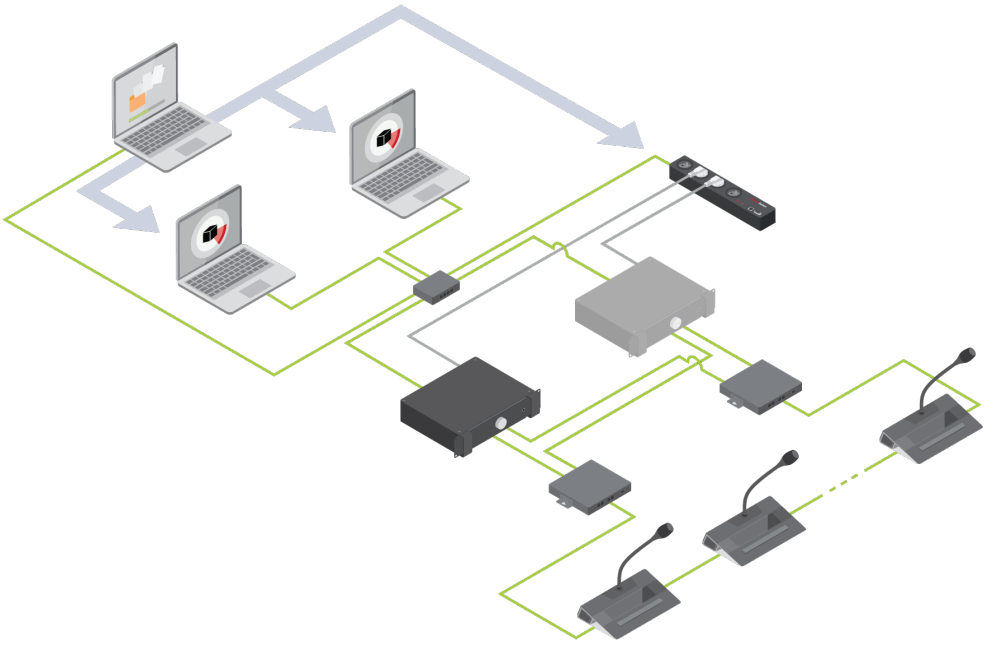
televic
conference

PLIXUS REDUNDANCY

USER & INSTALLATION GUIDE

VERSION 3.6



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CONTENTS

INTRODUCTION

This chapter gives a short introduction to this manual and a general description of the Plixus Redundancy application and its functionalities.

GETTING STARTED

About This Manual

Throughout this guide we use different icons to designate different types of information:

	This is a note. A note gives additional information, such as the meaning of the color of the LEDs. A note also provides information that may only be applicable to some situations.
	This is a tip. A tip gives you an alternative way to do a particular step or procedure, or lets you know of an option that you may find helpful.
	This indicates that something is very important. Important information is something that you need to do in order to accomplish a certain task.
	This provides safety precaution information, that is, information that you need to be careful about to prevent potential problems when using our systems.

Compatibility

This user manual applies to the following products:

Product	Version
CoCon for Plixus Core	≥5.4
CoCon	≥6.0
Plixus	≥CRP 5.4

ABOUT PLIXUS REDUNDANCY

Concept And Design

The Plixus Redundancy application ensures that your system keeps running when the CoCon Room server or the Plixus engine would malfunction. The application automatically takes over the Plixus engine or the CoCon Room server, in case one of these would become inactive. The Redundancy application controls the engines by means of an ePowerSwitch.

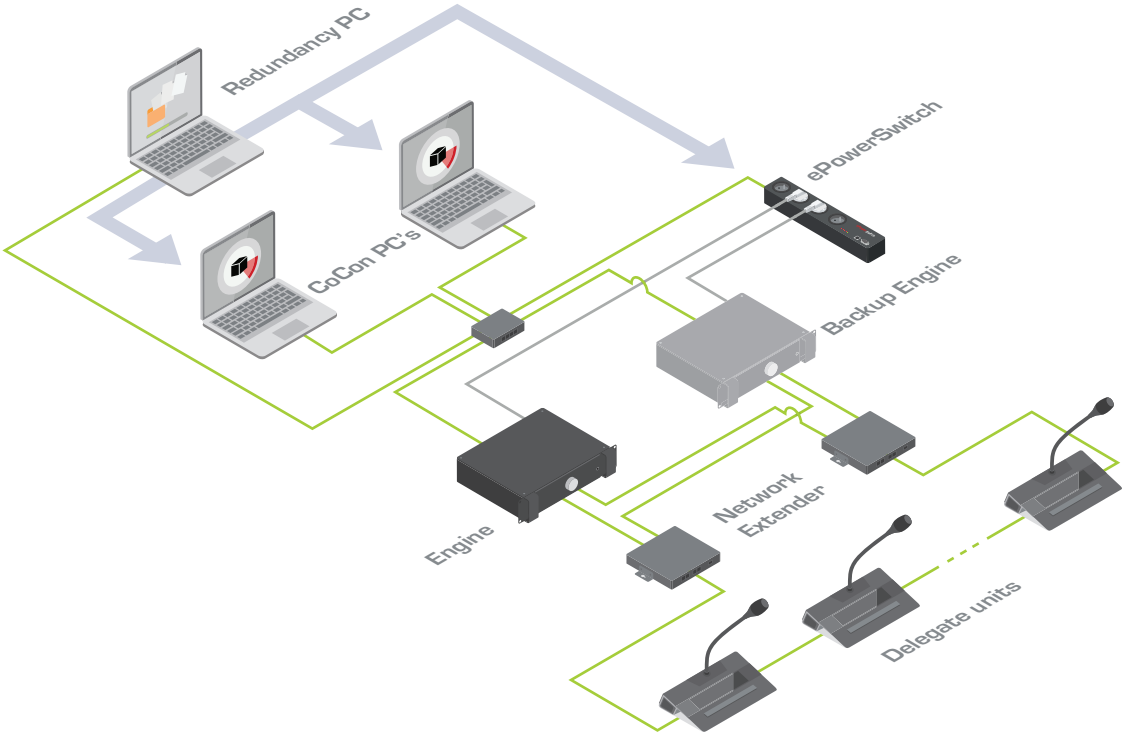


Figure 1-1 *Schematic overview of how to use Plixus Redundancy for a Plixus system with or without CoCon.*

INSTALLATION DESIGN

This chapter describes the prerequisites needed to install and use the Plixus Redundancy application.

NOTES BEFORE INSTALLATION

To enable and use the Redundancy application, the service must be running.

The engines are powered using a powerswitch. The only supported model is the ePowerSwitch 4 : https://www.neol.com/en/products/epowerswitch/epowerswitch-4/.

Preconditions

You can use Plixus Redundancy to manage:

- CoCon
- The Plixus engine
- CoCon & Plixus engine

SUPPORTED COCON AND PLIXUS CRP VERSIONS

The Plixus Redundancy application supports CoCon for Plixus Core version 5.4 or CoCon ≥6.0.

You can download all CoCon and Plixus versions on the Televic Conference website: https://www.televic.com/en/conference/support/software-updates/cocon-and-plixus.

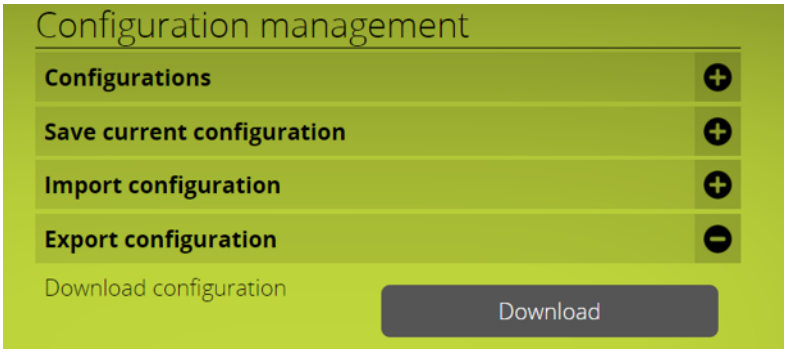
During the Plixus update process you need to use both update files (**crp-x.x-essential.tuf** and **crp-x.x.xx-multimedia.tuf**). First use the multimedia.tuf file, reboot and update again using the essential.tuf file.

When you use Plixus CRP 5.4, you need to enable Core mode.

Update Older Systems

If you are using an older version, you need the perform the following actions before installing a newer compatible version:

- Make a backup of the **Cocon SQL database**
- Make a backup of your **Plixus configuration** using the Plixus web server



- **Uninstall** the previous Cocon version
- Install Cocon for Plixus Core version 5.4 or Cocon ≥6.0
- When you first start the Cocon server, you need to run through the configuration wizard to update the database. Please check if you are selecting the correct database.

INSTALLATION PROCESS

This chapter describes how to install the Plixus Redundancy application. Here you can find all technical details needed to correctly install all required components.

INSTALL THE APPLICATION

Installation Of Redundancy_application_release Package

To get the Plixus Redundancy application, please **contact our Sales Support team**:

- Open a ticket on the Sales Support page here: https://salessupport-conference.televic.com/Tickets/
- Or call the following number:+32 (0)51 33 20 04.

Unzip the *Redundancy_application_release.zip* and copy the folder named *release* to the destination folder

E.g. c:\Redundancy

Backend Service Configuration

There are four configuration files that you need to adjust during the installation:

- **bin\config\application.properties**
- **bin\config\plixus.json** (for Plixus **engine redundancy**)
- **bin\config\roomserver.json** (for **CoCon Room Server redundancy**)
- **frontend/assets/config.json**

The username of the PC where the CoCon Server is installed, as well as the PC where the redundancy tool is installed, **should not contain spaces**!

BIN\CONFIG\APPLICATION.PROPERTIES

On line 33, add the **path to the Python executable**. E.g.

redundancy.plixus.executable=C:\\Users\\pdm\\AppData\\Local\\Programs\\Python\\Python37\\python.exe

See " Configuration for engine redundancy" on page 18 for instructions how to install Python.

Version 1.2.1 or higher only:

To disable the automatic failover for CoCon and/or Plixus, set the following properties to "true" as indicated below:

redundancy.roomserver.disableAutomaticFailover=true

redundancy.plixus.disableAutomaticFailover=true

BIN\CONFIG\PLIXUS.JSON

When you need engine redundancy, you need to adjust this file.

Fill in the properties of the plixus engines that need to be monitored and managed. Use the **same IP address** for both engines. Both engines also need to have the **same configuration**. For each engine, define which socket of the ePowerSwitch controls which engine: **IP address and the power socket must be correct**.

The example below shows a Plixus setup with two configured engines with the same IP address. The first one is connected to the first port (M0:O1) of ePowerSwitch with IP address 192.168.0.45. The second engine is connected to the second port (M0:O2) of the same ePowerSwitch.

```
[
	{
		"name": "Plixus1",
		"ip": "10.40.204.210",
		"port": 8890,
		"requestTimeout": 10,
		"startupTimeout": 120,
		"pollInterval": 5,
		"PowerSwitchConfig": {
			"ip": "192.168.0.45",
			"port": 80,
			"requestTimeout": 10,
			"type": "ePowerSwitch",
			"config": "M0:O1"
		}
	},
```

```
        {
                "name": "Plixus2",
                "ip": "10.40.204.210",
                "port": 8890,
                "requestTimeout": 10,
                "startupTimeout": 120,
                "pollInterval": 5,
                "PowerSwitchConfig": {
                        "ip": "192.168.0.45",
                        "port": 80,
                        "requestTimeout": 10,
                        "type": "ePowerSwitch",
                        "config": "M0:O2"
                }
        }
]
```

BIN\CONFIG\ROOM SERVER.JSON

If your system requires **Room Server redundancy**, you need to adjust this file.

Change the **IP addresses** to the address of the **PCs running the Cocon Room Server**. The user name must be a user with **Administrator rights** on that PC. The encrypted password can be generated using the **encryptor.bat** in bin\scripts\password\encryptor.bat. The command to get the encrypted password of "test" is as below:

```
.\encryptor.bat test
Result: EIre+l0EMnk8N1f1TcL00w==
```

Below you can find an example content of the Room erver.json file:

```
        {
                "name": "RoomServer1",
                "ip": "192.168.0.244",
                "port": 8890,
```

```
                "requestTimeout": 10,
                "startupTimeout": 240,
                "pollInterval": 5,
                "username": "<domain>\\<username>",
                "password": "<encryptedpassword>",
                "useHttps": false,
                "roomServerAppPath": "C:\\Program Files (x86)\\Televic
Conference\\CoCon\\Server\\CoCoS.exe",
                "roomServerServiceName": "CoConRoomServer"
        },
        {
                "name": "RoomServer2",
                "ip": "192.168.0.246",
                "port": 8890,
                "requestTimeout": 10,
                "startupTimeout": 240,
                "pollInterval": 5,
                "username": "<domain>\\<username>",
                "password": "<encryptedpassword>",
                "useHttps": false,
                "roomServerAppPath": "C:\\Program Files (x86)\\Televic
Conference\\CoCon\\Server\\CoCoS.exe",
                "roomServerServiceName": "CoConRoomServer"
        }
]
```

Make sure to set:

`useHttps:"false"`

FRONTEND/ASSETS/CONFIG.JSON

Change the 'roomName' parameter the name of your room.

Logging

There are three different loggings available:

- Backend service logs: **bin/logs/spring.log**
- Windows service wrapper logs: **bin/logs/TelevicRedundancy.wrapper.log**
- Powerswitch Manager: **bin/log/PowerSwitchManager.log**

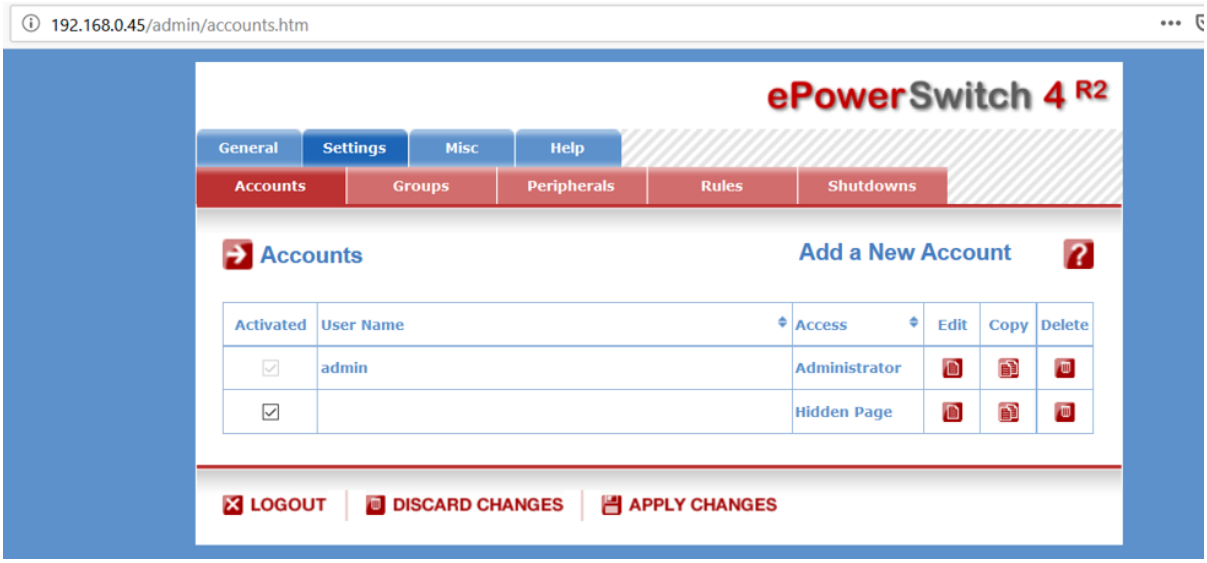
CONFIGURATION

This chapter describes how to configure the Plixus Redundancy network using the Plixus Redundancy Core web server. It includes a description of how to connect to the built-in web server together with how to initialize units and configure audio settings to guarantee a successful meeting.

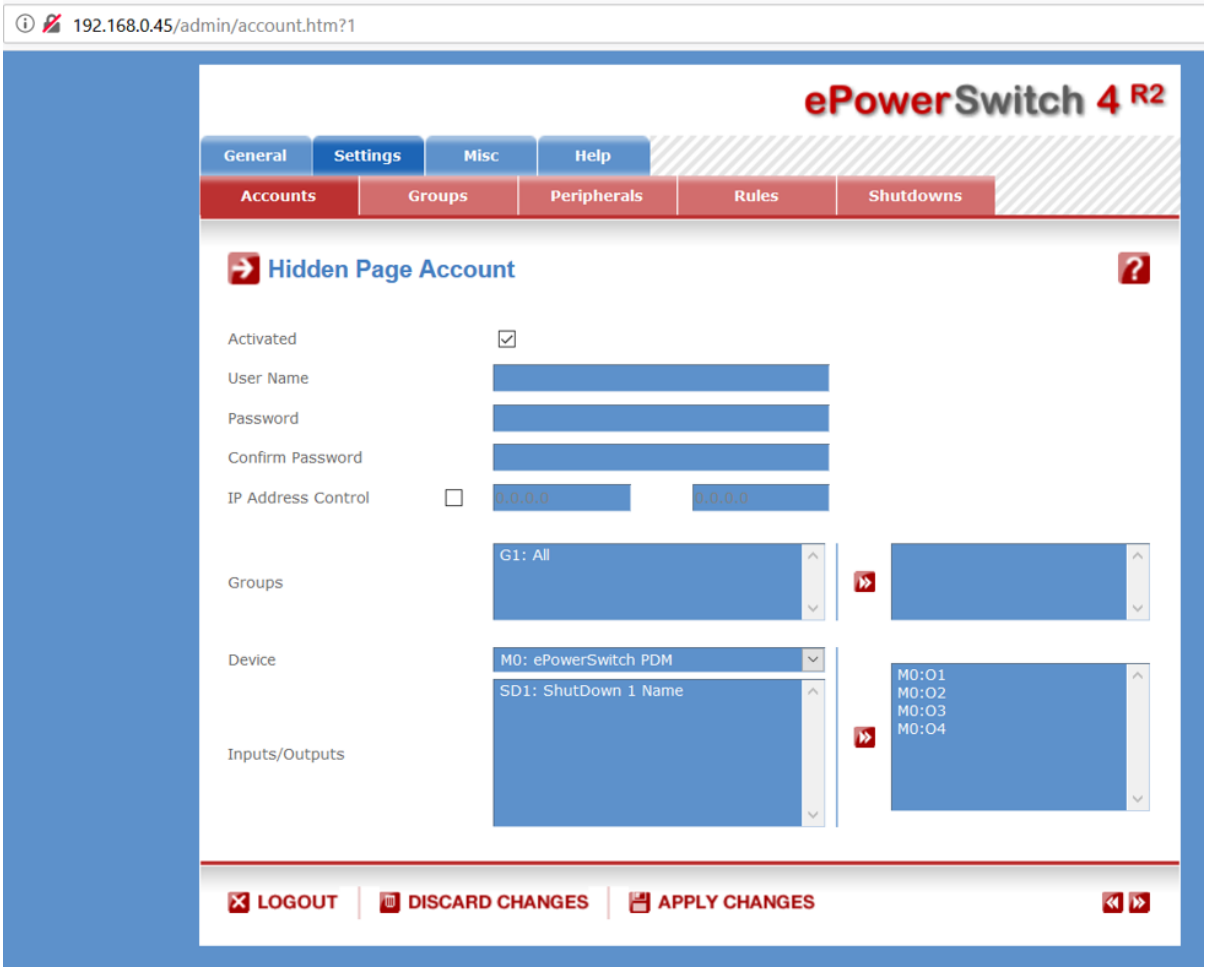
CONFIGURATION FOR ENGINE REDUNDANCY

Note that **Internet access** is necessary throughout the whole Python installation process.

1. Download and install **Python3.7** from https://www.python.org/downloads/release/python-374/
2. After you installed Python, make sure the location of python.exe is set in the application.properties file.
3. Run the following command where the pip.exe file is installed:
   pip install requests
4. Configure the **ePowerSwitch** to have a hidden page without user name or password:
   a. Go to the ePowerSwitch page at **<IP>/admin/accounts.htm**:



   b. Edit the second entry (with **Access** *Hidden page*) and clear the user name and password fields. Check if M0:O1 – M0-O4 are all in the list in the bottom right (select them and click the >> button)


192.168.0.45/admin/account.htm?1
ePowerSwitch 4 R2
General
Settings
Misc
Help
Accounts
Groups
Peripherals
Rules
Shutdowns
Hidden Page Account
Activated
User Name
Password
Confirm Password
IP Address Control
0.0.0.0
0.0.0.0
Groups
G1: All
Device
M0: ePowerSwitch PDM
Inputs/Outputs
SD1: ShutDown 1 Name
M0:O1
M0:O2
M0:O3
M0:O4
LOGOUT
DISCARD CHANGES
APPLY CHANGES

CONFIGURATION FOR COCON REDUNDANCY

1. On each PC running Cocon, configure **windows remote**:

    a. Install **PsExec**

    https://docs.microsoft.com/en-us/sysinternals/downloads/psexec

    Download PsTools (which is a zip file) and extract psexec and put in e.g. c:\windows\system32

    b. In Windows Powershell (Administrator mode), run the following six commands:

    New-Itemproperty -name LocalAccountTokenFilterPolicy -path HKLM:\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System -PropertyType DWord -value 1

    Set-NetConnectionProfile -NetworkCategory Private

    winrm quickconfig

    winrm enumerate winrm/config/listener

    netsh advfirewall firewall add rule name="Windows Remote Management (HTTP-In)" dir=in action=allow protocol=TCP localport=5985

    winrm set winrm/config/client '@{TrustedHosts="192.168.0.246"}'

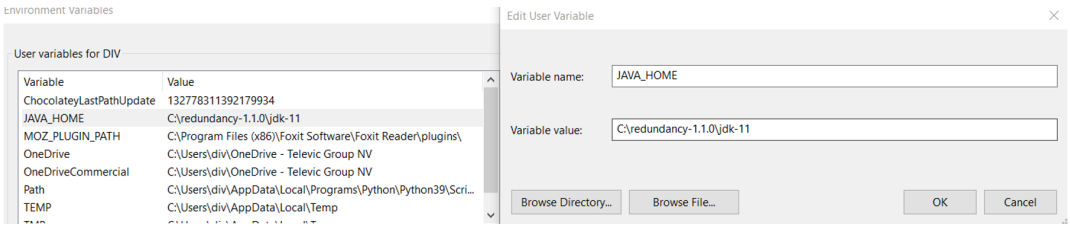
    

    The IP addresses are the addresses of the PC running the redundancy service and the CoCon server(s).

COMMON CONFIGURATION ELEMENTS FOR ENGINE AND PLIXUS REDUNDANCY

Install JDK 10 And The Televic Redundancy Application

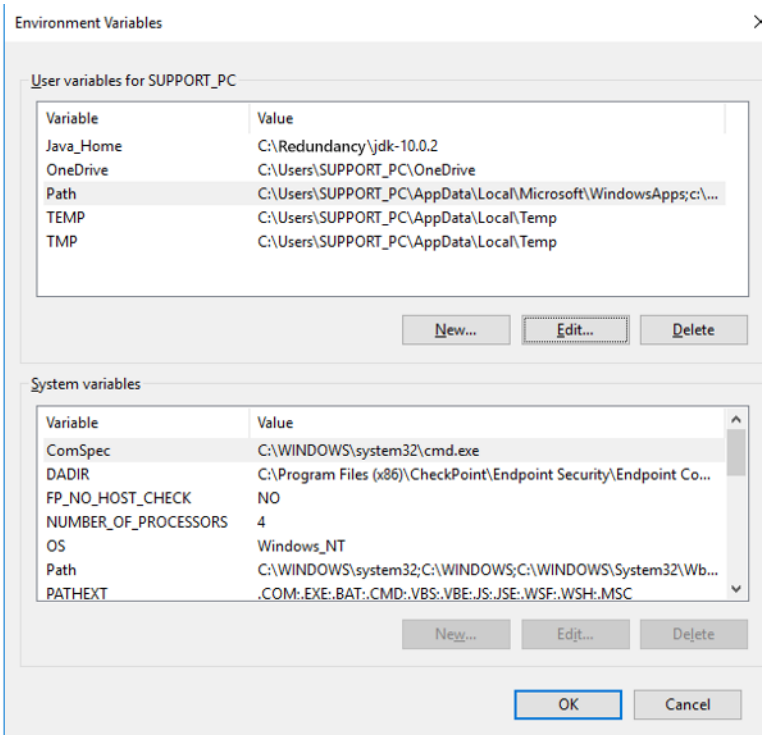
1. Install JDK 10 (java 11 is also supported)
    a. Download https://jdk.java.net/10/ (java 11 is also supported)
    b. Unpack archive. E.g. to C:\Redundancy\jdk-10.0.2
    c. Add JAVA_HOME environment variable to this path

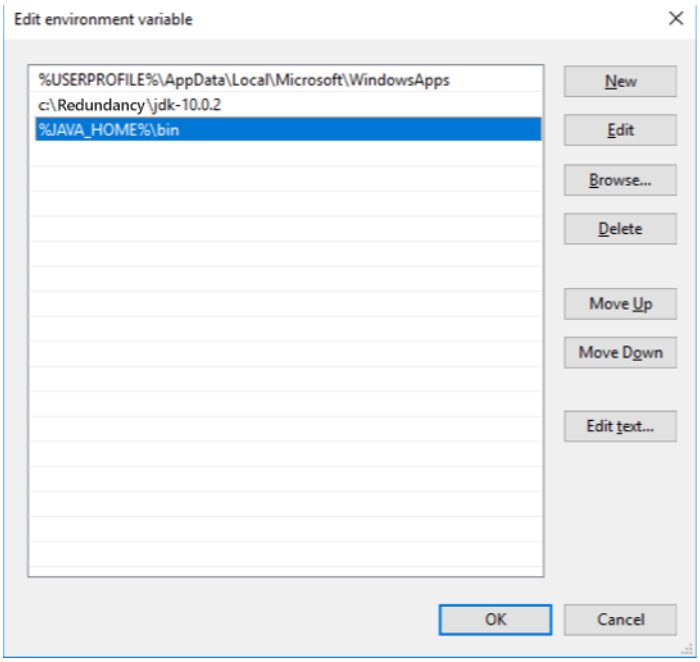


No spaces are allowed in the path before the \bin directory names!

    d. Add installed jdk and JAVA_Home\Bin to Path

    See screenshots below:





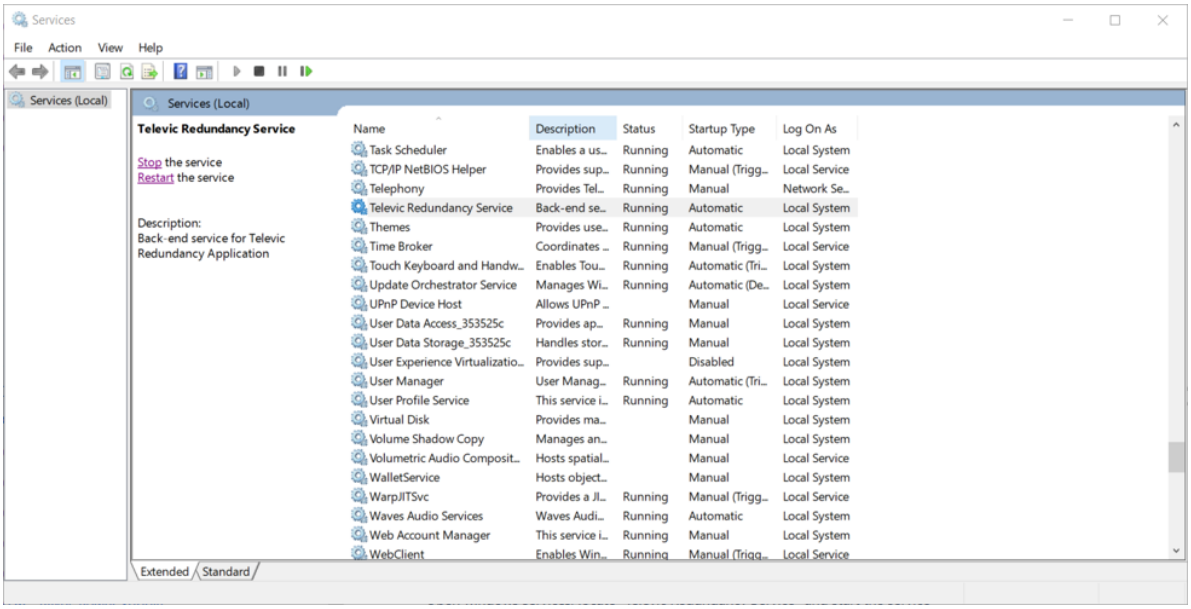
e. Verify if environment variable is set correctly.

f. Open CMD **As Administrator**, run " java –version" in cmd to verify installation.

2. **Install Televic Redundancy Application**:

- Open **CMD** As Administrator.
- Go to the **bin folder** of the Redundancy application.
- To **install** windows service: service.bat install.
- To **remove** windows service: service.bat remove.

3. The Televic Redunancy Application is now installed. You can now manage the service as all other windows services and perform Start/Stop actions.



4. Go to the services window and **restart the Redundancy service**.
5. Change the used port

   The default port is 80. If this port is already in use and you need a different one, you need to change this in two different files (use notepad++ to do this):

   a. In frontend/assets/config.json

      Update 'serverUrl' to use another port (e.g. 8081):

```
{
"serverUrl": "http://localhost:8081",
"defaultLanguage": "en",
"roomName": "Test Room"
}
```

b. in line 37 of ….nginx\conf\nginx.conf:

```
34      # HTTPS server
35      #
36      server {
37          listen       8081;
38          server_name  localhost;
39
40          location /auth {
41              alias ../fe-client/;
42          }
43
44          location / {
45              alias ../fe-client/;
46          }
47
48
49          location /static {
50              index index.html;
51          }
```

After changes you need to restart the redundancy service.

General PC Configuration

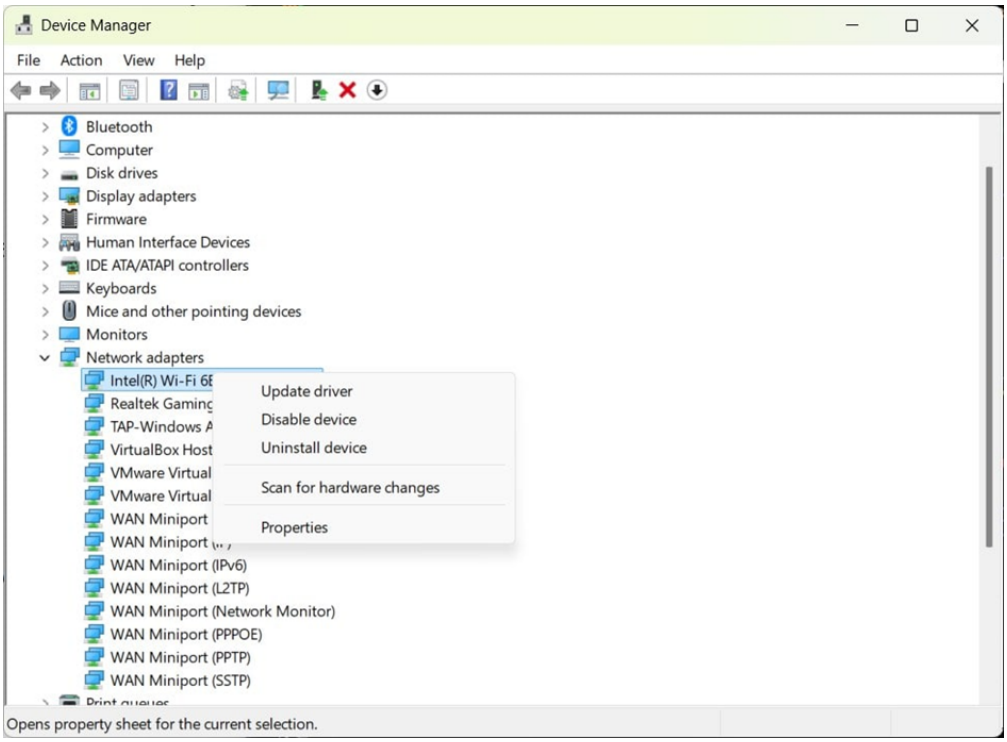
1. Check the PC powersave mode settings, and make sure the PC does not go into sleepmode after x time.

2. Check the ethernet port settings and make sure **"Energy Ethernet Ethernet"** setting is disabled.

HOW TO CONFIGURE EEE SETTINGS - TURN ON OR OFF

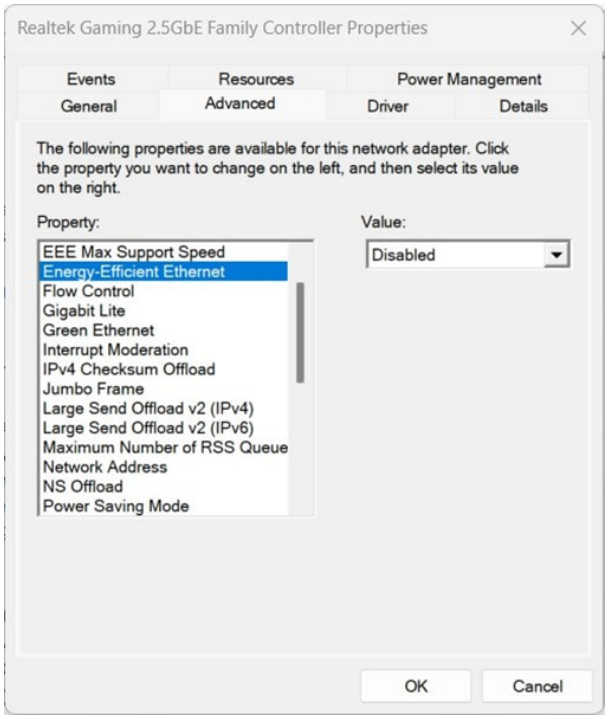
Most modern network adapters and switches come with EEE enabled by default. To modify these settings:

1. Right-click the **Start** button and select **"Device Manager"**.
2. Expand the **"Network adapters"** section.
3. Right-click your Ethernet adapter and select **"Properties"**.
4. Click the **"Advanced"** tab to view all configurable options.



5. Under the **"Advanced"** tab, scroll to find EEE settings listed as **"Energy Efficient Ethernet"**, **"Green Ethernet"**, or similar terminology.

6. Select **"Value: Disabled"**.

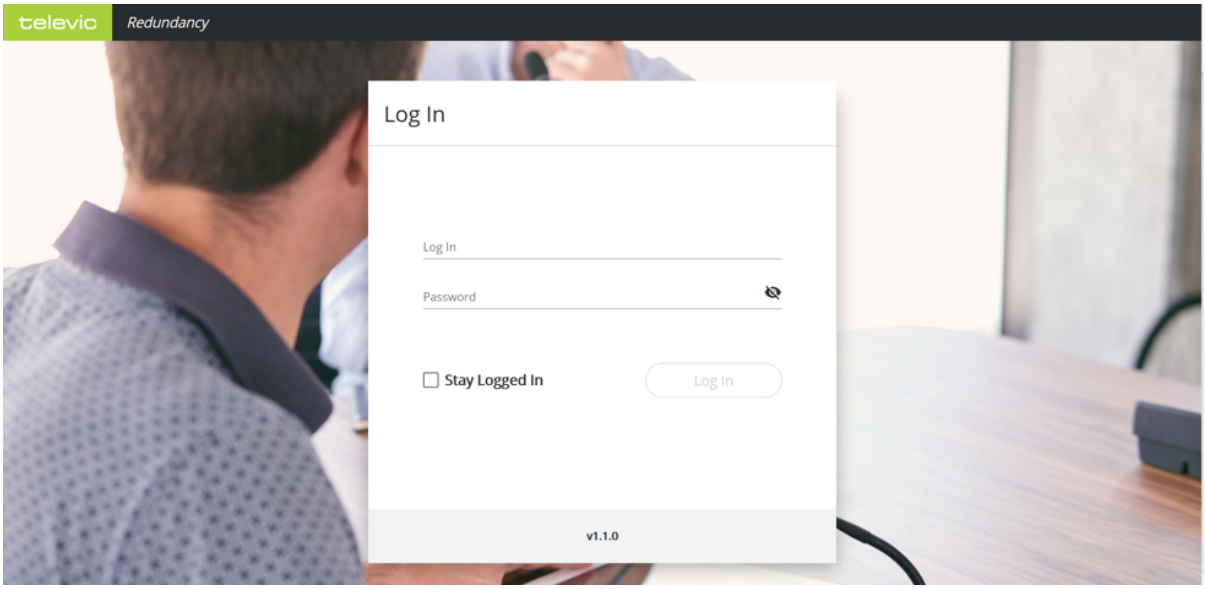


USE THE APPLICATION

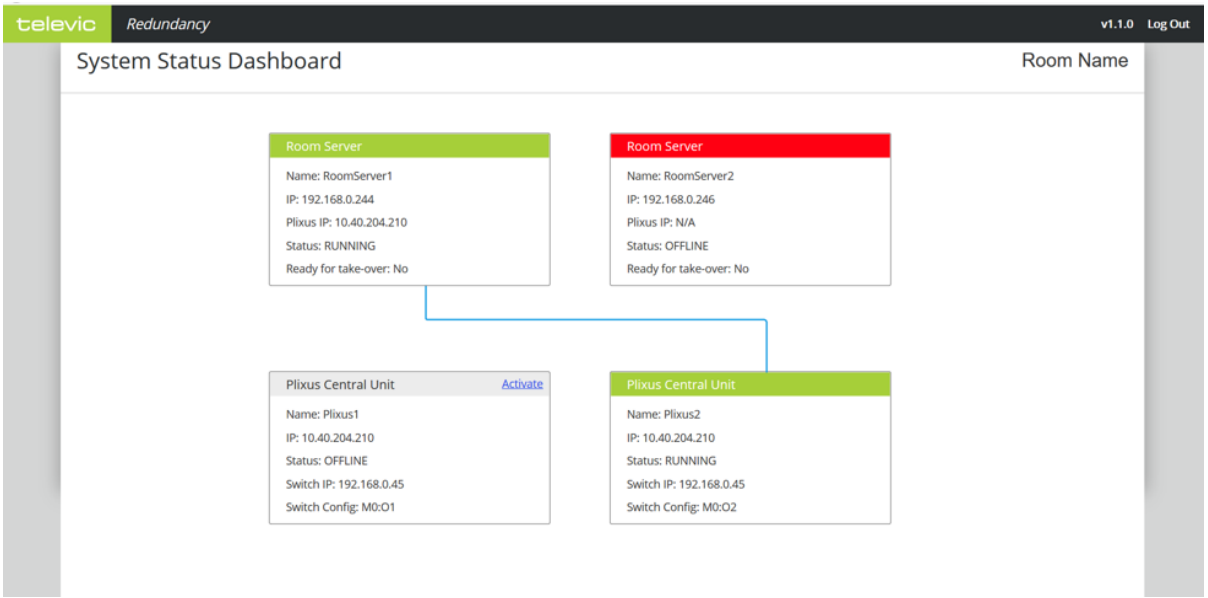
This chapter describes how to use the Plixus Redundancy application.

USE THE REDUNDANCY APPLICATION

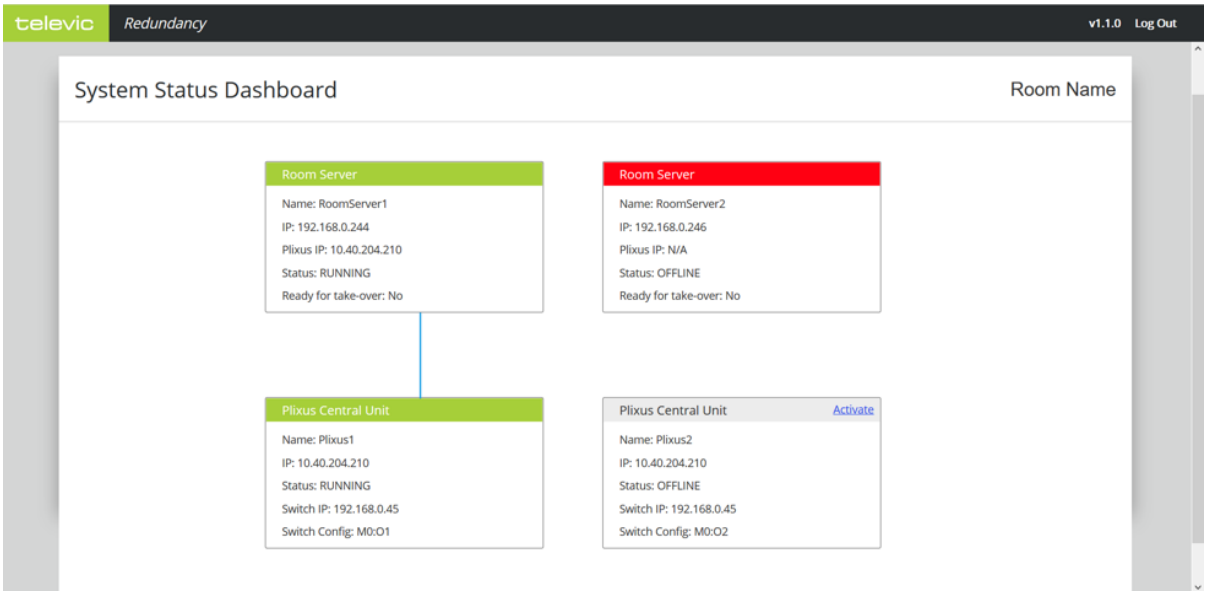
1. When the Redundancy service is active, go to http://localhost in your browser. This brings you to the Redundancy login page. Log in using the user name *admin* and using the password *admin*.



2. Once logged in, the browser shows the redundancy main screen. It shows **all configured CoCon Room Servers and the Plixus engines**:



3. To activate the other Plixus engine, **click** on the **engine** and **confirm**. As a result Plixus2 is shut down and Plixus1 is activated:



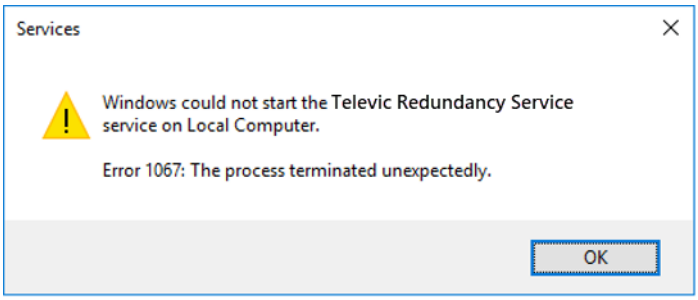
4. The redundancy application monitors the Room Servers and the engines. If an error occurs, the other Room Server or engine is **automatically started**.

TROUBLESHOOTING

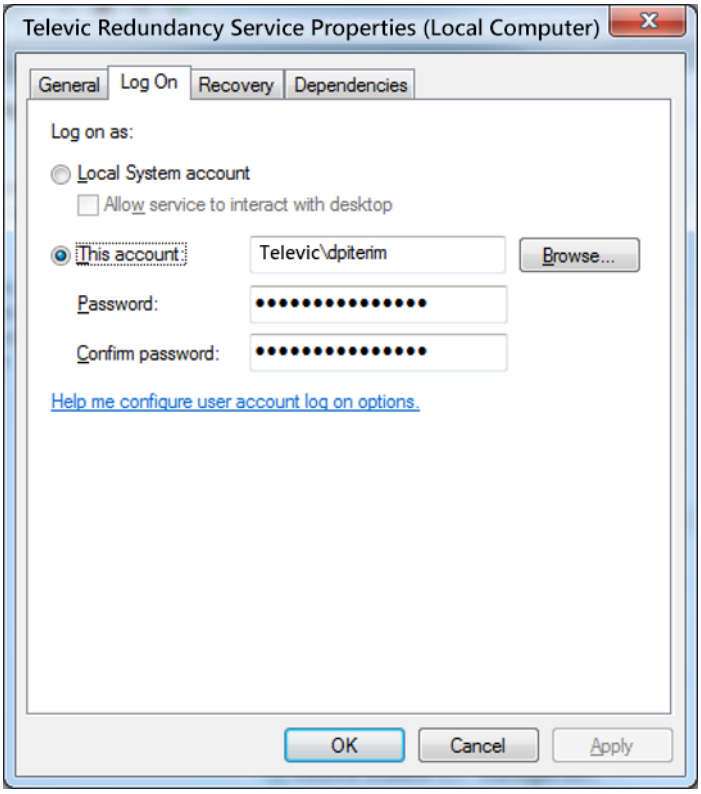
This chapter describes how to handle different known errors.

KNOWN ISSUES

If you encounter the following error during service start-up:



Change **Log On** for the service from **Local System account** to the **specific account**:



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