

Televic Education

How to configure room coupling for interpreterQ



interpreterQ
Reliable interaction.

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1 How to configure room coupling for interpreterQ

1.1 About

When you have the interpreterQ training system installed in multiple rooms, it is possible to link those rooms together. When doing so one teacher can control several rooms simultaneously and teach students divided over the different rooms almost as if they were present in one single classroom.

The room coupling configuration tool allows you to define the different combinations of rooms which you want to use: one configuration can put all rooms in standalone mode, so that they can be used by different teachers simultaneously, another configuration can couple 2 or more rooms together so that they can be controlled by one teacher as described above.

1.2 Prerequisites

Before configuring the room coupling, make sure that each room is fully configured and running as a standalone system.

1.2.1 ICC room layouts

All room layouts need to be configured in the respective Interpreter Control Center applications: an ICC which will control multiple rooms must have a layout created for each of those rooms. The room coupler application will then activate the necessary room layouts, depending on the chosen room coupling scenario.

Note: in the manual “How to create rooms” check the topic “setting up multiple rooms” to find out how to easily copy room layouts from one ICC to another.

1.2.2 Plixus C.U. initialization

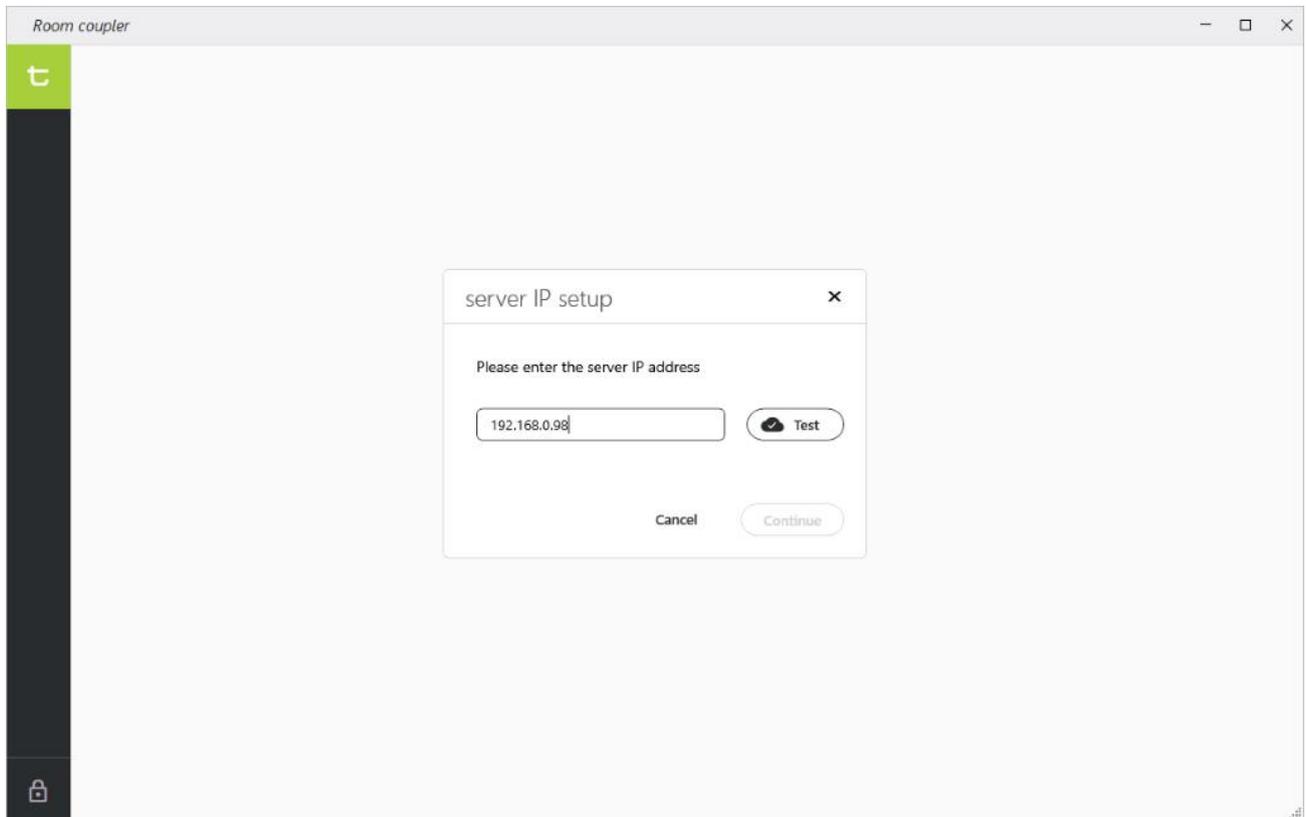
Each Central Unit will need to do an initialization of the connected units on the Plixus network. It is important to do this for each C.U. with the maximum number of booths connected: booths which can be connected to different rooms, depending on the room coupling scenario, will need to be initialized multiple times, connected to each of the C.U.'s. The Plixus network switchers, which are used for connecting the booths to the correct C.U. in each scenario, contain a manual toggle switch which can be used to make the correct network connections during each C.U. initialization. Those switcher settings will be automated later on by the room coupler application.

1.2.3 Plixus language configuration

In each room the necessary language setups need to be created (using the “ERSConfigurator” tool). The language setup specifies how many languages are available to choose from on the delegate units. This is depending on the number of available booths. As a different room coupling scenario can result in a different number of available booths, multiple language setups will need to be created for certain rooms. The room coupler application will then activate the correct language configuration, depending on the chosen room coupling scenario.

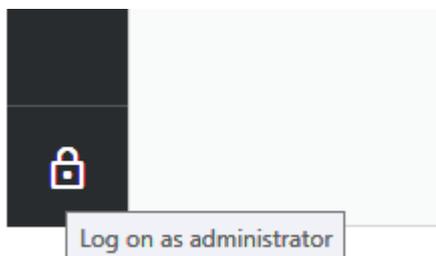
1.3 First launch of the RoomCoupler application

When launching the RoomCoupler for the first time, enter the IP address of the server which will store all room coupling configurations (storing this info on a server allows you to run the RoomCoupler application from any PC on the network). This server needs to be one of the “control PCs” which have the ERSCient Windows Service installed.



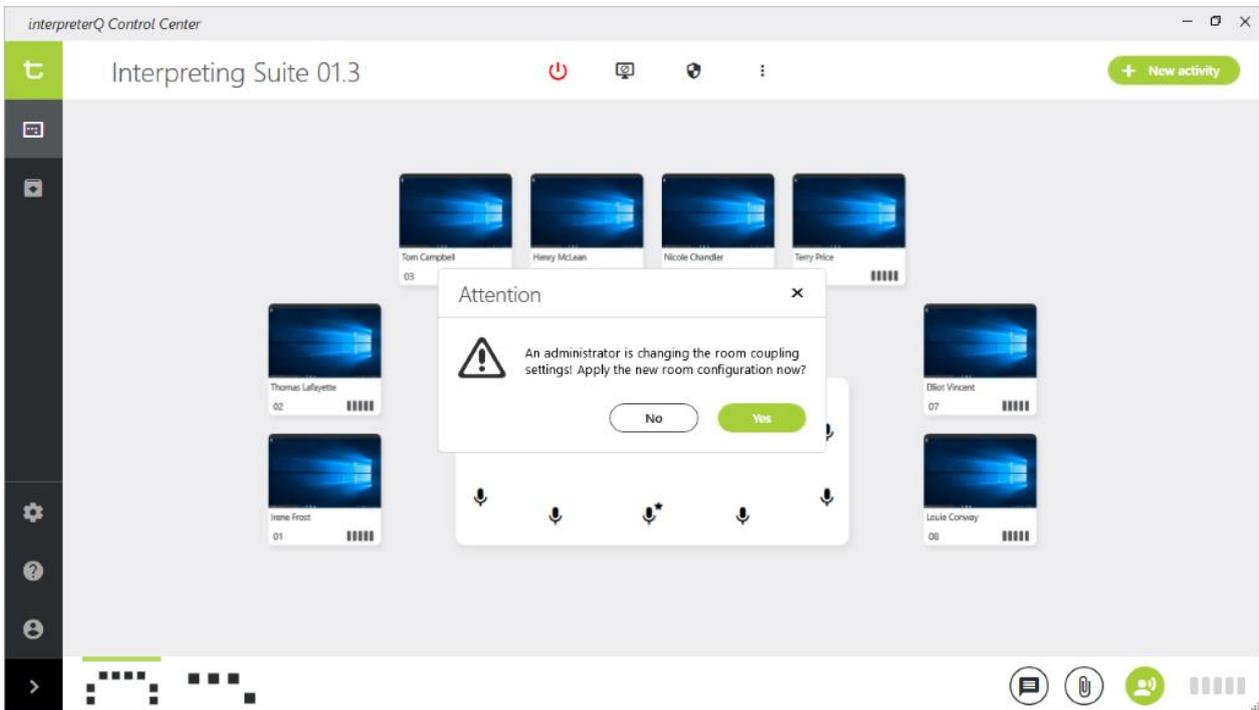
Click the Test button to test the server connection. If connection fails, check if the ERSCientService on the control PC is correctly up and running. When connection succeeds, you can proceed and start configuring the different room coupling scenario's.

To do so, click the icon in the left lower corner and enter the administrator password (it's the same password as the admin password for Interpreter Control Center).



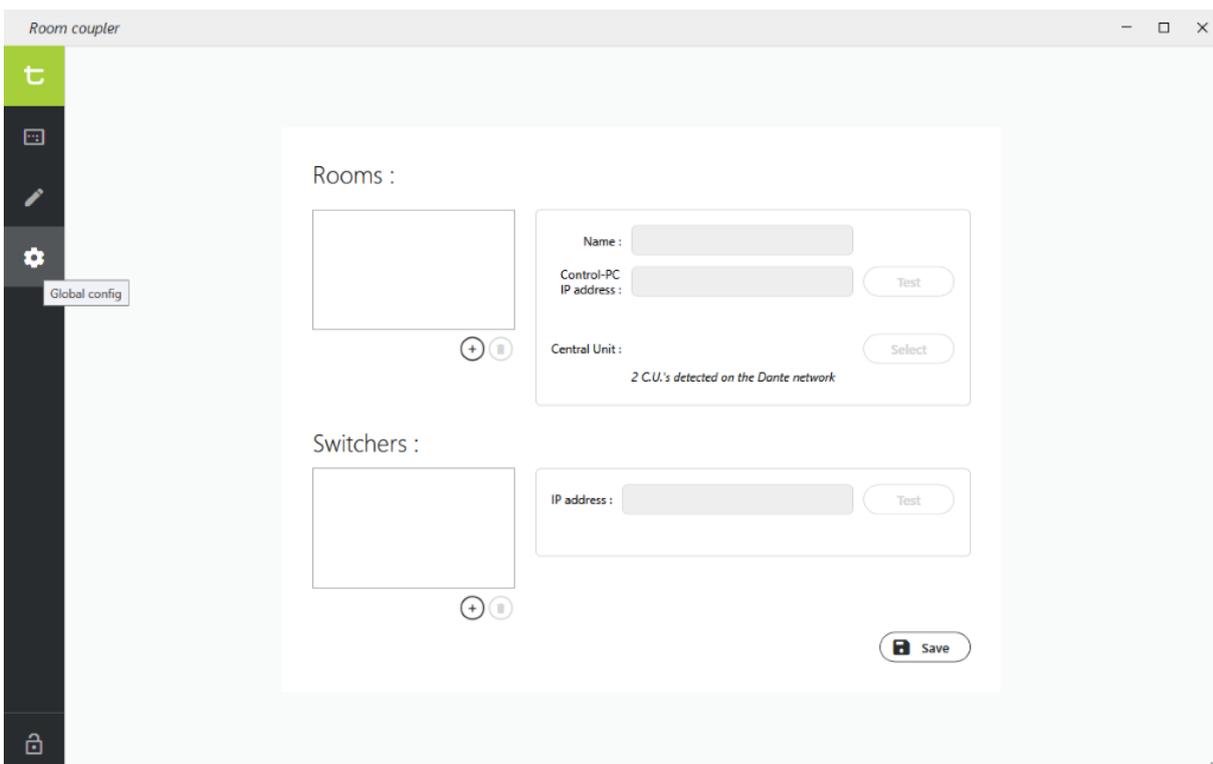
Remark: In order to avoid conflicting configuration changes, the RoomCoupler application cannot be started on several PCs simultaneously. If the application is open on 1 PC, you will get an error when trying to open it on a different PC.

Also, make sure to close all Interpreter Control Center applications prior to modifying or selecting a room coupling configuration in the RoomCoupler app. If a teacher would be using the ICC, he will get interrupted with a popup, and ongoing recording activities will get interrupted:



1.4 Global configuration

Before creating specific configurations for each room coupling scenario, a global configuration is required.



1.4.1 Rooms

Add an entry for each of the rooms. Give it a meaningful name, and fill in the IP address of the control PC for that room (the PC which controls the Plixus Central Unit of that room).

Click the “Test” button to verify that the RoomCoupler application can communicate with the ERSCient Windows Service on the control PC.

Next, select the correct Central Unit for this room. When clicking the “Select” button, the application will try to detect all Dante devices on the network. This can take some time, so please be patient. Also, make sure that all Central Units are actually powered. After detection, the “Central Unit” dropdown box will be populated – there will be one Plixus Central Unit detected for each room.

1.4.2 Switchers

In order to support different room coupling scenario’s (with certain interpreter booths sometimes connected to the local room, sometimes to a remote room) it is necessary to rewire the Plixus network depending on the required scenario. Until recently, this required an administrator or technician to manually change network connections on a patch panel. With the new room coupling solution this rewiring can be automated through the use of remotely controllable network switchers.

Depending on the complexity of the system, one or more switchers may be required. Add an entry for each of the switchers, fill in the IP address, and use the “Test” button to verify that the RoomCoupler application can remotely control the switchers.

After finalizing the global configuration, click “Save” to store the settings on the remote server.

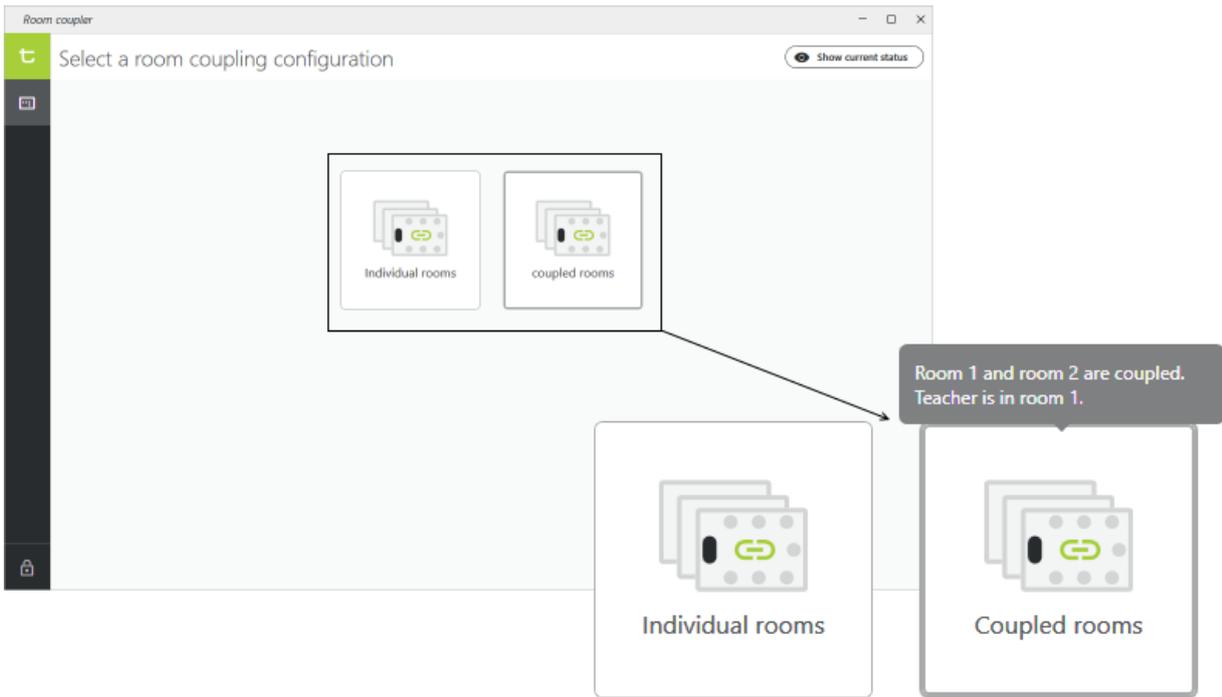
1.5 Room coupling configurations

With the global configuration correctly done, it is time to create one room coupling configuration for each supported scenario. We will take the example of a setup with 2 rooms, for the sake of simplicity we will call them “Room 1” and “Room 2”. For this setup we will create 2 configurations:

- a configuration called “Individual rooms”, which allows the 2 rooms to be used independently by 2 teachers at the same time.
- a configuration called “Coupled rooms”, which allows 1 teacher, seated in Room 1, to control both rooms from his Interpreter Control Center. This way he can teach a larger group of students.

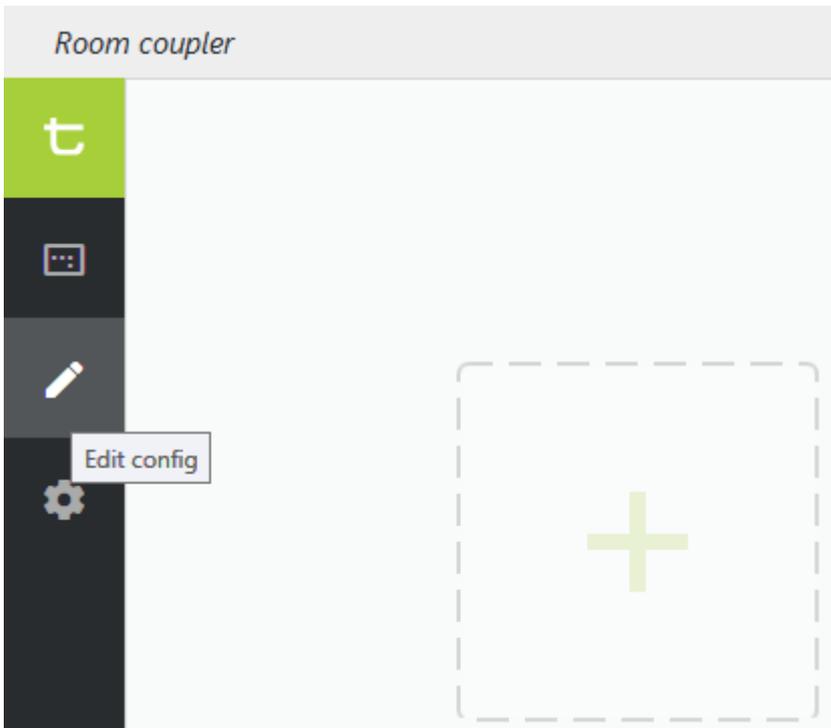
You will understand that the number of “room coupling” configurations doesn’t necessarily match the number of available rooms. Instead it matches the number of supported room combinations.

After configuring the 2 sample configurations, a teacher will be able to activate one of the configurations with a single mouse click:



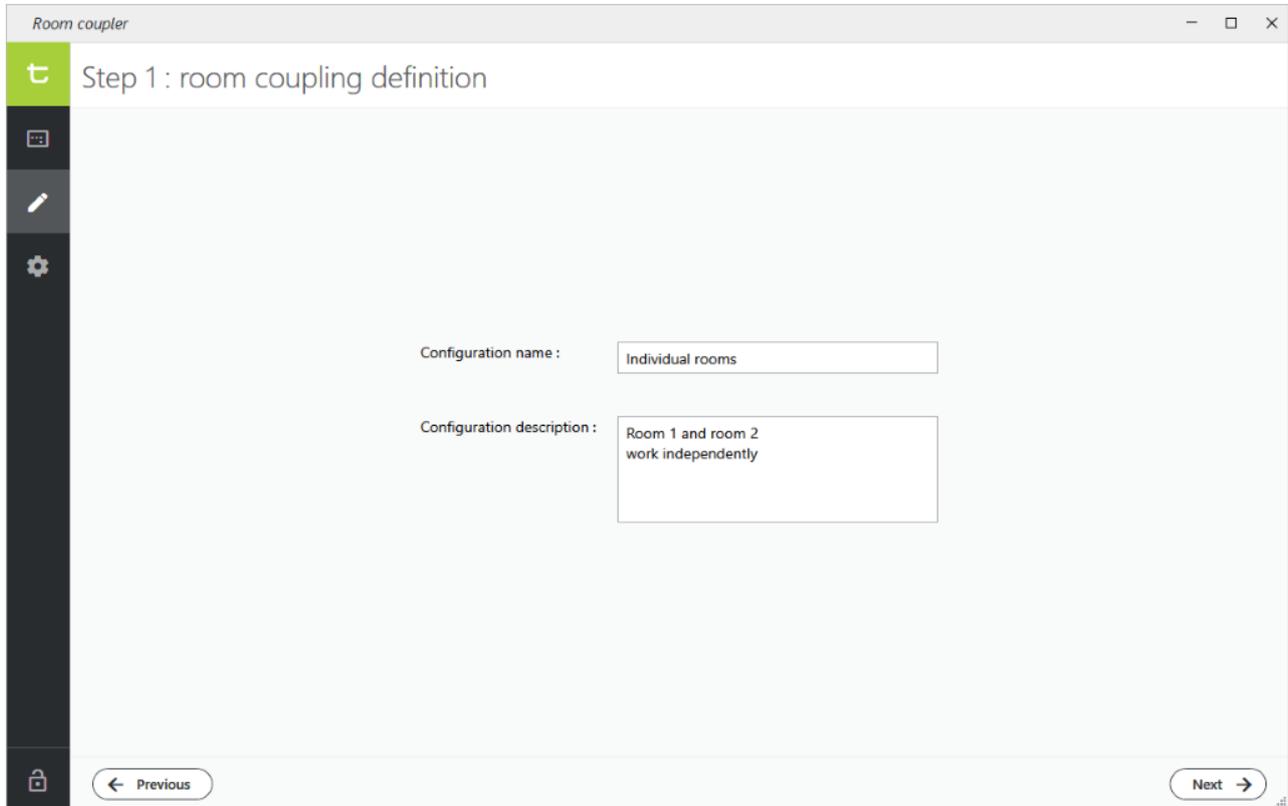
1.6 Creating a new room coupling configuration

Click the "Edit config" menu, then click a "+" tile to create a new configuration.



Step 1: room coupling definition

Give the configuration a meaningful name and description. The description will be shown to the teacher when he hovers over configuration button in the room coupling selection screen (see screenshot on the previous page).



The screenshot shows a web application window titled "Room coupler". The main heading is "Step 1 : room coupling definition". On the left, there is a dark sidebar with icons for home, list, edit, settings, and lock. The main content area contains two form fields:

- Configuration name :
- Configuration description :

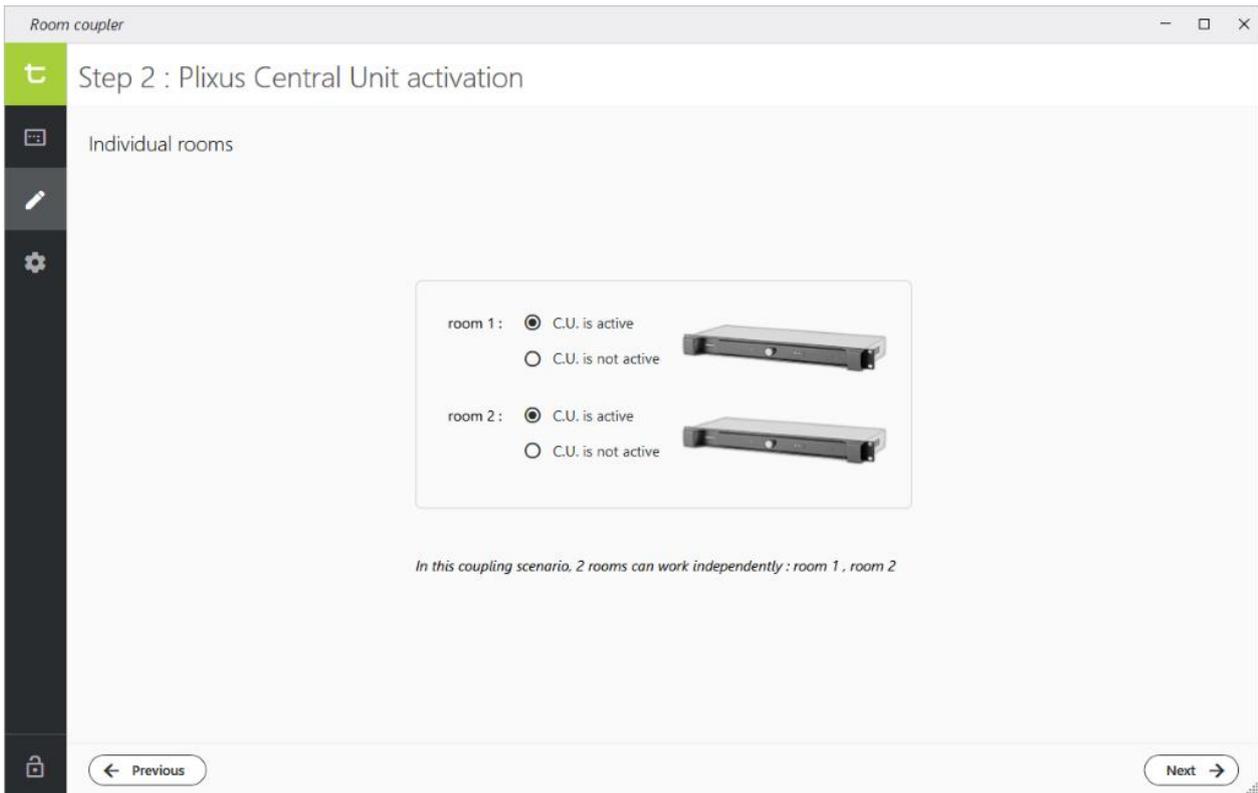
At the bottom, there are "Previous" and "Next" navigation buttons.

Step 2: Plixus Central Unit activation

Specify which rooms will have a Plixus Central Unit running.

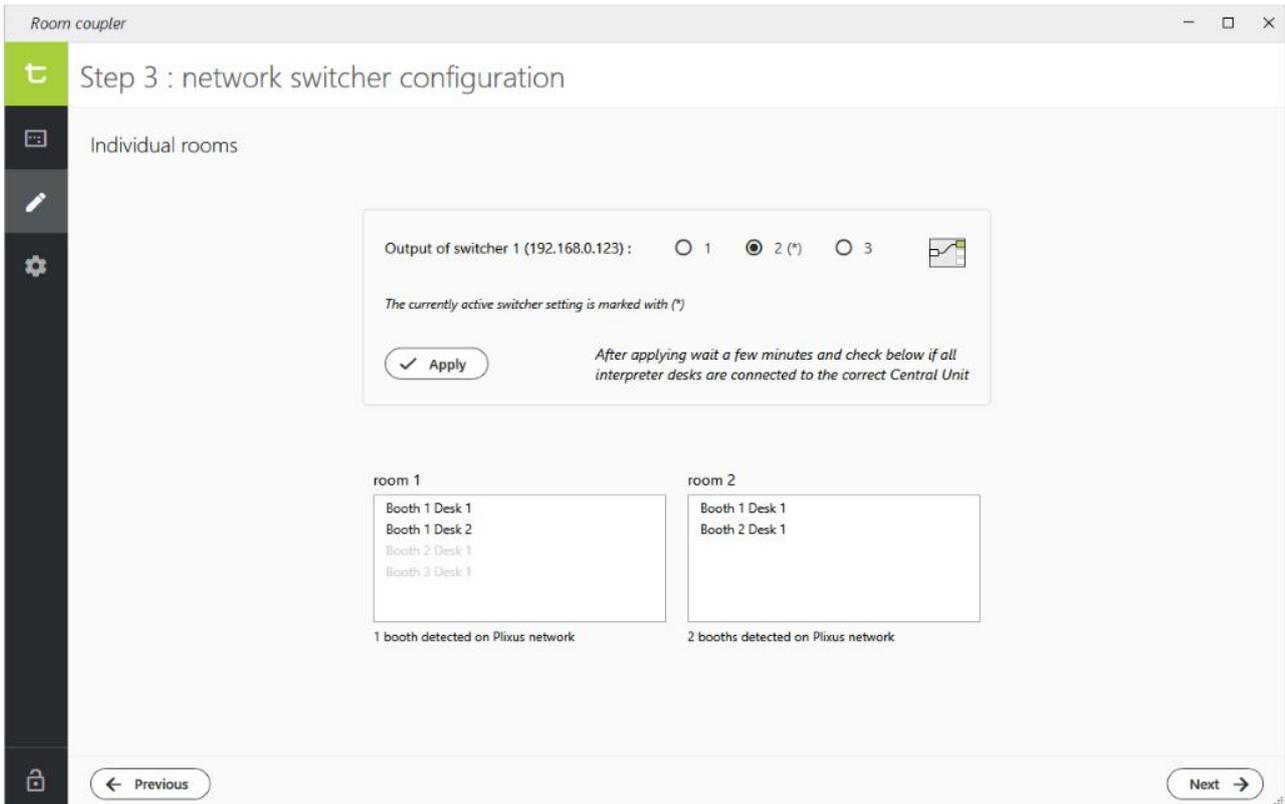
In a scenario where all rooms work independently each of the rooms will have their own Plixus Central Unit running, which will control the audio streaming of the booths in the room.

In a scenario where 2 rooms are coupled together, only 1 of both rooms will have a Plixus Central Unit running. It's the "master room" where the teacher is seated. The booths of the "slave" room will be connected to the Plixus network of the master room, and the Central Unit of the slave room is not active and can be powered down.



Step 3: network switcher configuration

In order to support different Plexus network configurations one or more network switchers are added to the Plexus network. They allow certain booths to be connected to a different Central Unit, depending on the room coupling scenario.

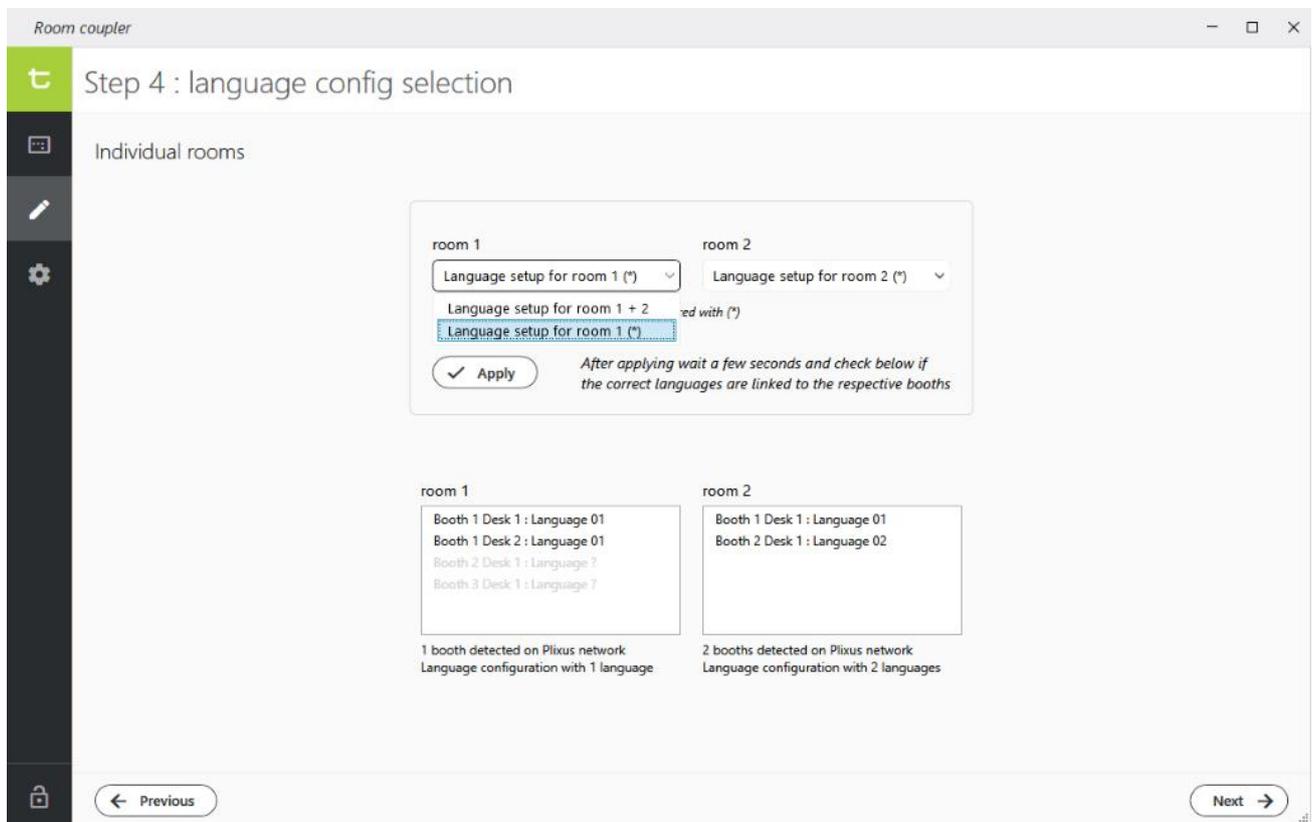


On this page, each of the switchers, configured during the global setup earlier, can be set in 1 of 3 available positions. You will need a network wiring scheme to know which setting(s) are required for each scenario. By clicking the “Apply” button, the Plexus network routing is applied and all of the booths are connected to a certain Central Unit. It will take a few minutes for the Central Units to detect and configure the interpreter desks. Once detected, the interpreter desks will appear in the interpreter desk lists for each room.

Example: the example screenshot above is taken on a small test setup which contains 3 booths. With the correct switcher setting applied, the lists show that one dual booth is connected to the C.U. of room 1, and 2 single booths are connected to the C.U. of room 2. The greyed out list entries “Booth 2 Desk1” and “Booth 3 Desk 1” in the first list show that another Plexus network configuration exists in which all 3 booths are connected to the C.U. of room 1. This configuration is currently not active, so 2 of the 3 booths are currently not detected by this C.U., but, as mentioned in the “Prerequisites” topic above, all 3 booths have previously been initialized on the C.U. of room 1.

Step 4: language config selection

In this step, the correct language configuration for the current room coupling scenario is selected, this for each of the active rooms.

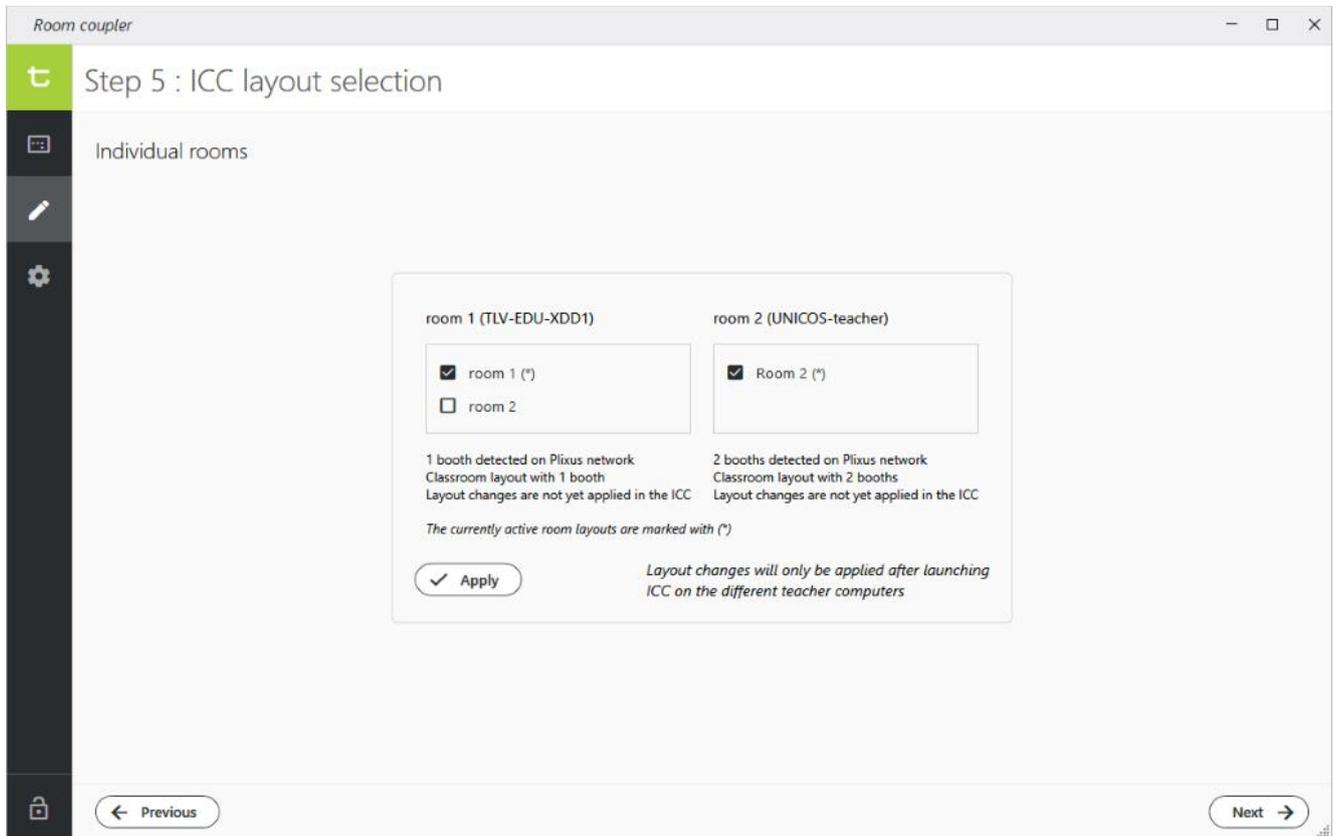


After selecting the correct language setup for each room, you can verify that the number of detected booths in each room corresponds to the number of languages in the selected language configuration. Also the language linked to each booth can be verified in the lists. In a regular training setup, no real languages (EN, FR, NL, ...) are used in the configuration. The language selection rather shows booth numbers instead (01, 02, ...). Therefore the interpreter desk lists will mention “language 01” for booth 1, “language 02” for booth 2, and so on.

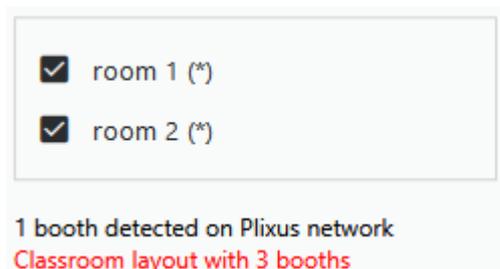
Example: in our small test setup shown above, we have created 2 language setups for room 1: the setup labeled “language setup for room 1” contains 1 language, since room 1 has only 1 (dual) booth. The setup labeled “language setup for room 1 + 2” contains 3 languages, because in another “coupled” scenario 3 booths can be connected to the C.U. of room.

Step 5: ICC layout selection

Now it is time to specify the layouts to be activated in each of the Interpreter Control Center applications. As mentioned in the “Prerequisites” section at the start of this manual, each ICC needs to contain a classroom layout for each of the rooms which can be controlled from that ICC. In this configuration step you specify which of those room layouts is actually used in the current room coupling scenario:



If the total number of booths in the selected room layouts is different from the number of detected booths on the Plixus network, the configuration screen will draw attention to that:



Example: in the example above we are configuring a scenario with both rooms working independently. Therefore we only select the “room 1” layout in the ICC for room 1. As you can see, this ICC also has a “room 2” layout available, which will only be activated in the other scenario of controlling both rooms from room 1.

Remark: while doing a room coupling configuration or selection, make sure the ICC applications are all closed, in order to avoid disrupting an ongoing class. At startup, the ICC will check if a layout selection change has been requested by the RoomCoupler application, and will apply this change. Therefore the screenshot above shows the remark “Layout changes will only be applied after launching ICC on the different teacher computers”.

Step 6: Dante routing

The booth PCs are responsible for recording the interpreting exercises of the students. For that a digital audio stream is set up between the Plexus Central Unit and the PC. In the other direction, a digital audio stream from PC to Central Unit allows the system to make the PC sound available on the student headphones. The technology used for these audio streams is Dante.

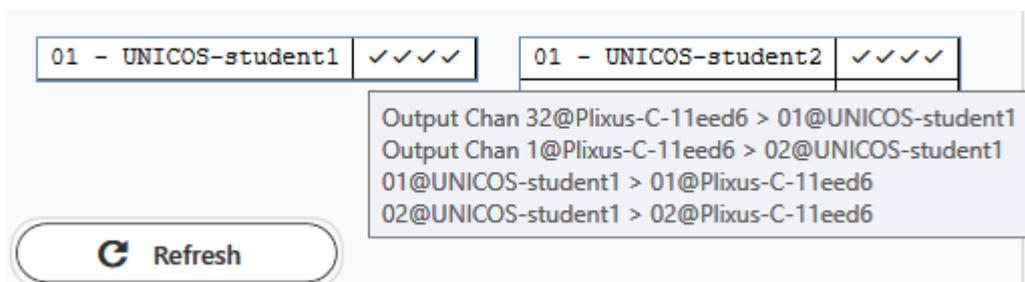
Depending on the room coupling configuration, a booth PC may need to stream audio to one or another Central Unit. Therefore Dante routing will be reconfigured on each room coupling change. The ICC room layouts selected in the previous step contain all necessary booth PC info in order to configure those routings. Therefore nothing else needs to be set up in the current configuration step: just click the “Apply” button and the necessary Dante routings will be created, based on the room layout selections of the previous step.

For the Dante routings to be created and checked, all booth PCs need to be up and running. A button in the configuration screen allows to remotely power on all the PCs (provided that the PC network cards support “Wake-on-LAN” functionality)



The lists in the screenshot above show all booth PCs in each of the rooms (only 3 PCs in total for this small test setup). The 4 checkmarks next to each PC show that all 4 Dante routings are correct for the PC (there is a 2-channel audio stream in each direction, resulting in a total of 4 streams per PC).

Hover over the checkboxes to see more detailed info about the configured Dante streams:



This can be especially interesting when the list indicates one or more routing errors (red exclamation marks). The most common error will be a Dante routing which is not yet correctly refreshed after a layout change. In that case some booth PCs will still be routed to the wrong Central Unit.

Example: in our example, if booths 2 and 3 would still be routed to C.U. of room 1, this would be indicated as follows:

room 1 (Plixus-C-11eed6)	room 2 (uniCOS-CU-TEDU)
01 - UNICOS-student1 ✓✓✓✓	01 - UNICOS-student2 ⚠⚠✓✓
	02 - UNICOS-student3 ⚠⚠✓✓

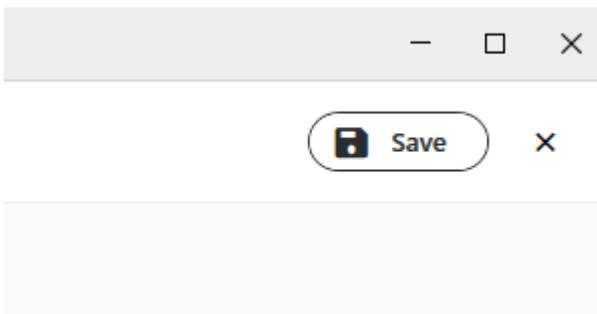
Output Chan 32@Plixus-C-11eed6 > 01@UNICOS-student3
 Output Chan 3@Plixus-C-11eed6 > 02@UNICOS-student3
 01@UNICOS-student3 > 03@uniCOS-CU-TEDU
 02@UNICOS-student3 > 04@uniCOS-CU-TEDU

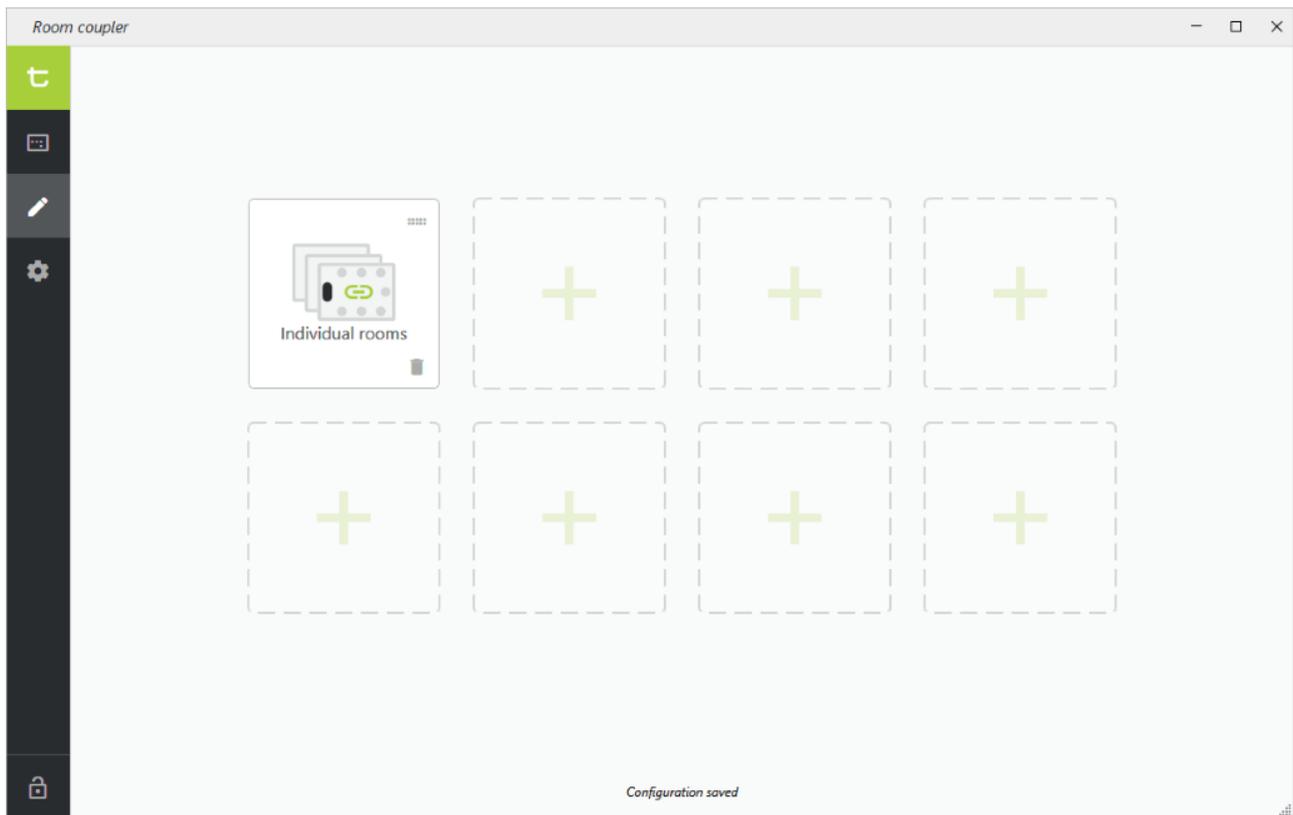
SHOULD BE :

Output Chan 32@uniCOS-CU-TEDU > 01@UNICOS-student3
 Output Chan 2@uniCOS-CU-TEDU > 02@UNICOS-student3
 01@UNICOS-student3 > 03@uniCOS-CU-TEDU
 02@UNICOS-student3 > 04@uniCOS-CU-TEDU

Indeed, the 4 routings mention Dante device “Plixus-cC-11eed6”, which is the C.U. of room 1, as shown at the top of the “room 1” list. The popup shows that the routings should instead run to device “uniCOS-CU-TEDU”, which is the C.U. of room 2 in our test setup.

At this moment we have concluded the configuration steps for this scenario. Click the “Save” button in the page header to save this configuration for later use:





1.7 Wrap up

On the previous pages we described the different steps for creating one room coupling configuration. We took the example of a setup with 2 rooms, and we created a first room coupling configuration which allows two teachers to use both rooms independently at the same time.

A typical second scenario would be a “Coupled rooms” setup, which allows a teacher to control both rooms while using the Interpreter Control Center of room 1. The 2 booths of room 2 are now connected to the Plexus network of room 1, and the Central Unit of room 2 is not used.

As a wrap up of this manual, we will show on the next page the screenshots of both sample room coupling scenarios next to each other. They will clearly show the 2 different scenarios and their according setup choices.

Note: how these configurations can now be activated by a teacher or technician is shown in the manual “How to use coupled rooms”.

Step 1 : room coupling definition

Configuration name :

Configuration description :

Step 1 : room coupling definition

Configuration name :

Configuration description :

Step 2 : Plexus Central Unit activation

room 1 : C.U. is active 
 C.U. is not active

room 2 : C.U. is active 
 C.U. is not active

In this coupling scenario, 2 rooms can work independently : room 1 , room 2

Step 2 : Plexus Central Unit activation

room 1 : C.U. is active 
 C.U. is not active

room 2 : C.U. is active 
 C.U. is not active

In this coupling scenario, room 1 is the single master room.

Step 3 : network switcher configuration

Output of switcher 1 (192.168.0.123) : 1 2 (*) 3 

room 1

Booth 1 Desk 1
 Booth 1 Desk 2
 Booth 2 Desk 1
 Booth 3 Desk 1

1 booth detected on Plexus network

room 2

Booth 1 Desk 1
 Booth 2 Desk 1

2 booths detected on Plexus network

Step 3 : network switcher configuration

Output of switcher 1 (192.168.0.123) : 1 2 3 (*) 

room 1

Booth 1 Desk 1
 Booth 1 Desk 2
 Booth 2 Desk 1
 Booth 3 Desk 1

3 booths detected on Plexus network

Step 4 : language config selection

room 1

Language setup for room 1 (*)

Booth 1 Desk 1 : Language 01
 Booth 1 Desk 2 : Language 01
 Booth 2 Desk 1 : Language 01
 Booth 3 Desk 1 : Language 01

1 booth detected on Plexus network
Language configuration with 1 language

room 2

Language setup for room 2 (*)

Booth 1 Desk 1 : Language 01
 Booth 2 Desk 1 : Language 02

2 booths detected on Plexus network
Language configuration with 2 languages

Step 4 : language config selection

room 1

Language setup for room 1 + 2 (*)

Booth 1 Desk 1 : Language 01
 Booth 1 Desk 2 : Language 01
 Booth 2 Desk 1 : Language 02
 Booth 3 Desk 1 : Language 03

3 booths detected on Plexus network
Language configuration with 3 languages

Step 5 : ICC layout selection

room 1 (TLV-EDU-XDD1)

room 1 (*)
 room 2

room 2 (UNICOS-teacher)

Room 2 (*)

Step 5 : ICC layout selection

room 1 (TLV-EDU-XDD1)

room 1 (*)
 room 2 (*)

Step 6 : Dante routing

room 1 (Plixus-C-11eed6)

01 - UNICOS-atudent1	✓✓✓✓
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room 2 (unicOS-CU-TEDU)

01 - UNICOS-atudent2	✓✓✓✓
02 - UNICOS-atudent3	✓✓✓✓

Step 6 : Dante routing

room 1 (Plixus-C-11eed6)

01 - UNICOS-atudent1	✓✓✓✓
02 - UNICOS-atudent2	✓✓✓✓
03 - UNICOS-atudent3	✓✓✓✓