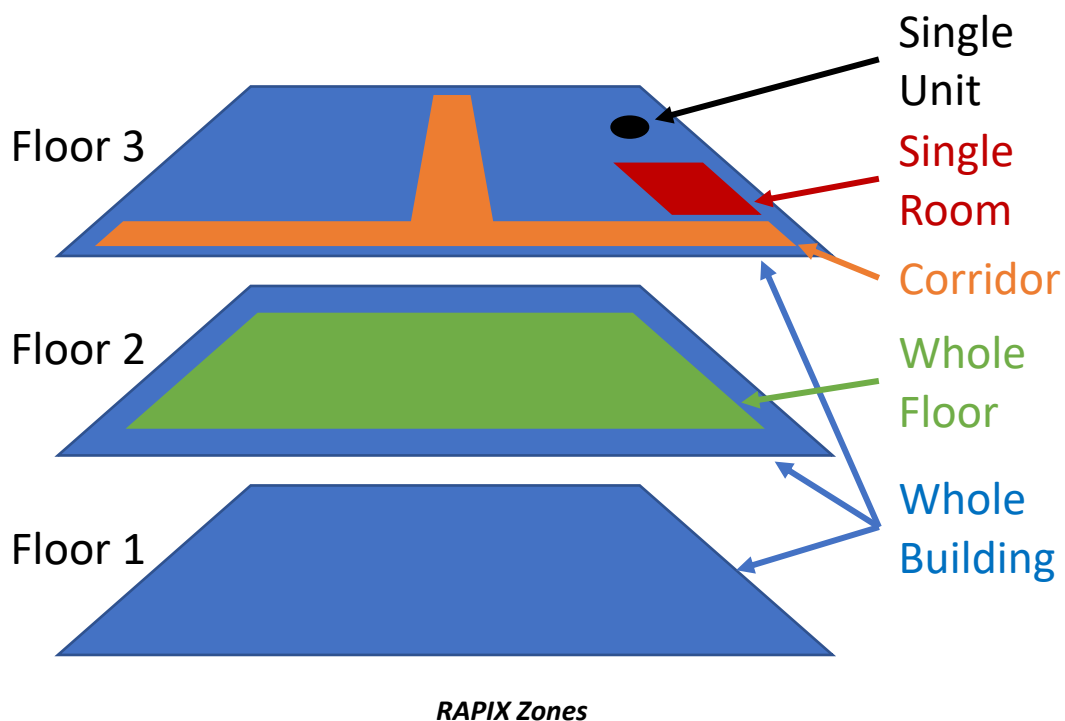


Introduction

This document describes the use of virtual zones within the RAPIX Lighting Control System.

Zones

A RAPIX zone is an area of lighting that is controlled or monitored by the RAPIX system. A zone can range in scale from a single device or room, through larger areas including corridors or floors of a building, up to an entire building or site.



A RAPIX zone can contain any combination of zone “members”:

- DALI Units (“control gear”)
- DALI Groups
- DALI Lines (DALI “broadcast”)
- Other Zones

All aspects of the RAPIX system are configured through zones, which greatly simplifies commissioning and maintenance. This includes:

- RAPIX switches and sensors
- Schedules and Logic
- Floor plans
- Third-party interfaces: RAPIX API, ModBus, BACnet, MQTT

Virtual Zone Members

If a non-RAPIX device or system needs to control a RAPIX Zone, it can be done through a “virtual” zone member (Short Address or DALI Group). A virtual zone member has no physical DALI units associated with it.

Example

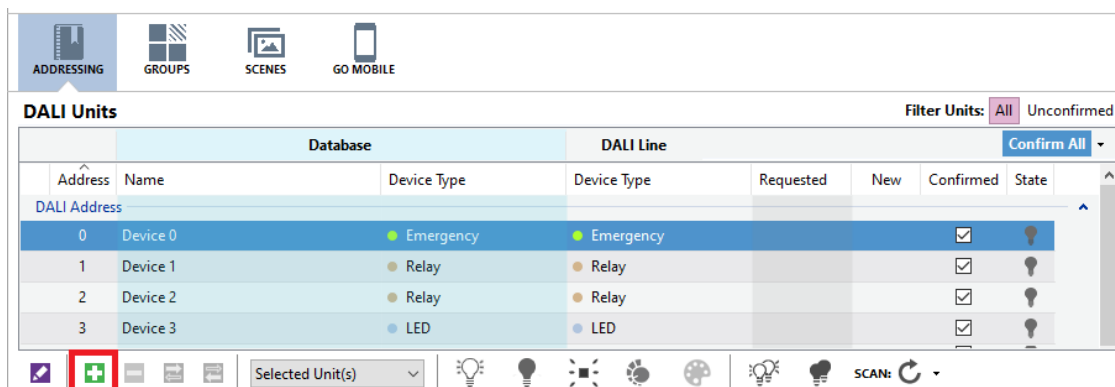
Requirement

A non-RAPIX wall switch needs to control some aspect of logic through a virtual zone. The wall switch controls Short Address 50 and there is no DALI unit at this address.

Creating the Virtual Zone Member

In RAPIX Integrator, a virtual unit can be added as follows:

1. In the **Addressing** tab, click on the **Add** button.



The Add Unit button (highlighted)

2. Select the “**Virtual**” unit type, the short address, and click on **OK**.

Add DALI Units

Add DALI unit(s) to the database.
Add one or more DALI units of the same type to the database.

Unit Details

Type: Virtual

Starting Address: 50

Quantity: 1

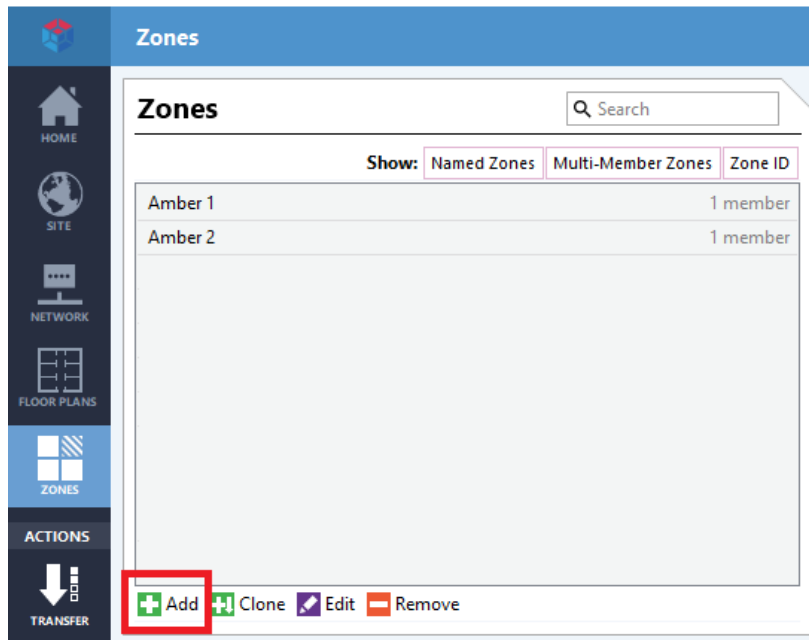
OK Cancel

Adding a virtual unit

Creating the Virtual Zone

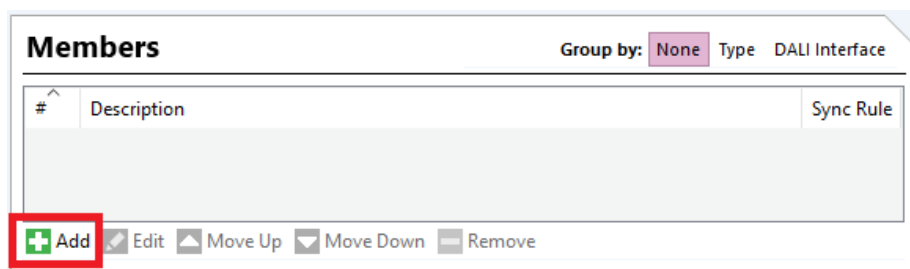
To create a virtual zone containing the virtual Short Address:

1. On the **Zones** tab, click on the **Add** button:



The Add Zone button (highlighted)

2. Give the zone a name, then click on the **Add Members** button.



The Add Zone Members button (highlighted).

3. Select the virtual short address, then click on the **>** button to add it to the zone. Click on **Close**. Note that the **"Is Virtual"** check box will be already selected, as a virtual unit is being added.

Add New Zone Member

Add a Member to this Zone
Select the type of zone member to add to this zone.

Member to Add

☐ Zone
Add another zone in this project as a member to this zone.

☐ DALI Line Broadcast
Add an entire DALI line to be controlled by this zone.

☐ DALI Group Address
Add a specified DALI group address to be controlled by this zone.

☒ DALI Short Address
Add a specified DALI short address to be controlled by this zone.

DALI Interface:
Floor 1

DALI Line:
F1 L1

DALI Address:
50 : Unit 50

Select the Sync Rule to use:
Sync Rule: Do Nothing

Mark zone member as virtual:
☒ Is Virtual

Zone Members

#	Description

Move Up Move Down

Close

Adding a virtual short address to a zone

Virtual Zones

A virtual zone is a zone that has no physical DALI units. It can have a virtual zone member, as described above, or it can have no members at all.

A virtual zone can be used anywhere in the RAPIX system that a normal zone is used.

A RAPIX input unit can control a virtual zone directly, without the need for a virtual short address.

Example

Requirement

A RAPIX wall switch needs to control a virtual zone.

Creating the Virtual Zone

To create a virtual zone with no virtual addresses:

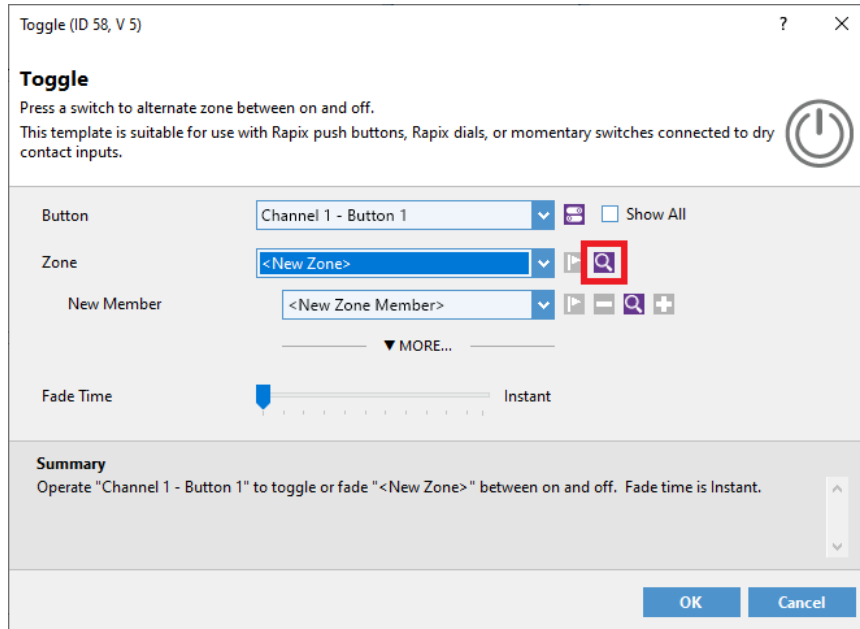
- On the Zones tab, click on the **Add** button.
- Give the zone a name.

Controlling the Virtual Zone

To allow the RAPIX Wall switch to control the virtual zone:

- Edit the RAPIX unit.
- Add the **Toggle** template.

3. The virtual zone is not local to the device, so it will not be in the drop-down list of local zones. Click on the **remote zones** button, then select the virtual zone from the list.



The Toggle template (with Remote Zones button highlighted)

4. Click on the **OK** button to finish.

Virtual Zones for “Unused” DALI Devices

A site may have DALI devices that are not able to be controlled through any of the zones. This could be unintentional and caused by:

- The commissioning has not been completed.
- Some DALI devices were overlooked during commissioning.
- A new DALI device has been added since commissioning was finished.

It could also be that the DALI device only needs to be controlled through RAPIX Scenes.

If a DALI device is not a member of any zones, it will not be able to be controlled through the zones.

It may be necessary to identify that these “unused” DALI devices exist, or to be able to control them. A simple way to achieve this is to create a virtual zone called “Unused DALI”. A message will show you that this zone has unique properties:



The screenshot shows a 'Properties' window for a zone. The 'Zone Name' field is set to 'Unused DALI' and is highlighted with a blue border. To the right of this field, a red text message reads: 'This name signifies that the Zone will control unused DALI Devices. Do not add members to the Zone.' Below the name field, the 'Zone ID' field is set to '14'. At the bottom of the window, there is a row of icons and labels: 'Identify' (with a square icon), 'On' (with a light bulb icon), 'Off' (with a light bulb icon), 'Set Level' (with a slider icon), and 'Set Colour' (with a color wheel icon).

The “Unused DALI” Zone

During DALI Line scans, the Zone Controller will find any DALI Devices that are not in any zones and put them into this Zone automatically.

This zone can be used like any other zone.

For example, in logic, you could have:

```
if (Zones["Unused DALI"].DaliDeviceCount > 0)
{
    // There are unused/unconfigured devices.
    // Do something here...
}
```

Change History

Rev	Date	Updated By	Comment
1	15 April 2024	D S	First Release
2	15 July 2024	D S	Added details of “Unused” DALI Devices zone

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