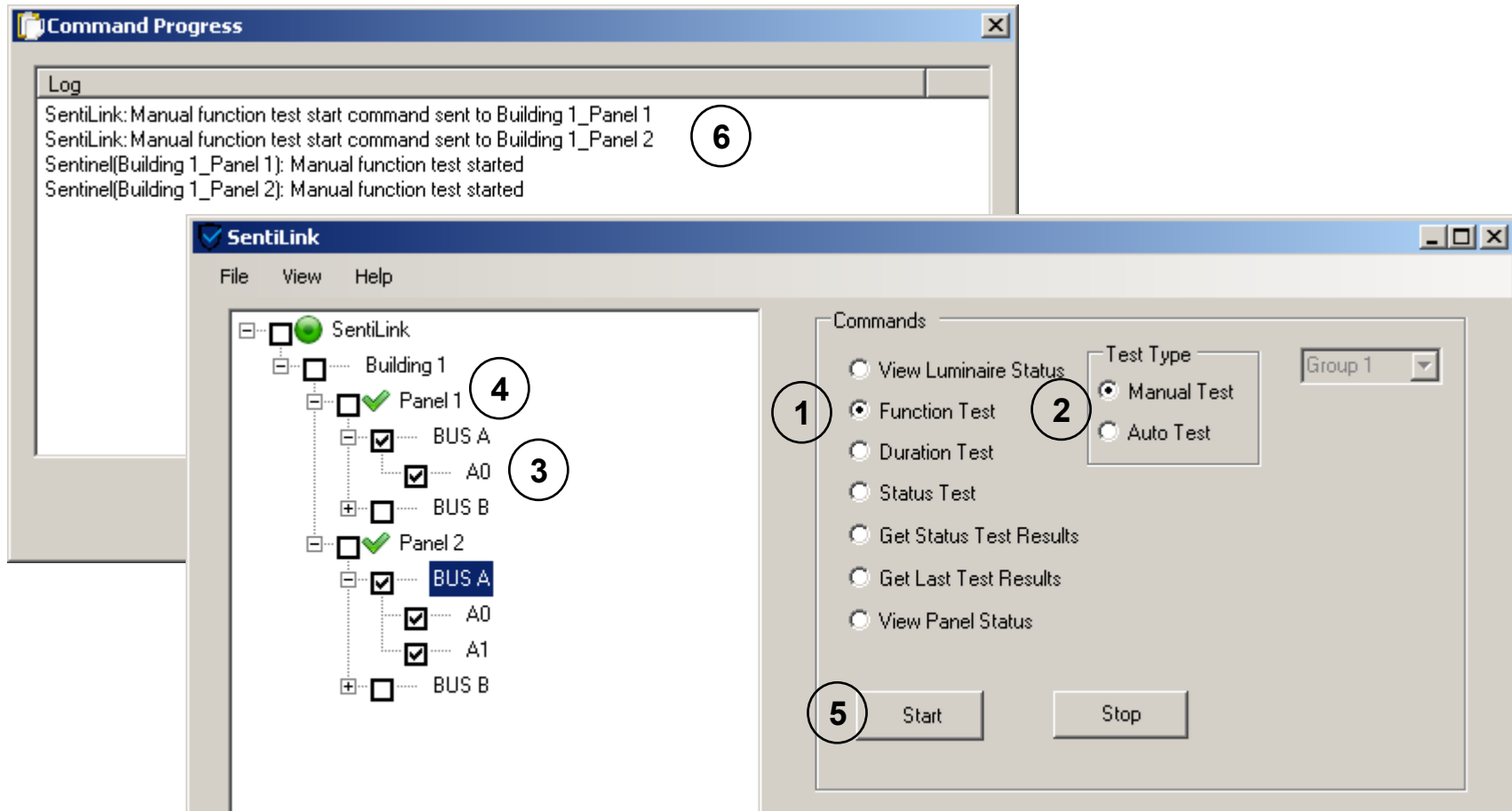


Figure 8 Manual Function Test Start

#### 4.1.4. Stop Manual Function test

To stop a manual Function test of a remote Sentinel panel, perform following steps shown in Figure 9

- On the main window of SentiLink application select the “Function Test” command
- In the Test Type option select the “Manual Test” radio button
- Highlight the required Sentinel panel in the treeview widget
- Press “Stop” button \*
- Result of the command will be shown command progress dialog box

\*Stop command will stop manual function test only if it was started earlier and test will be stopped for all luminaire on both buses (selection has no effect)

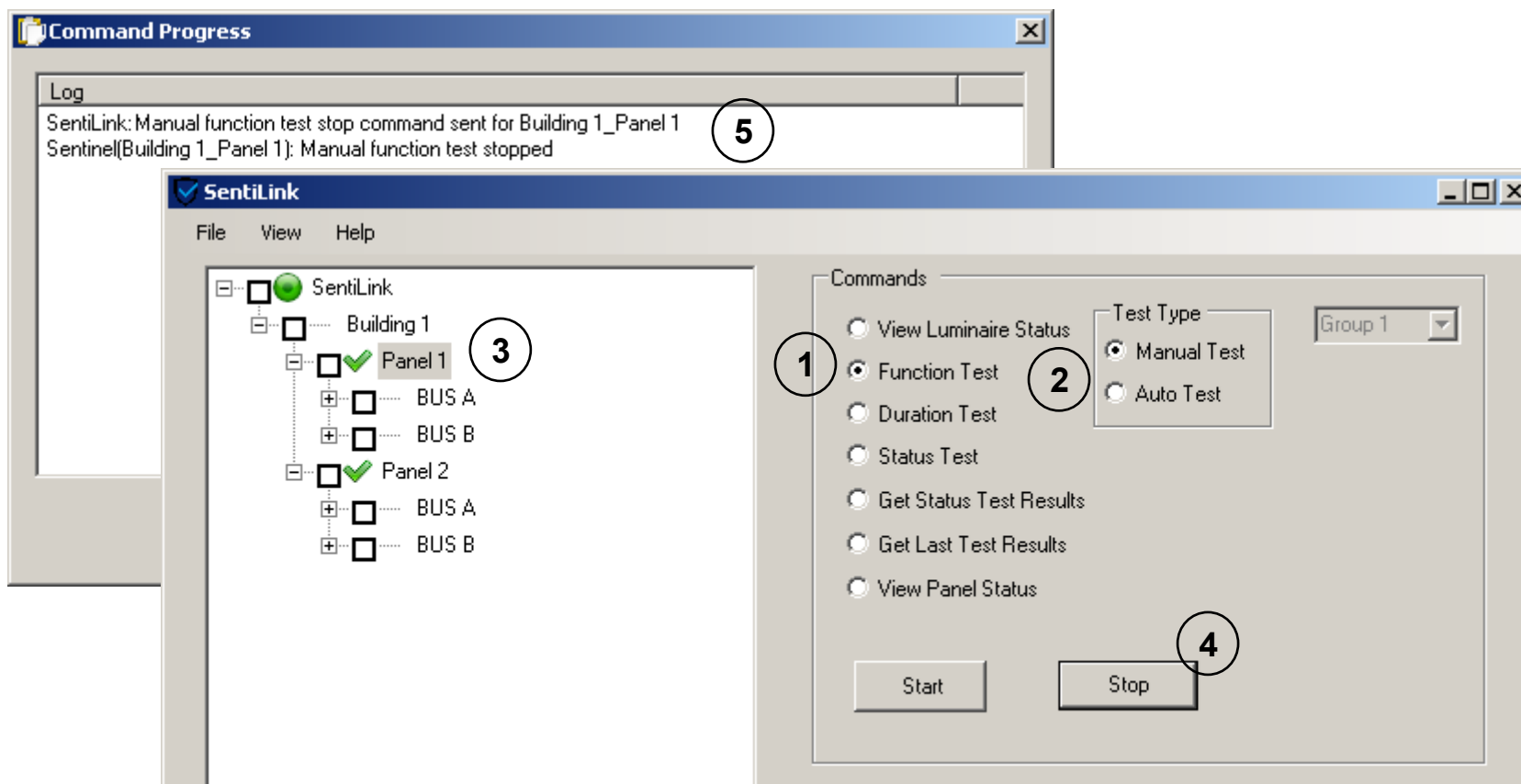


Figure 9 Manual Function Test Stop

#### 4.1.5. Start Manual Duration Test

To start a manual Duration test on a remote Sentinel panel, perform following steps shown in Figure 10

- On the main window of SentiLink application select the “Duration Test” command
- In the Test Type option select the “Manual Test” radio button
- Check the required luminaire(s)
- Highlight the required Sentinel panel in the treeview widget
- Press “Start” button
- Result of the command will be shown command progress dialog box

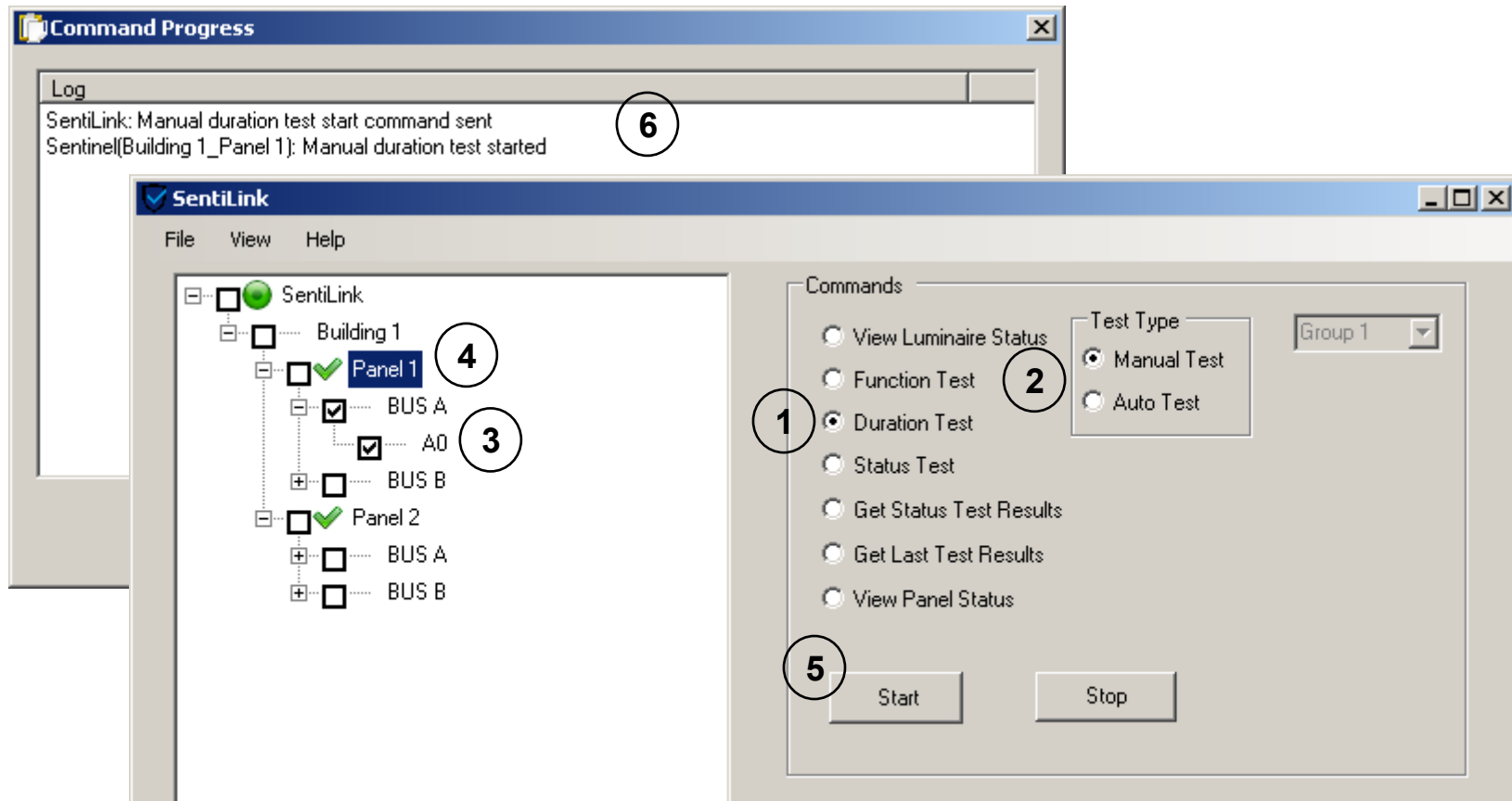


Figure 10 Manual Duration Test Start

#### 4.1.6. Stop Manual Duration test

To stop a manual Duration test of a remote Sentinel panel perform following steps shown in Figure 11

- On the main window of the SentiLink application select the “Duration Test” command
- In the Test Type option select the “Manual Test” radio button
- Highlight the required Sentinel panel in the treeview widget
- Press “Stop” button \*
- Result of the command will be shown command progress dialog box

\*Stop command will stop manual duration test only if it was started earlier and test will be stopped for all luminaire on both buses (selection has no effect)

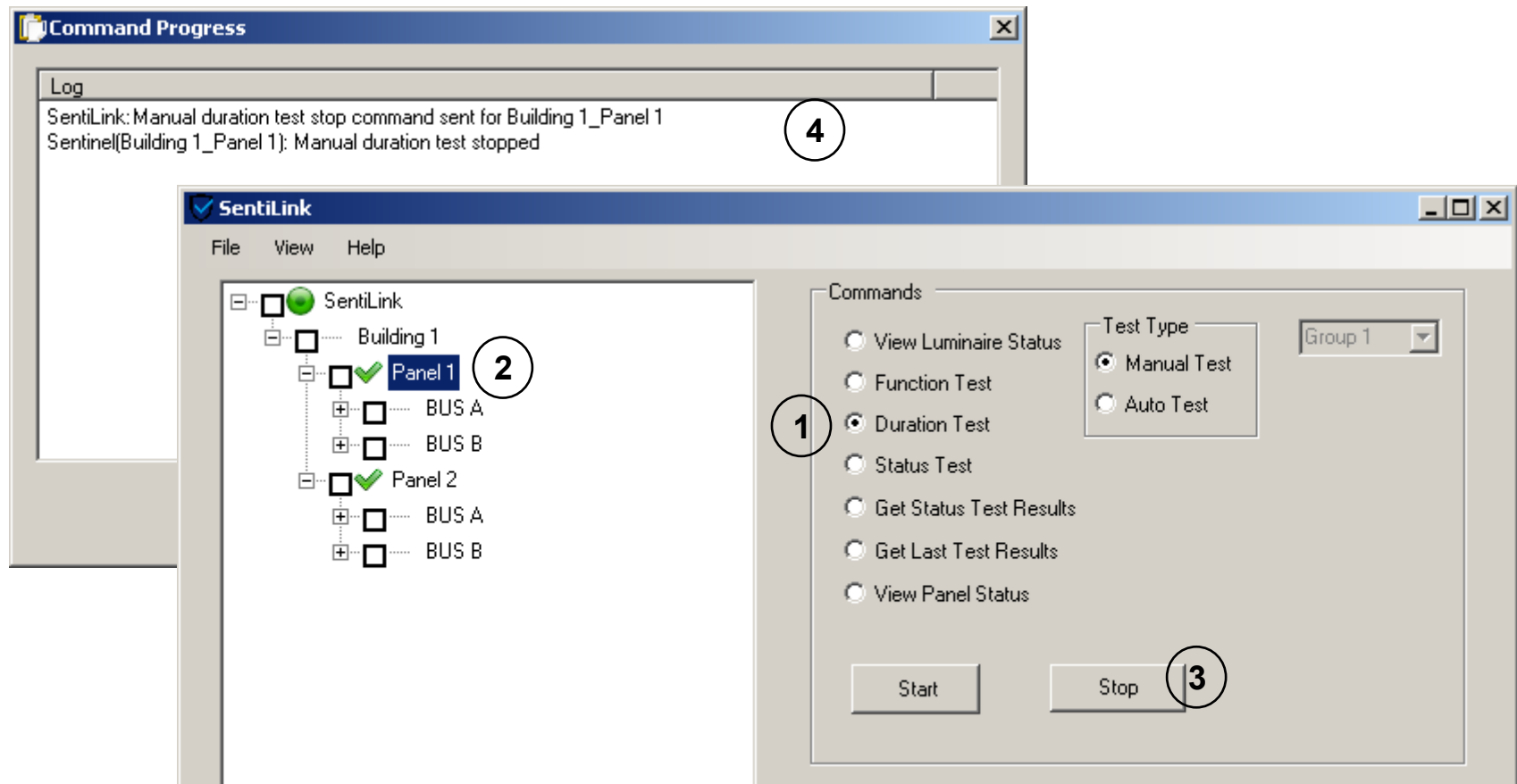


Figure 11 Manual Duration Test Stop



### 4.1.7. Manual Status Test Start

To start a manual Status test on a remote Sentinel panel perform following steps shown in Figure 12

- On the main window of the SentiLink application select “Status Test” command
- Highlight required the Sentinel panel in the treeview widget
- Press “Start” button
- Result of the command will be shown command progress dialog box

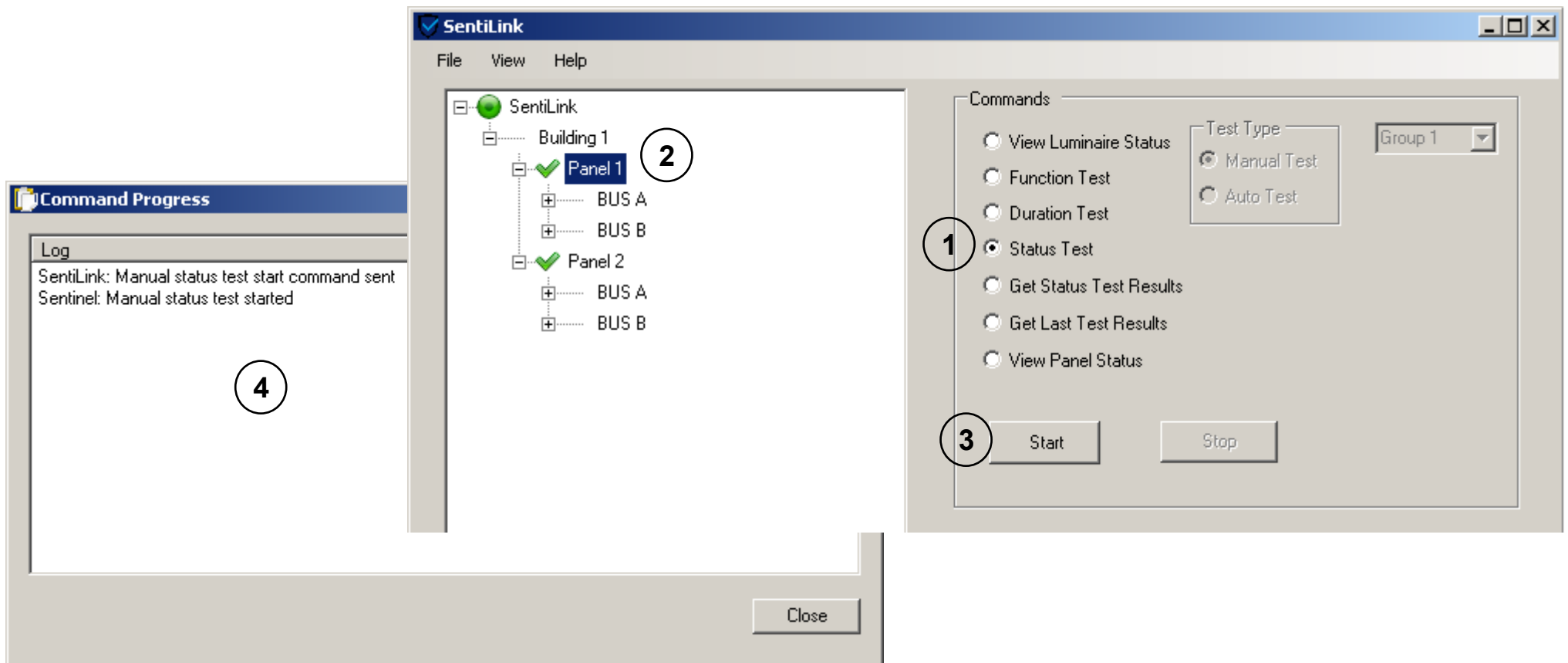


Figure 12 Manual Status Test Start

#### 4.1.8. Set Individual Luminaire Name

To set / update the name of an individual luminaire of a remote Sentinel panel perform following steps shown in Figure 13

- Right click on required luminaire and press “Edit Luminaire Name” context menu option
- In the edit box enter/update required luminaire name
- Press “OK” button
- Result of the name update will be shown command progress dialog box
- Updated name will reflect locally on treeview widget

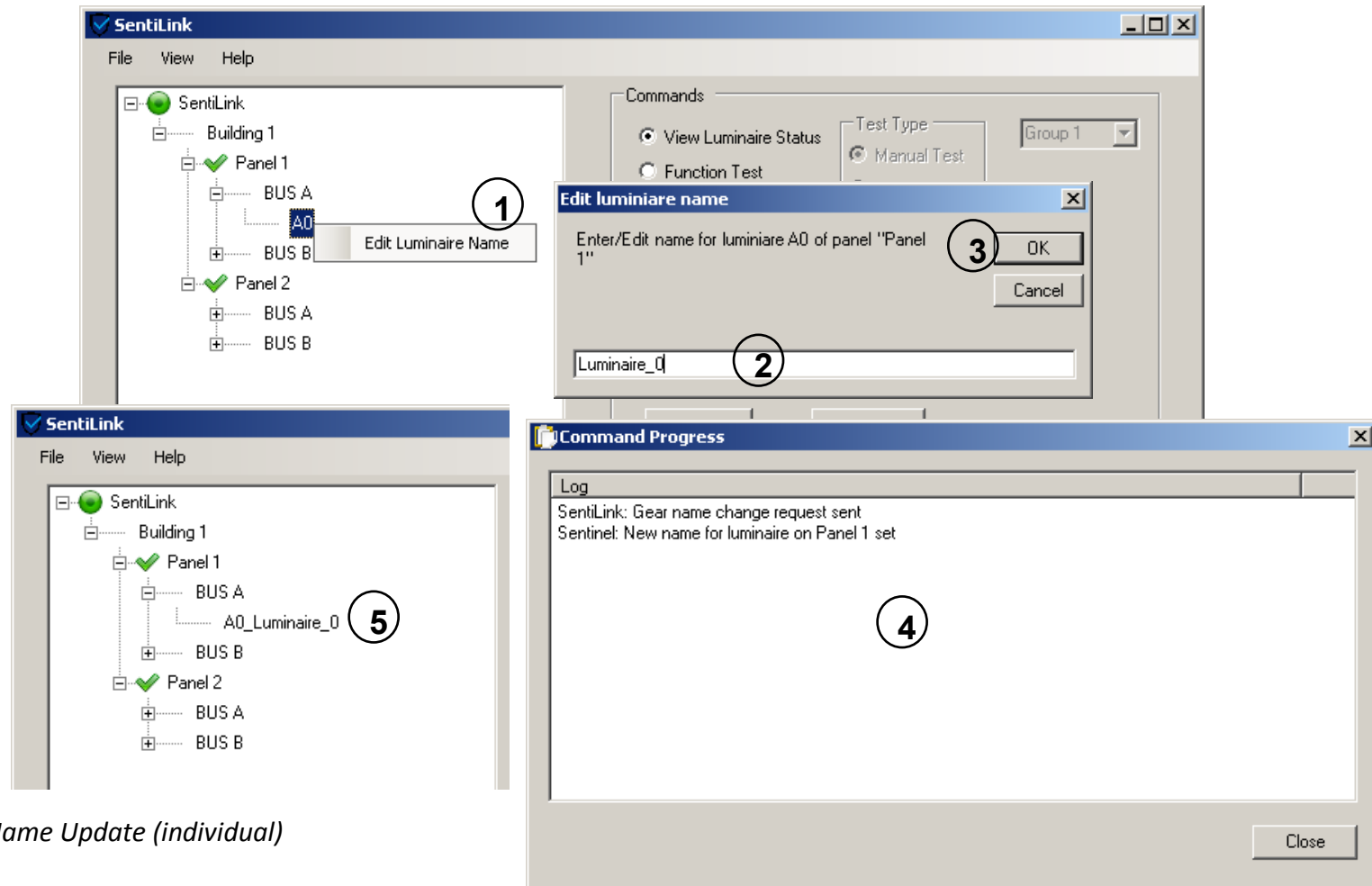


Figure 13 Luminaire Name Update (individual)

#### 4.1.9. Set Bulk Luminaire Names

To set / update names of multiple luminaires of a remote Sentinel panel perform following steps shown in Figure 14

- Right click on required Sentinel panel and select “Import Luminaire Names” context menu option
- Browse and select CSV file filled with required luminaire names \*
- In the newly opened dialog box press “Begin” button to start update process
- Results of updated luminaire will be confirmed successively

\*Format of required CSV file can be found in appendix section 6.1

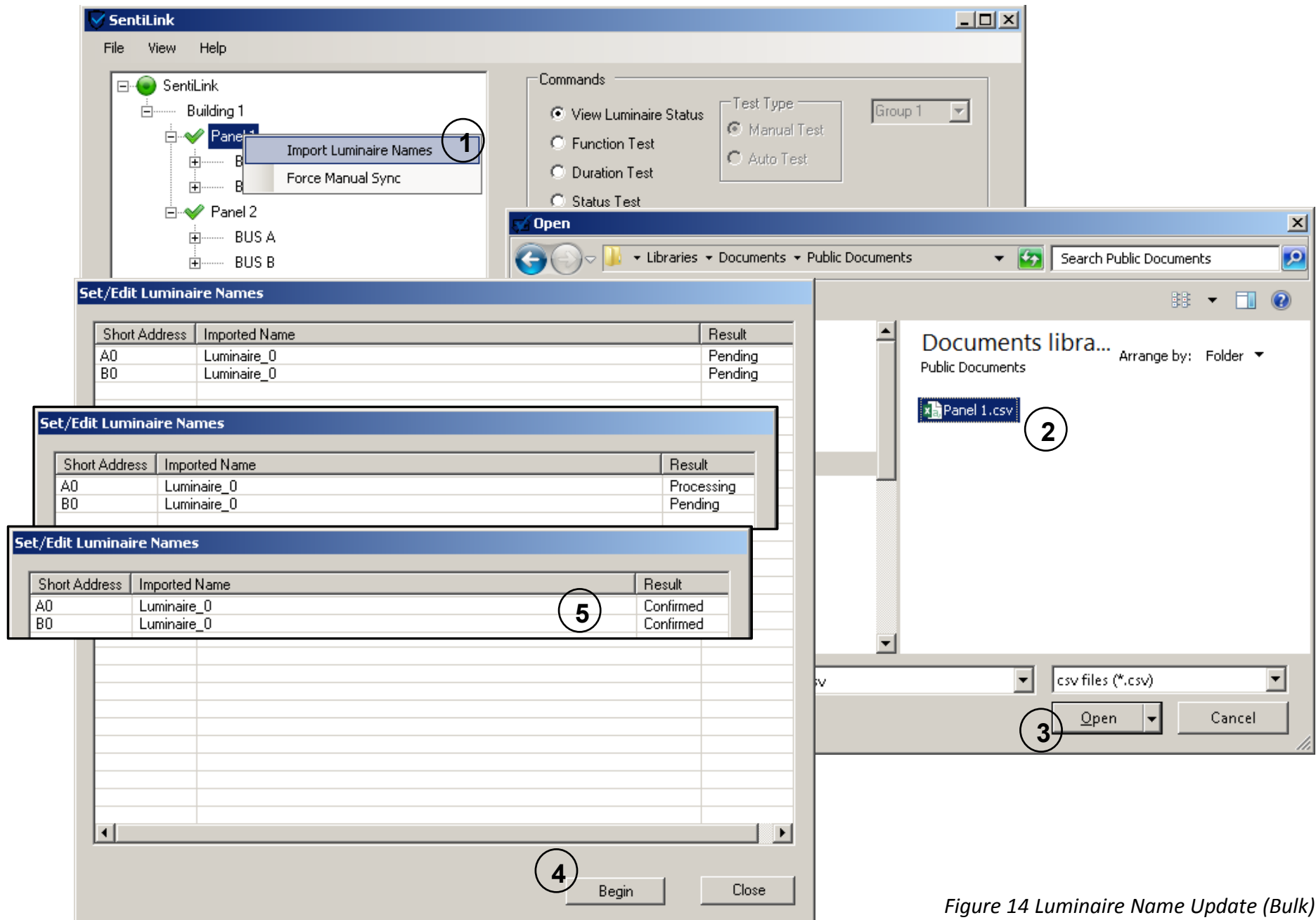


Figure 14 Luminaire Name Update (Bulk)

## 4.2. Monitor Sentinel Panel

The SentiLink application provides commands to view the live status of a remote Sentinel panel. These commands allows the user to view the status of individual luminaires, view status test results, view last standard test results and view the status of the Sentinel panel.

### 4.2.1. View Luminaire Status

To view remote luminaire status perform following steps shown in Figure 15

- In the main window of the SentiLink application select “View Luminaire Status” command
- Highlight required luminaire from treeview widget
- Press “Get” button
- Result of the command will be shown command progress dialog box



#### 4.2.2. View Status Test Results

To view status test results of a Sentinel panel perform following steps shown in Figure 16

- On main window of SentiLink application select “Get Status Test Results” command
- Highlight the required Sentinel panel in the treeview widget
- Press “Get” button
- Status results of selected Sentinel panel will be shown new dialog box





### 4.2.3. View Last Test Results

To view the last test results, perform the following steps shown in Figure 17

- In the main window of the SentiLink application select “Get Last Test Results” command
- Highlight the required Sentinel panel in the treeview widget
- Press “Get” button
- Results of the last performed test for the selected Sentinel panel will be shown a new dialog box
- To view further details of individual luminaire, highlight required luminaire and press “View Details” button on the dialog box
- Details of luminaire status recorded after finishing the test will be shown in new dialog box

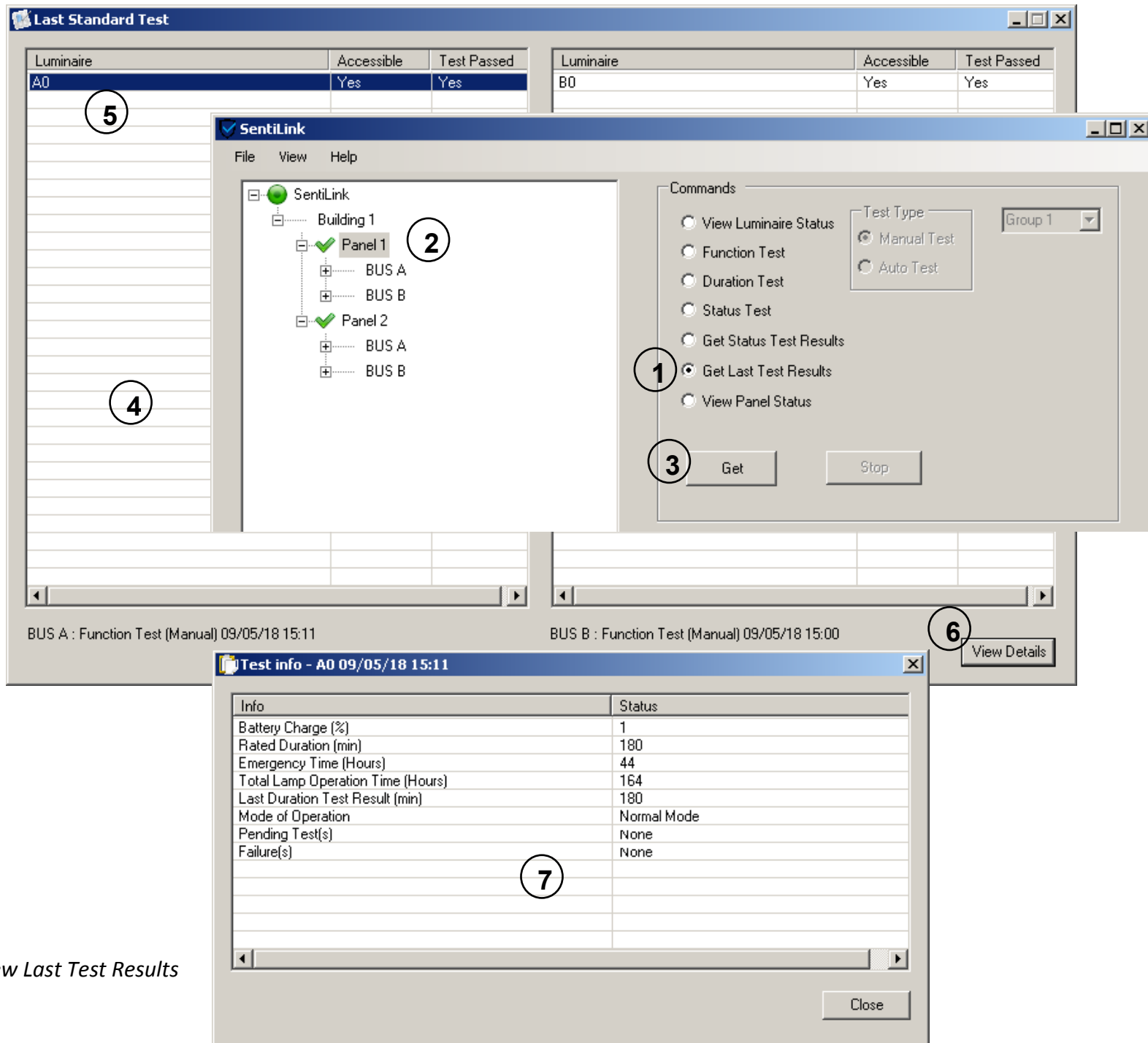


Figure 17 View Last Test Results

#### 4.2.4. View Sentinel Panel Status

To view the status of a Sentinel Panel perform following steps shown in Figure 18

- In the main window of SentiLink application select the “View Panel Status” command
- Highlight the required Sentinel panel in the treeview widget
- Press “Get” button
- Results of the last performed test for selected Sentinel panel will be shown in a new dialog box

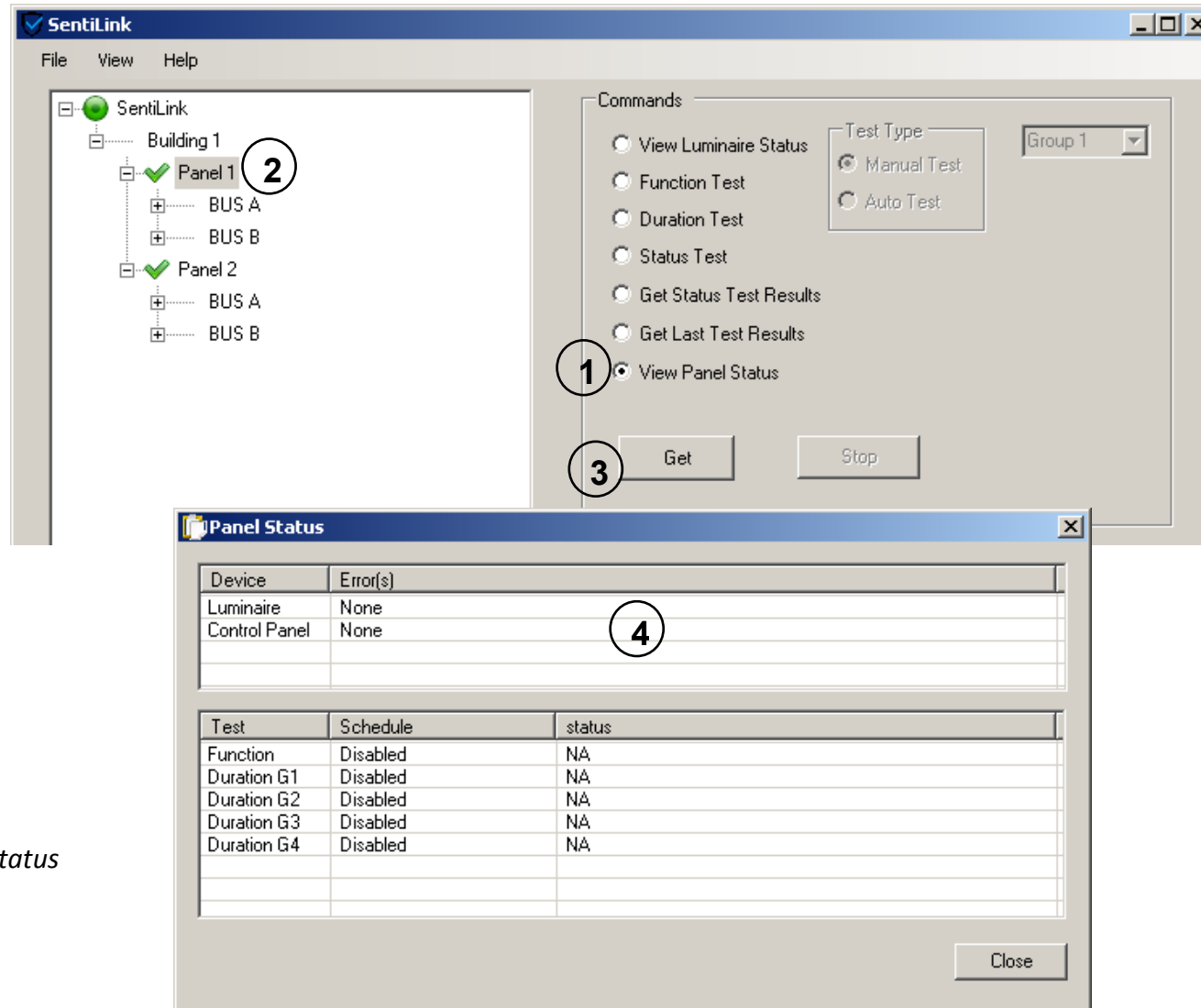


Figure 18 Sentinel Panel Status

## 5. Historic Test Logs

Test logs both automatic and manual are synced from remote Sentinel panel whenever tests are completed at the remote site, and are stored in a local SQL database on the computer. All past synced test logs will remain in the local database even if the Sentinel panel is removed or set to not monitor in settings of the SentiLink application. Historic test logs are available for browsing and exporting as spreadsheet file at any time.

All historic synced test logs will show following information of luminaire

- Short address
- Assigned luminaire name, present at that instance of time
- Test results
- Snapshot of important luminaire data (if reachable)

### 5.1. View Test Logs

To view historic logs perform steps shown in Figure 19

- From the menu bar of the SentiLink application select “View > Historic Logs”,
- Select the required Sentinel panel from “Panel” drop down menu. If there are no logs synced the dropdown menu will not be populated.
- From the “List of Test Logs” table select the required test \*
- Details of selected test log will be shown in “Details of Unique Test Log” table\*\*

\* Test logs for DALI BUSA and DALI BUSB of Sentinel panel are displayed separately, thus for same timestamp there can be two entries in the “List of Test Logs” table. Selecting one BUS entry will cause selection (if available) of the complementary BUS automatically; presenting a consolidated list of both DALI buses in the “Details of Unique Test Log” table. Selecting more than 2 tests will cause table in “Details of Unique Test Log” to be cleared.

\*\*In the “Battery Charge” column, if the luminaire has not calculated charge % then battery charge value is shown as blank value.

**Historic Logs**

Panel: **Building 1\_Panel 2** 1

List of Test Logs: Building 1\_Panel 2, Building 1\_Panel 1

**Export Selected Test Logs**   **Export Selected Panel Logs**

**Details of Unique Test Log** 3

Short Address	Luminaire Name	Test Results	Battery charge(%)	Emergency Time (Hrs)	Lamp Op Time(Hrs)	Pending Tests	Failures	Rated Duration(Min)
A0		Passed	100	226	584	None	None	180
A1		Passed	0	181	580	None	None	180
B0		Passed	0	255	856	None	None	180

*Test result(s) of luminaire(s)*

**2**

Time Stamp	Test Type	DALI BUS
09/05/2018 15:01	Function Test(Man)	BUS A
09/05/2018 15:01	Function Test(Man)	BUS B
09/05/2018 15:11	Function Test(Man)	BUS A

*Test Type: Function/Duration Test Manual/Auto*

*DALI Bus of test log*

*Test timestamp: When Sentinel panel finished test*

Figure 19 View Historic Test Logs

## 5.2. Export Test Logs

Historic logs can be exported from the local database as xml spreadsheet. In the export process a unique spreadsheet file will be created for each year and each spreadsheet file will contain one or more sheets for each unique test log.

To export historic test logs from a local database perform steps shown in Figure 20

- From menu bar of the SentiLink application select “View > Historic Logs”,
- Select the required Sentinel panel from the “Panel” drop down menu. If there are no logs synced the dropdown menu will not be populated.
- To export an arbitrary selection of test logs \*
  - Select one or more required test log entries from “List of Test Logs” table
  - Press “Export Selected Test Logs” button
- To export all logs from “List of Test Logs” table press “Export Selected Panel Logs”
- In the folder selection box select the folder to export spreadsheet files to, and press Ok. \*\*
- Confirmation of file export result will be shown in message box

\*Arbitrary selection will include (if available) all test logs of the complementary DALI Bus as well.

\*\*File name of spreadsheet file will be in format “BuildingLocation\_PanelLocation\_Year.xml”. In selected folder older files will be over written.

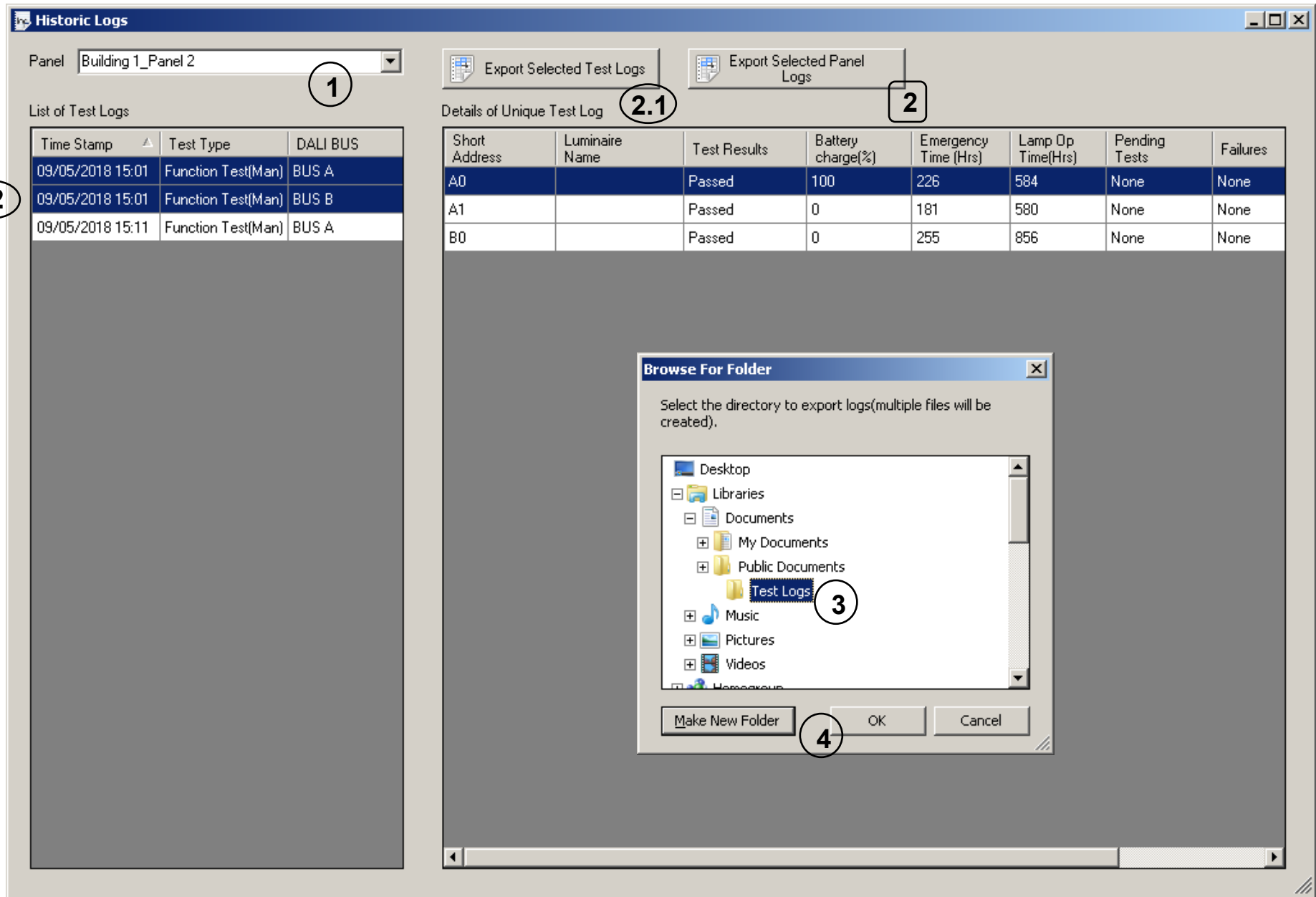


Figure 20 Export Historic Test Logs

## 6. Appendix

### 6.1. CSV File Structure for Importing Name List

For all commissioned luminaires that exists on the Sentinel panel, the respective short addresses must be listed (including for non-emergency luminaire) in the first column in ascending order and having the format of An/Bn. Where A/B letter represents prefix for the bus and n represents luminaire number between 0-63. E.g. A0, B0, A10, B63 etc.

Assigned name length of luminaire must be  $\leq 25$  characters and the permitted characters are A-Z, a-z, 0-1, ' ', '\_' and '/'.

	A	B
1	Short Address(A)	Assigned Names(A)
2	A0	Luminaire_0
3	Short Address(B)	Assigned Names(B)
4	B0	Luminaire_0
5		

Figure 21 File Structure for Importing Name List of Luminaires

### 6.2. Network Topology

The following Figure 22 shows a typical network setup where the Sentinel panel and the SentiLink application resides locally, while Figure 23 shows typical network setup where the Sentinel panel and the SentiLink application resides remotely.

Wire connection legends for Figure 22 and Figure 23

===== DALI bus: 2 Core / 5 Core, Max 300 meters

===== CAT5 : 4+ Cores, Max 100 meters, RJ45 Terminated

————— Fibre / ADSL line



# Building 1

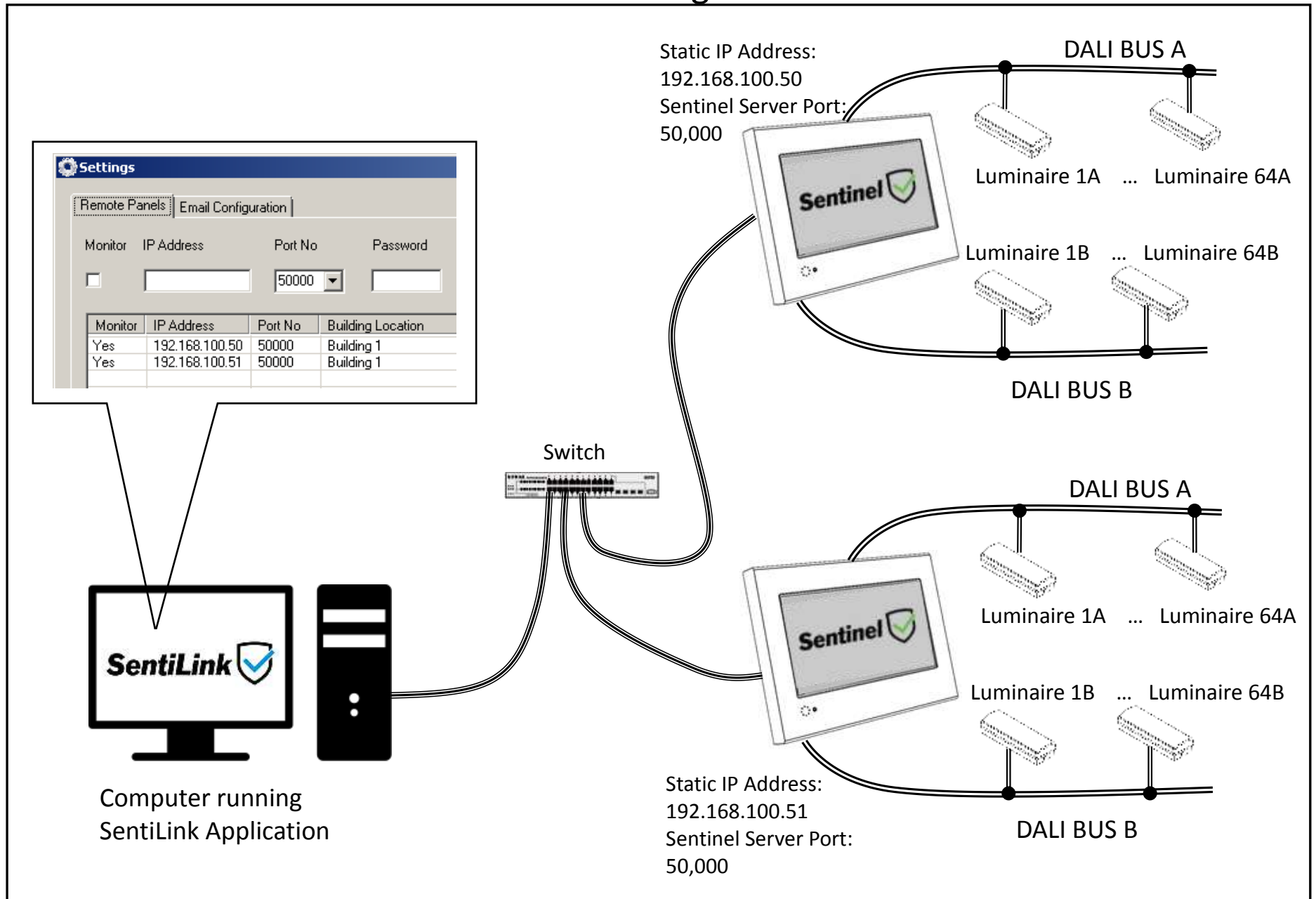


Figure 22 Private Network Setup

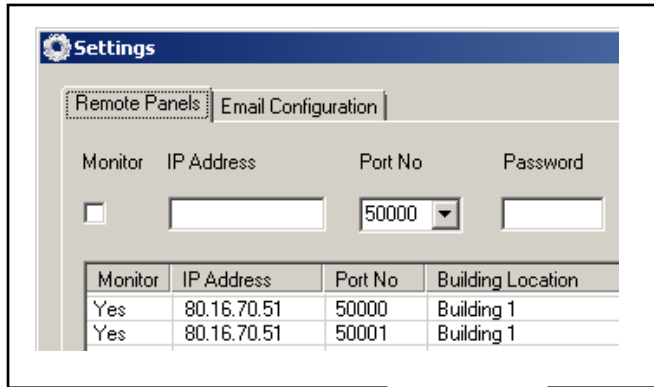
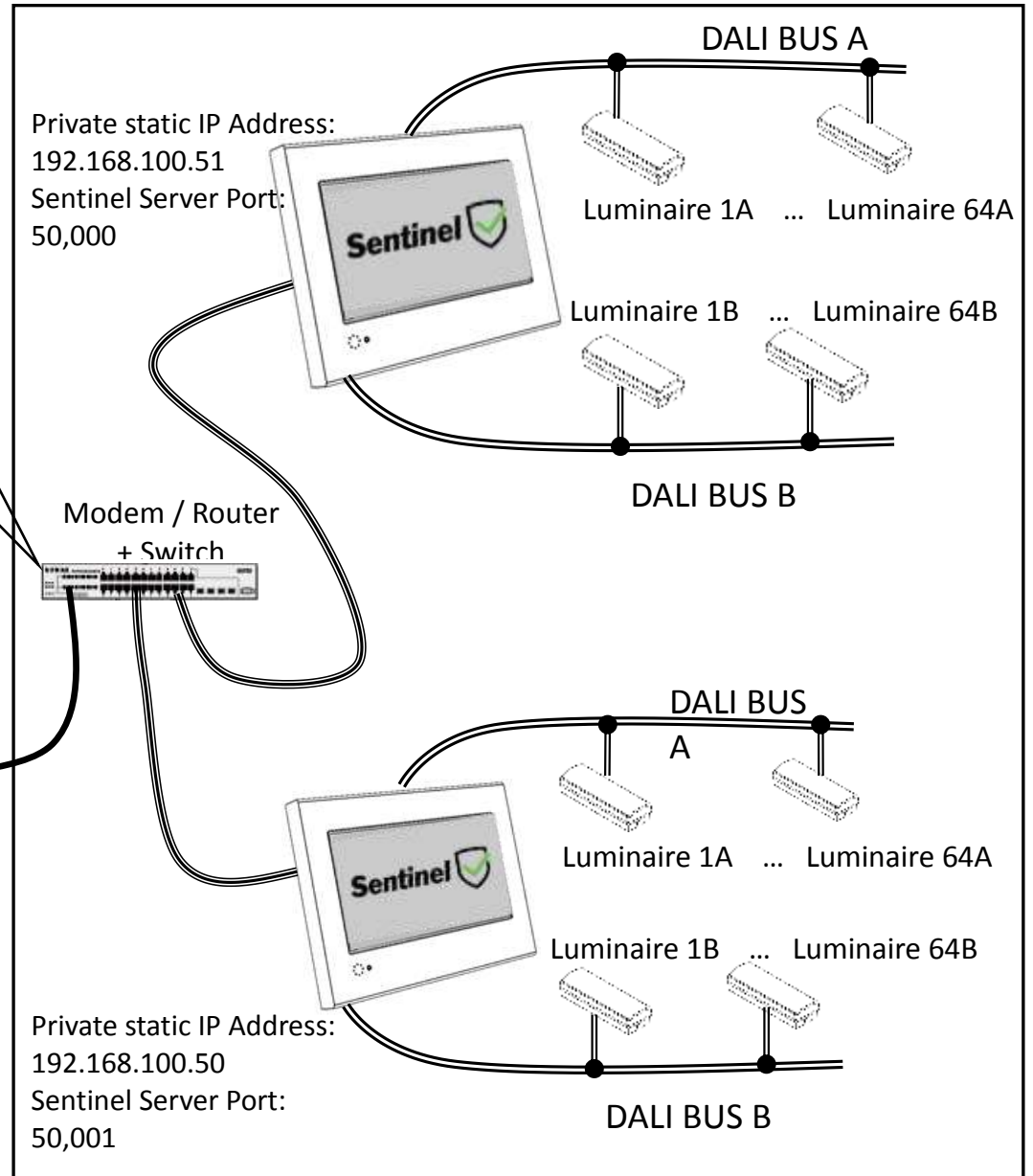


Figure 23  
Public Network Setup

Public static IP Address:  
80.16.70.51  
Incoming traffic forwarded  
For 50,000 to 192.168.100.51  
For 50,001 to 192.168.100.50

## Building 1



## Building 2

