SIEMENS

SITOP Manager User Manual

Function Manual

08.2018

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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

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indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

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indicates that minor personal injury can result if proper precautions are not taken.

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indicates that property damage can result if proper precautions are not taken.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Siemens AG
Division Process Industries and Drives
Postfach 48 48
90026 NÜRNBERG
GERMANY

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Table of contents

Introduction

1

SITOP Manager is a software tool for secure offline and online commissioning, engineering and monitoring of existing and future OPC UA enabled SITOP devices with communication interface in a customer network.

SITOP Manager consists of three modular services that can be installed and run individually:

- SITOP Manager (MGR)
- SITOP Shutdown Service (SDS)
- SITOP Gateway Service (GWS)

SITOP Manager and SITOP Shutdown Service provide a web based Graphical User Interface (Web GUI).

This version of SITOP Manager supports the OPC UA enabled uninterruptible power supply SITOP UPS1600 and the power supply system PSU8600. For further detailed information regarding the supported devices, please refer to subchapter Supported SITOP Devices (Page 16) or to the following internet addresses: here (http://www.siemens.com/sitop-ups1600) for UPS1600 and here (https://www.siemens.com/global/en/home/products/automation/power-supply/sitop-psu8600.html) for PSU8600.

The software SITOP Manager is provided free-of-charge via the SIOS download portal. SIOS is the Siemens Industry Online Support site available on the Internet at this address (https://support.industry.siemens.com).

1.1 Purpose of this Document

This user manual guides you through using SITOP Manager. Step-by-step instructions explain the installation with the previously downloaded setup file and the basic functions of the software.

Basic Knowledge Required

The following are required to understand this SITOP Manager software:

- Knowledge regarding using personal computers with the Microsoft Windows operating system
- Knowledge regarding configuring SITOP UPS1600 and connected battery modules UPS1100
- Knowledge regarding configuring a PSU8600 system and its extension modules CNX8600, buffer modules BUF8600 and uninterruptible power supply module UPS8600 with connected battery modules BAT8600

Range of Validity

This User Manual is applicable for SITOP Manager V1.0.0 and higher.

1.2 Additional Documentation

Detailed information on the SITOP UPS1600 / UPS1100 can be found in the manual SITOP UPS1600/UPS1100 (https://support.industry.siemens.com/cs/ww/en/view/84977415).

Detailed information on the SITOP PSU8600 with four outputs can be found in the manual SITOP PSU8600 MP (https://support.industry.siemens.com/cs/ww/en/view/105867947).

Detailed information on the SITOP PSU8600 with one output can be found in the manual SITOP PSU8600 SP (https://support.industry.siemens.com/cs/ww/en/view/109482936).

Security and License Information 2

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Customer Services DF&PD

DF CS SD CCC TS

Gleiwitzer Str. 555

90475 Nuernberg, Deutschland

Internet: Support Request (http://www.siemens.com/automation/support-request)

Tel.: +49 911 895 7222

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System Description

3

3.1 System Overview

SITOP Manager consists of three modular services that can be installed and run individually. They are the SITOP Manager Service (MGR), the SITOP Gateway Service (GWS) and the SITOP Shutdown Service (SDS). So, the engineer of the respective plant can decide which services are installed on each machine.

The scopes of the services are as follows:

1. The SITOP Manager Service (MGR) represented by its icon () is used to browse, to engineer, to commission and to monitor multiple SITOP objects like SITOP UPS1600 and SITOP PSU8600 and/or SITOP Shutdown Service. The user interface is realized via a web interface and can be accessed locally or remotely.
2. The SITOP Shutdown Service (SDS) represented by its icon () is responsible for the communication between the IPC on which it is installed and a buffering device (i.e. SITOP UPS1600, PSU8600). It is the minimum required service to trigger the shutdown of the IPC, given a (buffered) power failure. SDS can be configured within the MGR, but also directly via an integrated web interface (necessary for installations without MGR).
3. The SITOP Gateway Service (GWS) represented by its icon () is responsible for the communication between SITOP UPS1600 with USB interface and the OPC UA interface needed for the SDS and MGR. The Gateway Service is installed on the IPC to which the SITOP UPS1600 is physically connected via USB.

Together these three services constitute the software product SITOP Manager.

Application

The main tasks that you can perform with SITOP Manager are as follows:

- Commissioning and monitoring of SITOP UPS1600 and PSU8600
- Online engineering of multiple SITOP UPS1600 and PSU8600
- Offline engineering of multiple SITOP UPS1600 and PSU8600
- Controlled shutdown of buffered IPC systems (IPC 24 Volt)
- Backup project configurations for archiving and replacement
- Secure data exchange and communication

With the specification of further applications and alarms, you define a comprehensive protection of your computer and/or computer network.

3.2 Components of SITOP Manager

SITOP Manager is an engineering and monitoring tool for SITOP devices with communication interface, which consists of three modular components that can be installed and run individually: SITOP Manager Service (MGR), SITOP Shutdown Service (SDS) and SITOP Gateway Service (GWS). Each module is in fact a windows service running in the background. These services can be accessed via the three icons in the system tray.

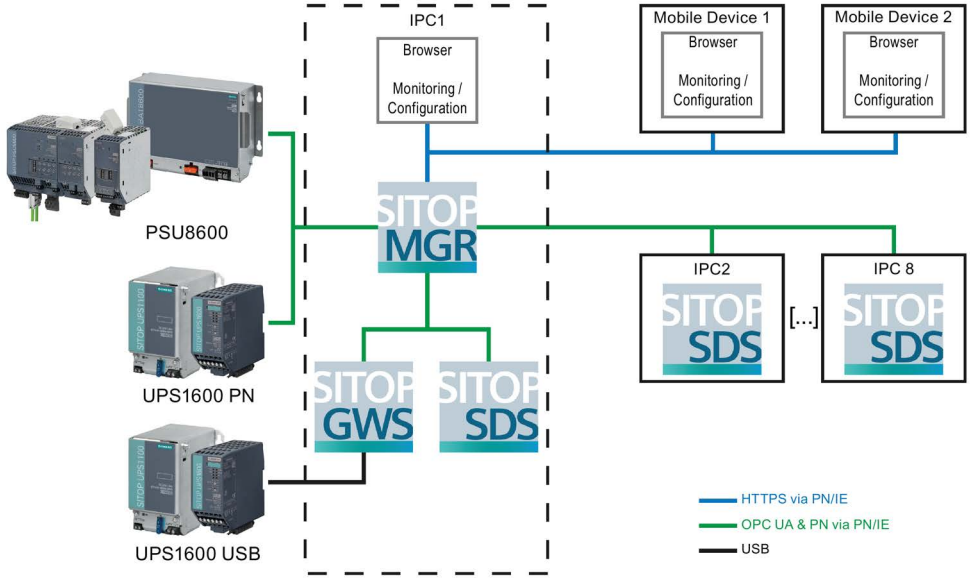


Figure 3-1 SITOP Manager server – Client architecture

3.2.1 Required Installation: SITOP Manager Service + SITOP Shutdown Service (+ SITOP Gateway Service)

- Full functionality of SITOP Manager
- Recommended installation
- GWS is only needed if the UPS device is connected locally via USB
- The user can engineer, configure and monitor all PROFINET devices in the network and the SITOP USB device and the shutdown service on the local IPC

3.2.2 Minimal Installation IPC: SITOP Shutdown Service (+ SITOP Gateway Service)

- For older or resource limited IPCs
- GWS is only needed if the UPS1600 device is connected locally via USB
- No configuration is possible: MGR must be installed somewhere else in order to configure UPS1600 and PSU8600 devices

3.2.3 Engineering IPC: SITOP Manager Service (+ SITOP Gateway Service)

- Recommended to configure SITOP devices
- GWS is only needed if the UPS device is connected locally via USB
- Without the SDS, this IPC will not respond to shutdown commands from SITOP devices

3.3 Supported SITOP Devices

SITOP Manager V1.0.0 supports the following devices:

- SITOP UPS1600 10 A, 20 A as of product state "6" with firmware V2.2.2 or higher
- SITOP UPS1600 40 A as of product state "3" with firmware V2.2.2 or higher
- SITOP PSU8600 20 A/1x20 A as of product state "1" with firmware V1.4.0 or higher
- SITOP PSU8600 20 A/4x5 A as of product state "1" with firmware V1.4.0 or higher
- SITOP PSU8600 40 A/1x40 A as of product state "1" with firmware V1.4.0 or higher
- SITOP PSU8600 40 A/4x10 A as of product state "2" with firmware V1.4.0 or higher

Corresponding expansion and buffer modules of the PSU8600 system are supported with firmware V1.4.0 or higher.

UPS1600 devices are supported directly in the versions with Ethernet/PROFINET interface. UPS1600 devices with USB interface are supported by SITOP Manager Gateway (GWS), given the above minimum firmware version.

Installation 4

4.1 Preconditions

NOTICE
The SITOP Manager Installer is only available/functional for administrators.

Installation

The installation file is available online free-of-charge on SIOS (http://www.siemens.com/sitop).

4.1.1 Supported Hardware and Software

Any IPC that complies with the following minimum requirements can be used:

- Processor:
  - 32 bit and 64 bit architecture-based IPC with Intel or ADM processor
  - Recommended: Quad-Core processors at 1.90 GHz or faster
- Memory: 4 GB
- Disk space: 550 MB on system drive (if all three components are installed!)
- Screen resolution: 1280 × 768 pixels
- Interfaces: Ethernet 100 Mbit/s and USB 2.0

Any mobile device that complies with the following minimum requirements can be used:

- Smartphone and tablet devices running on Android 6 or iOS9
- Memory: 2 GB
- Screen resolution: 320 pixel width
- Interface: Wi-Fi

Operation Systems for IPC

- Windows 7 Enterprise (32 bits and 64 bits) starting from SP1 Build 7601
- Windows 10 Enterprise (64 bits) starting from Build 1511

Any IPC that uses minimum the following browsers can be used:

- Microsoft Internet Explorer V11
- Mozilla Firefox V54

- Google Chrome V60
- Microsoft Edge V25

Operational Requirements for Mobile Devices

Any mobile device that uses minimum the following browsers can be used:

- Google Chrome V60 running on Android 6
- Safari V9.1 running on iOS9

4.1.2 Network

Operational Requirements

A web browser is used for the access to SITOP Manager.

It is necessary to allow incoming connections for the following TCP ports, in order to allow SITOP Manager to communicate with SDS, GWS and other SITOP PROFINET devices:

- 4841 (MGR - OPC UA)
- 4842 (SDS - OPC UA)
- 4843 (GWS - OPC UA)
- PROFINET: 4840 (PSU/UPS OPC UA)
- Web-interface secure:
  - 5445 (MGR - Web-interface secure)
  - 5447 (SDS - Web-interface secure)

Please be aware that ICMP echo requests (ping) from the SITOP devices to the IPCs where the Shutdown Service is running must also be allowed!

Please review the firewall settings in your application to ensure that these requirements are met!

For entirely localized installation (SITOP devices with USB, IPC with MGR, SDS and GWS), there are no firewall requirements.

Network Interfaces Detection

The SITOP Manager web application detects all network interfaces (Ethernet and WLAN), which are available on the hosting IPC.

It is not necessary to detect USB interfaces, because SITOP devices with USB interface use the SITOP Gateway Service and will be automatically displayed with other Ethernet devices within SITOP Manager.

4.1.3 Required Rights

The installation of SITOP Manager requires administration rights.

4.1.4 SIOS

SITOP Manager is available online via SIOS. SITOP Manager, SITOP Shutdown Service and SITOP Gateway Service are delivered in one installation package with the possibility to select the installable components.

4.2 Installing SITOP Manager

To install SITOP Manager, please observe the requirements below:

1. Download the .zip file (Setup_SITOP-Manager_<SW Version Number>.zip) containing the executable setup file (Setup_SITOP-Manager_<SW Version Number>.exe) for the SITOP Manager Installer.
2. Save the .zip file and unpack it to a local drive.
3. Double click the installation application executable "Setup_SITOP-Manager_<SW Version Number>.exe" file.

4.2.1 Installation

Please follow the steps below provided by the SITOP Manager Installation Wizard:

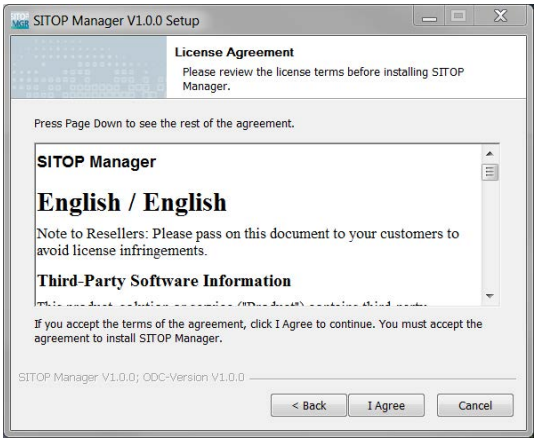
1. Select the language you want to be used during the installation wizard from the drop-down list and click the OK button. The Installer supports the English (US), French, German, Italian and Spanish languages.

NOTICE
The Installer does not support the Chinese (Simplified) language, but SITOP Manager software does.

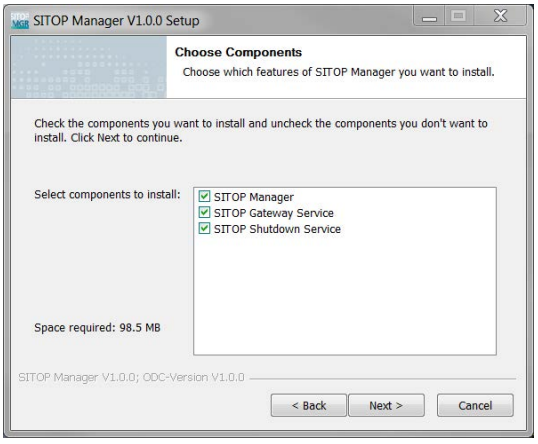
2. Read the welcome message to the SITOP Manager setup and click the "Next" button.

3. Read the SITOP Manager License Agreement carefully and, if you agree with it, click the "I Agree" button.

NOTICE
You must accept the License Agreement in order to install SITOP Manager.



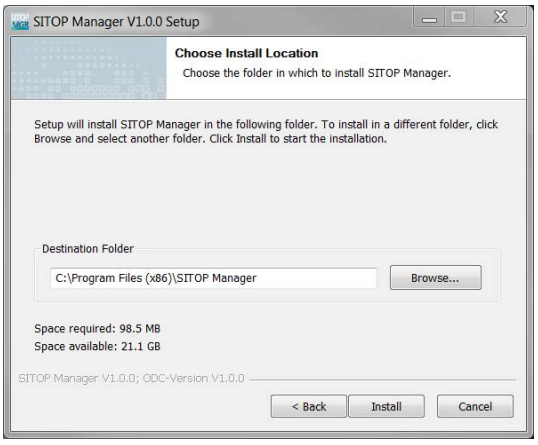
4. Check all of the components that you want to install. Full installation is already preselected. If you need just certain components of SITOP Manager (e.g. just installation of SITOP Shutdown Service), please make your selection accordingly. After selection, click the "Next" button.



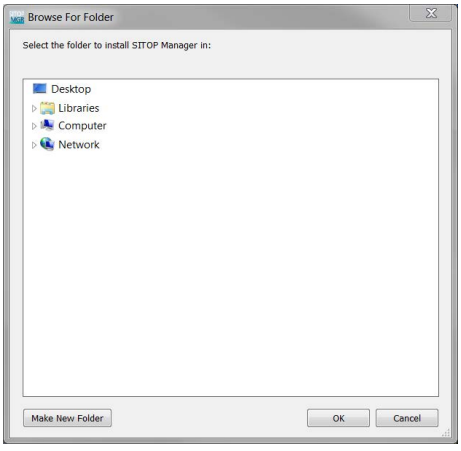
On this page, the storage consumption is displayed.

5. Select the location where you want to install your selected components of SITOP Manager. In order to realize this, you have two options: either write the path to the installation folder in the "Destination Folder" textbox or select another directory by clicking the "Browse..." button.

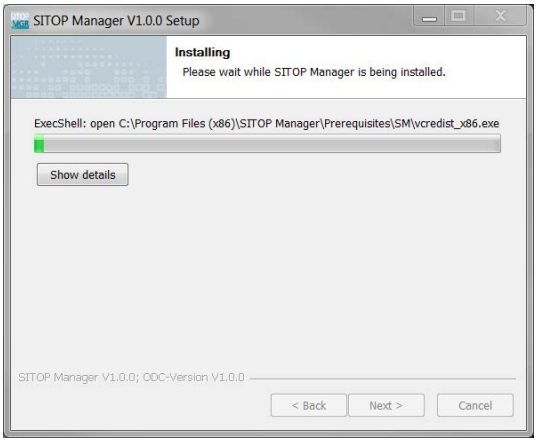
   After choosing the install location, click the "Install" button.



   If you select another directory, navigate to the installation folder and then click the OK button.



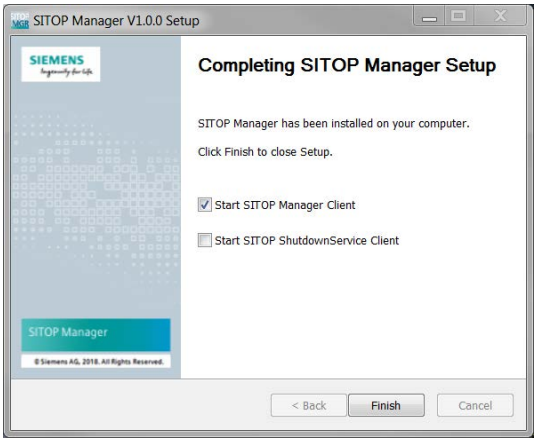
6. Wait for the chosen components to install. During installation you can click the "Show details" button to see the exact actions taken by the Installer.



7. Click the "Finish" button to complete the installation.

Note

By default, the SITOP Manager client start checkbox is preselected. If you do not wish for this service to start after closing the dialog window, then uncheck the corresponding checkbox.



You have successfully managed to install SITOP Manager.

Note

After successful installation, for SITOP Manager and respectively for the SITOP Shutdown Service (if both services are installed), an icon appears on the desktop.

You can access the web interface locally, either by clicking the icon(s) on the desktop or in the Windows start menu, or by clicking the corresponding icon in the task/tray bar.

Note

The installer installs the SSL web server certificate during the installation process.

NOTICE
For the functioning of SITOP Manager a Microsoft Loopback Adapter is installed. Please make sure you do not delete it!

4.2.2 Silent Installation

The Installer offers the possibility to install SITOP Manager per command line.

CAUTION
You must have Windows administrator privileges in order to perform the silent installation.

The steps for performing a silent or an unattended installation are as follows:

1. Open a command prompt window and navigate to the directory where the Setup_SITOP-Manager_V1-0-0.exe file is located.
2. Install from command line.

   The following table identifies the command-line options:

Parameters	Description
/MGR	(optional) Installs SITOP Manager
/GWS	(optional) Installs the SITOP Gateway Service
/SDS	(optional) Installs the SITOP Shutdown Service
You can choose to install all three components by writing all three parameters or choose only one or two of the components to install, but you have to install at least one component.	
/D=	(required) Specifies the installation directory, e.g. /D=C:\.... Please be aware that the silent installation program gives you the possibility to select the directory where you want the application to be installed!
/norestart	(optional) Prevents the restart of your IPC at the end of the installation. Under certain conditions, a system reboot might be necessary for the installation to complete successfully. The option "norestart" causes the installation program to not reboot the system if circumstances would otherwise cause the reboot to occur. While this option is convenient, please use this parameter with caution because if the silent installer needs to reboot your system and this "norestart" command is used, then no installation will take place!

In order to install from command line, you can use the following syntax:

>Setup_SITOP-Manager_V1-0-0.exe /MGR /SDS /GWS /D=C:\<destination directory>

When you are running the installation in silent mode, please keep in mind the following considerations:

- Silent mode installation requires the same amount of temporary disk space and uses the same temporary storage directories as a standard installation. The installation program does not alert you if there is not enough space in the temporary directory.
- You can reinstall SITOP Manager over a previously installed same version of SITOP Manager in the same home directory and in the same file location. You can add any of the three components to an already existing installation. For example, you can install one service during one installation and another service during a separate installation (or any variation thereof). Any of the three components can be installed over the corresponding components already installed, whether of the same version or of different versions, but an already installed component cannot be moved to another location after the installation is completed. If you want to move an already installed component to another location, you have to uninstall it and then reinstall it to the newly desired location.

- SITOP Manager silent installer recognizes an already installed application and performs only an update!

Note

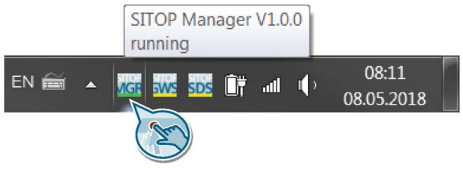
In this case, the following command line shall be used: >Setup_SITOP-Manager_V1-0-0.exe /MGR /SDS /GWS /D=C:\<existing installation directory>

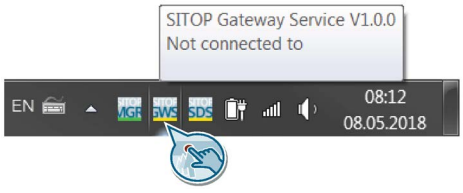
4.2.3 Service Control

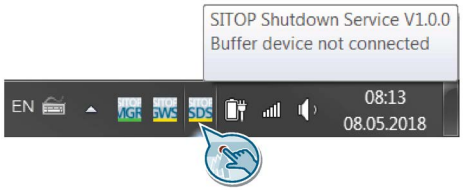
Following SITOP Manager, SITOP Gateway Service and SITOP Shutdown Service control icons are provided in the task bar after installation:

SITOP Manager can be controlled by these service icons.

At mouse over each icon, the status of the corresponding service is displayed. Here are some examples:





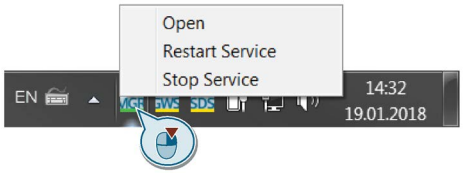


At mouse over, each service shows its status as stopped:

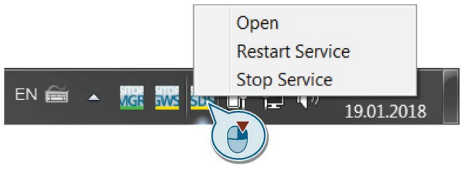
Color	Description
Green	Service running: The green color marks the fact that the service is running and everything is working.
Yellow	Not connected: The yellow color informs that the running service is facing an issue. At mouse over, the corresponding issue message is displayed: in this case, the SITOP Gateway Service is not connected to a USB device and to the SITOP Shutdown Service there is no buffer component assigned.
Red	Service error: If the services are not running, their respective icons are red.

When clicking right on each icon, the services show different actions that can be taken for each service.

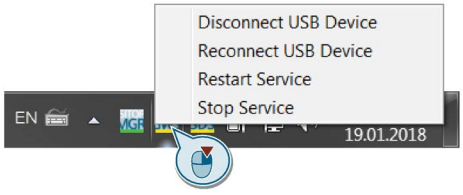
At right click on the MGS icon, you can open, restart or stop the service:



The SDS icon offers you the same three possibilities:



The GWS icon offers you four possibilities: to disconnect or reconnect the USB device, to restart or to stop the service.



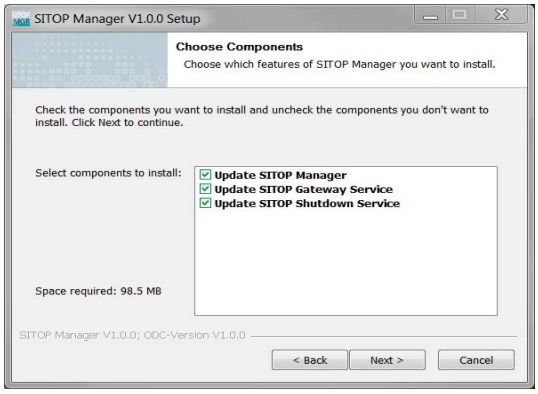
4.2.4 Updating SITOP Manager

SITOP Manager offers you the possibility to update the components according to your needs without the requirement to uninstall SITOP Manager first.

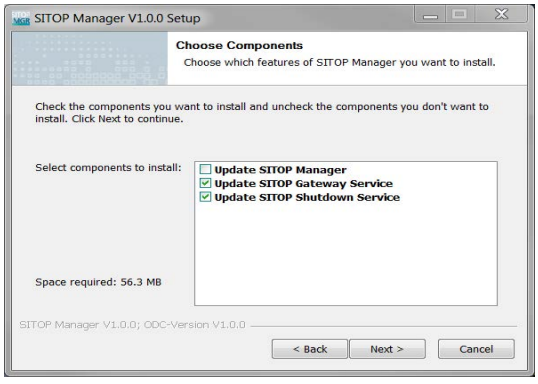
The updating of SITOP Manager follows the steps of the installation process. For further detailed information regarding the installation process, please refer to subchapter Installation (Page 20).

Special cases

- When you want/need to update SITOP Manager as a whole, then update all of its components by checking them in the dialog page seen below after following the installation process as mentioned above. After selection, click the "Next" button.



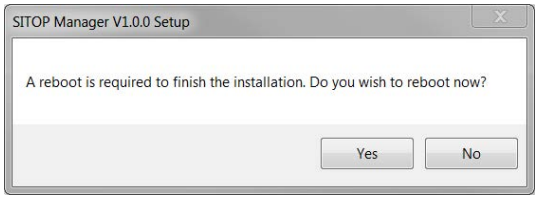
- When you want/need to update certain services, then select only those components you want to update as shown below:



Note

In case the corresponding services cannot be automatically stopped during the update process, you are required to reboot your IPC in order to complete the update.

In this case, the following message appears:



Updating SITOP Manager using silent installation

SITOP Manager Installer offers the possibility to update components silently, but for already installed components only and only if you write in the correct parameter for update.

Note

In this case, please be aware that for the update, the existing path is used.

A newly entered path is only taken into account for installations not for update. For instance, MGR and SDS components are already installed, but GWS is not. GWS needs to be installed and MGR and SDS need to be updated. GWS is installed using a newly entered path, while MGR and SDS are updated on the existing path.

For further detailed information regarding the silent installation, please refer to subchapter Silent Installation (Page 24).

4.2.5 Uninstallation

SITOP Manager setup also provides a function for uninstallation. You can uninstall SITOP Manager as a whole or just a certain component.

To uninstall SITOP Manager, please follow the steps below:

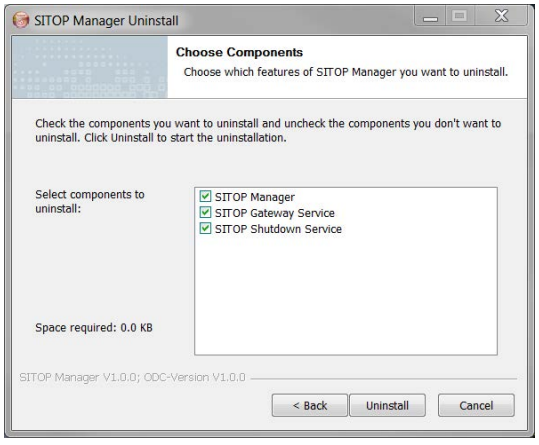
Please use the Uninstaller provided in the installation directory or directly over Windows start menu!

1. Select the language you want to be used during uninstallation from the drop-down list and click the OK button. Just like the Installer, the Uninstallation Wizard supports the English (US), French, German, Italian and Spanish languages.

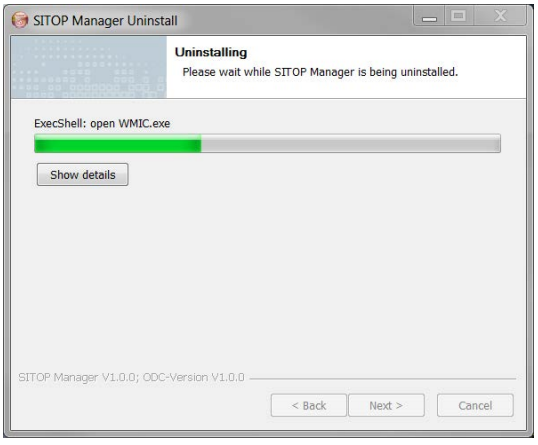
NOTICE
The Uninstaller does not support the Chinese (Simplified) language!

2. Read the welcome message to the SITOP Manager Uninstallation Wizard and click the "Next" button.

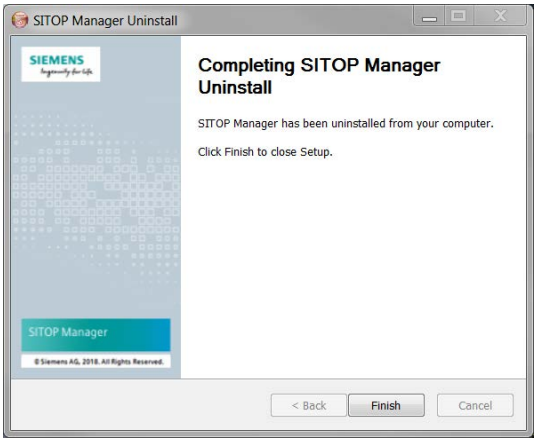
3. Check all of the components that you want to uninstall. After selection, click the "Uninstall" button.



4. Wait for the chosen components to uninstall. During uninstallation, you can click the "Show details" button to see the exact actions taken by the Uninstallation Wizard.



5. Click the "Finish" button to complete the uninstallation.



The icons corresponding to SITOP Manager, SITOP Gateway Service and SITOP Shutdown Service are no longer shown in the tray bar and on the desktop.

You have successfully managed to uninstall SITOP Manager and its components.

If you need to reinstall SITOP Manager, you have to follow again the installation steps described in subchapter Installing SITOP Manager (Page 20).

The Uninstaller offers the possibility to uninstall SITOP Manager silently per command line.

CAUTION
You must have Windows administrator privileges in order to perform the silent uninstallation.

The steps for performing a silent or an unattended uninstallation are as follows:

1. Open a command prompt window and navigate to the directory where SITOP Manager was installed.
2. Uninstall from command line.

   The following table identifies the command-line options:

Parameters	Description
/MGR	(optional) Uninstalls SITOP Manager
/GWS	(optional) Uninstalls the SITOP Gateway Service
/SDS	(optional) Uninstalls the SITOP Shutdown Service
You can choose to uninstall all three components by writing all three parameters or choose only one or two of the components to uninstall, but you have to uninstall at least one component.	
/norestart	(optional) Prevents the restart of your IPC during the uninstallation. Under certain conditions, a system reboot might be necessary for the uninstallation to complete successfully. The option "norestart" causes the uninstallation program to not reboot the system if circumstances would otherwise cause the reboot to occur. While this option is convenient, please use this parameter with caution because if the silent uninstaller needs to reboot your system and this "norestart" command is used, then the uninstallation will not take place!

In order to uninstall from command line, you can use the following syntax:

uninst.exe /MGR /SDS /GWS /norestart

SITOP Manager Web Access

5

5.1 Securing HTTPS Access

NOTICE
SITOP Manager provides only secure HTTPS communication. HTTP communication is for security reasons not available! TLS V1.2 is the precondition for HTTPS access. For more detailed information regarding the browser specific setting, please refer to chapter Troubleshooting (Page 167).

Delivery State

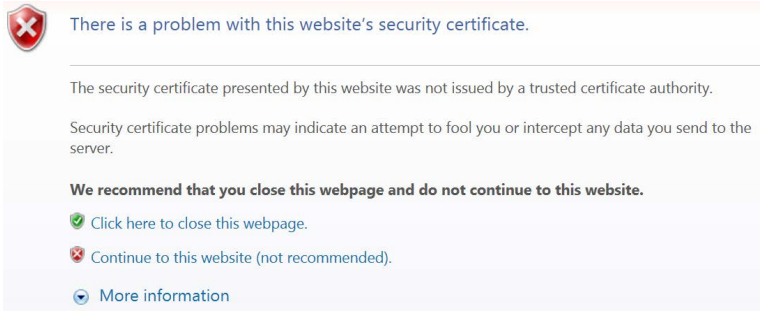
The as-delivered state provides a standard server certificate (self-signed) and a private key of the web server after successful SITOP Manager installation.

During HTTPS connection to the SITOP Manager server, the stored certificate is sent to the client browser. The browser will now display a warning that an attempt is being made to communicate via an untrustworthy certificate. To trust the unknown certificate and establish secure access via HTTPS in the SITOP Manager delivery state, please follow the instructions in your browser for the exact procedure when importing the certificate.

Importing the Certificate Using the Internet Explorer V11 Browser

In order to import the certificate using the Internet Explorer V11 browser, please follow the steps below:

1. Connect to SITOP Manager using the following address: https://<IP address>:5445.



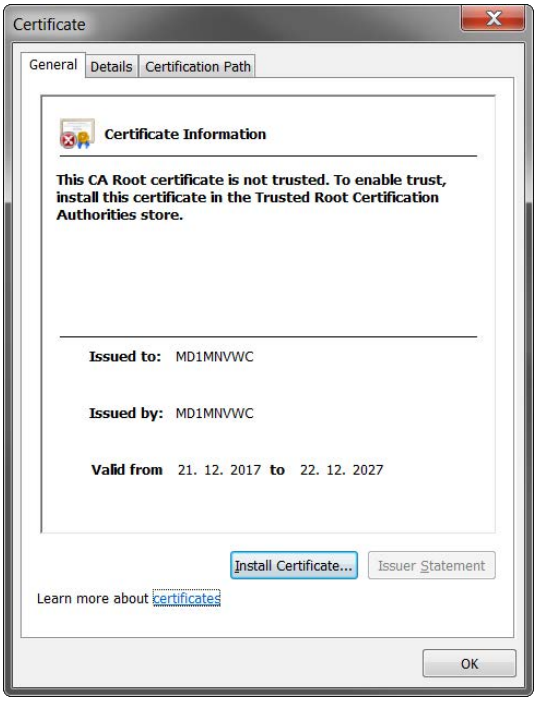
You may see a screen like the above due to the fact that your self-signed certificate is not trusted.

Choose the "Continue to this website (not recommended)" option to be then forwarded to the SITOP Manager landing page.

2. Here, click in the Top header view the "Download certificate" menu item and download the certificate out of the menu ( ) icon as shown below:

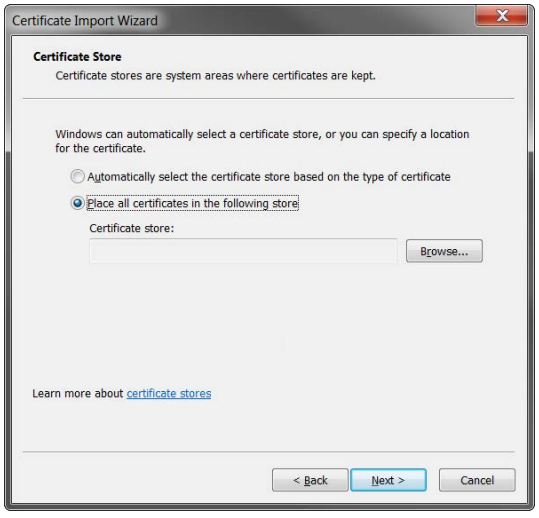
Now, please open the downloaded certificate.

3. Select "Install Certificate..." from the Certificate dialog.



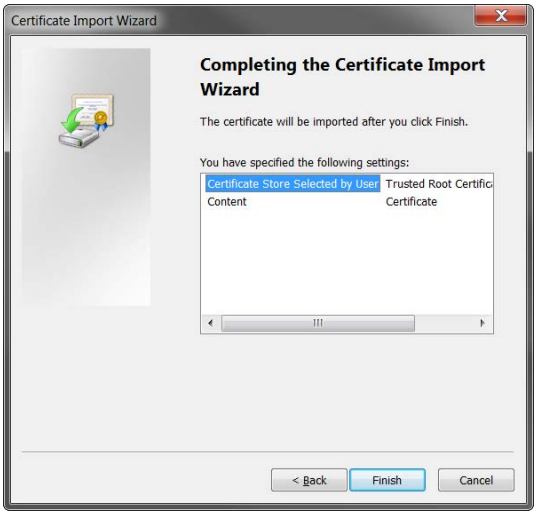
4. This will launch the Certificate Import Wizard:

After clicking "Next", please make sure to choose the option "Place all certificates in the following store" and select "Browse..." in the following dialog:

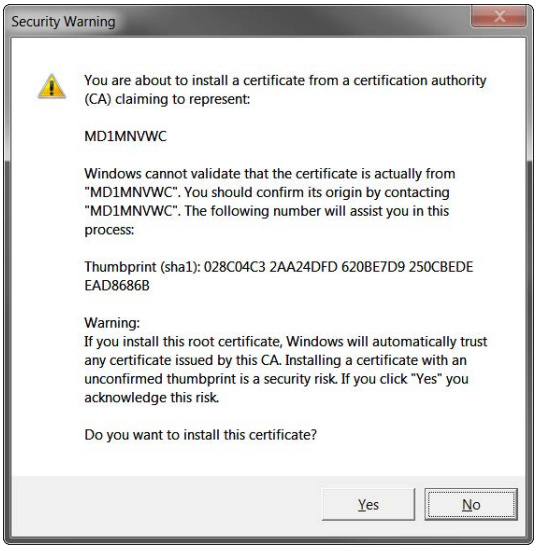


5. Select "Trusted Root Certification Authorities" and click OK:

6. Click "Finish" on Completing the Certificate Import Wizard:



7. Click "Yes" on the Security Warning pop-up to install the certificate:



8. Restart the browser.

5.2 Languages

Multilanguage Support

SITOP Manager supports the English (US), French, German, Italian, Spanish and Chinese Simplified languages.

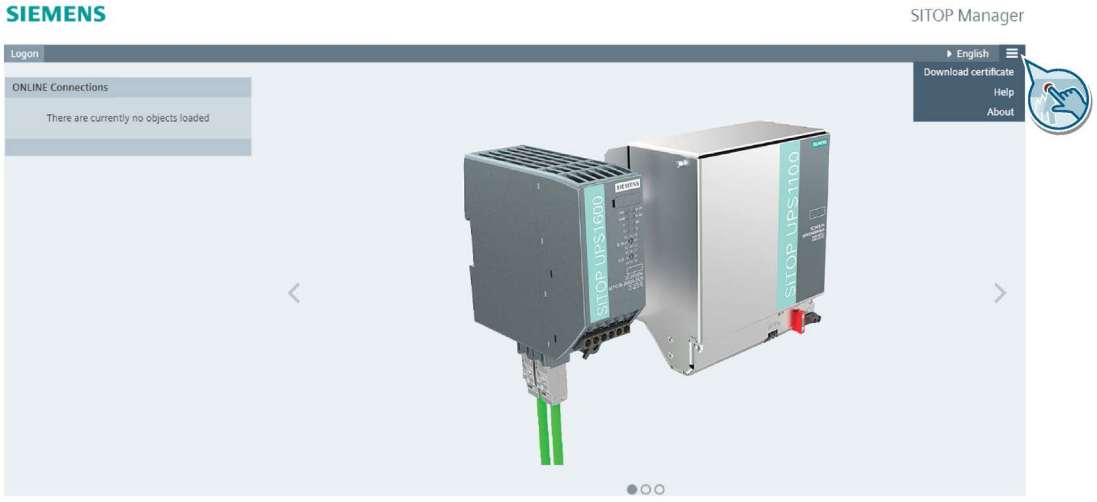
Language selection is always possible within SITOP Manager.

SITOP Manager detects and applies automatically the preferred language provided by the browser. For the cases in which the browser language is not supported, then the primary language English is applied.

5.3 Landing Page

SITOP Manager is available at the following address: https://<IP address>:5445.

When accessing SITOP Manager for the first time (no online objects have been added to SITOP Manager up until that point in time), the following page opens:



At this stage, the available functions are in the Top header view: a logon (Logon) button, a drop-down field for changing the language (English) and the menu ( ) icon.

Clicking the menu ( ) icon offers you three possibilities:

- Download certificate: you can download and then install the certificate for accessing SITOP Manager by using the browser Certificate Import Wizard. For further detailed information regarding the certificate installation, please refer to subchapter Securing HTTPS Access (Page 33).
- By clicking the "Help" menu item, you can access the SITOP Manager User Manual in PDF format.
- The "About" menu item offers information about:
  - the currently used SITOP Manager version
  - the currently used ODC version
  - the copyright information and
  - a link to the "License information"

Note

Clicking the "License information" link provides a .zip file with the 3rd party license information in html format: LicenseInformation.html

This file can be saved by using the dialog window that opens when clicking the link.

In order to have configuration access to SITOP Manager, either offline or online, you have to log in by clicking the "Logon" (Logon) button on the left side of the Top header view. For further detailed information regarding the Top header view, please refer to subchapter Top Header View (Page 43).

5.4 First Logon

5.4.1 User Management

To get access to SITOP Manager, it is necessary to authenticate with a valid username and password. SITOP Manager considers two different users: "admin" and "guest".

The user "admin" has full access (all rights) to the SITOP Manager functionality and has full access to all online SITOP objects. The "admin" can change their own and the "guest" password.

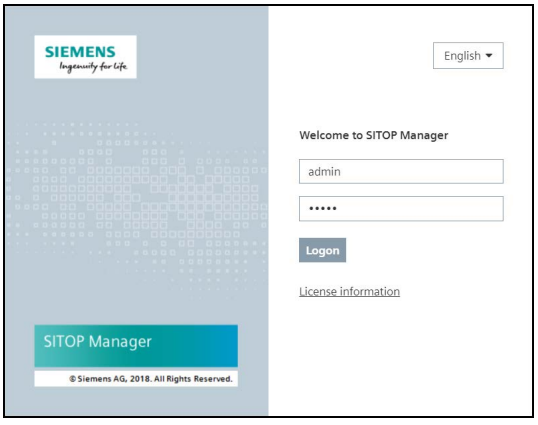
WARNING
In case the "admin" forgets their password, a re-installation is necessary.

The user "guest" has limited access to SITOP Manager and can only change their own password.

For further detailed information regarding "admin" accessibility, please see below. For further detailed information regarding "guest" accessibility, please refer to subchapter Guest User (Page 46).

5.4.2 First Logon

After clicking on "Logon" (Logon) in the landing page, a login page opens. On the login page, there is a login form, a drop-down field for changing the language and a link to the license information:



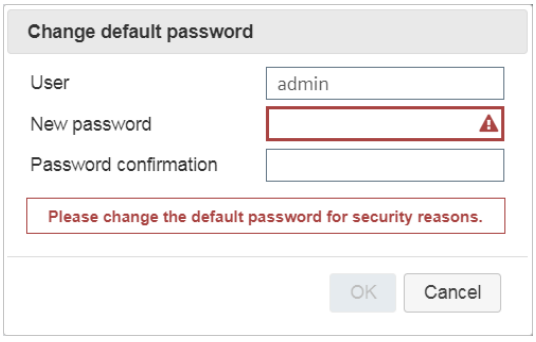
WARNING

At the first login with default user name "admin", a change default password dialog opens, giving you the possibility to change the insecure default password. This step can be postponed by clicking the "Cancel" button of the pop-up.

Please be aware that you remain logged in with an insecure default password!

Note

The message "Please change the default password for security reasons." that appears written in red in the change default password dialog reminds you of the insecure nature of the default password.



NOTICE

After the first login, your browser may offer you the option to save the password for SITOP Manager.

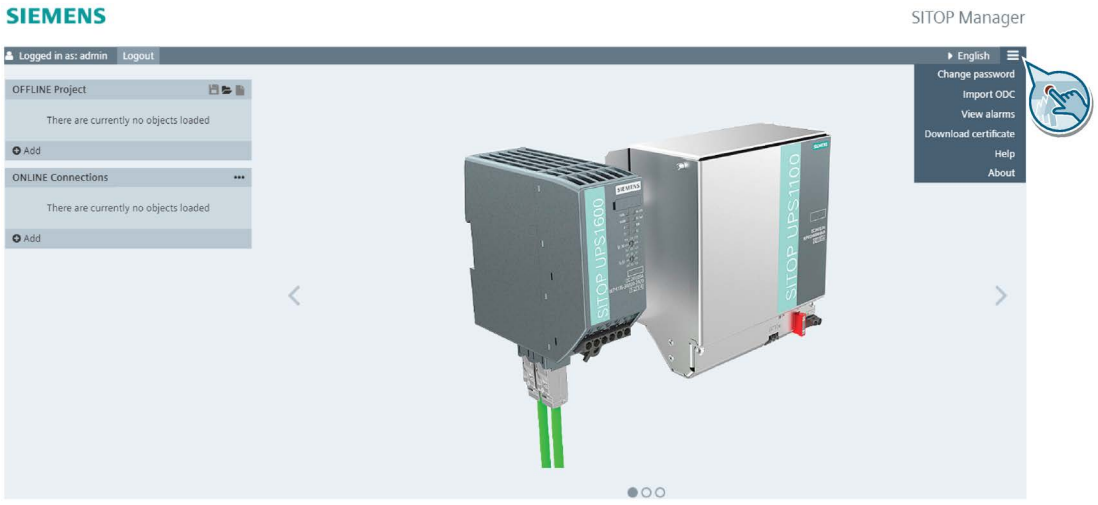
1. You can either confirm the message: that is let the browser save the SITOP Manager credentials in order to automatically sign in from that moment on by using the stored credentials every time you access SITOP Manager or
2. You can deny the message: that is block the browser from saving the SITOP Manager credentials. In this case, you need to enter the login credentials every time you access SITOP Manager.

If you let the browser save the SITOP Manager credentials, please check if the browser does not autofill the SITOP Manager password in the specific device password fields that appear while adding a new device into ONLINE Connections and in the Commissioning page. In this case, just delete the default password and write in the correct specific device password.

Please make sure that the password complies with the following criteria:

The password must fulfill the following criteria:
- Must contain a minimum of 8 and a maximum of 20 characters.
- Contains at least one uppercase letter (A to Z).
- Contains at least one lowercase letter (a to z).
- Contains at least one digit (0 ... 9).
- Contains at least one special character (e.g. !, $, #, %).

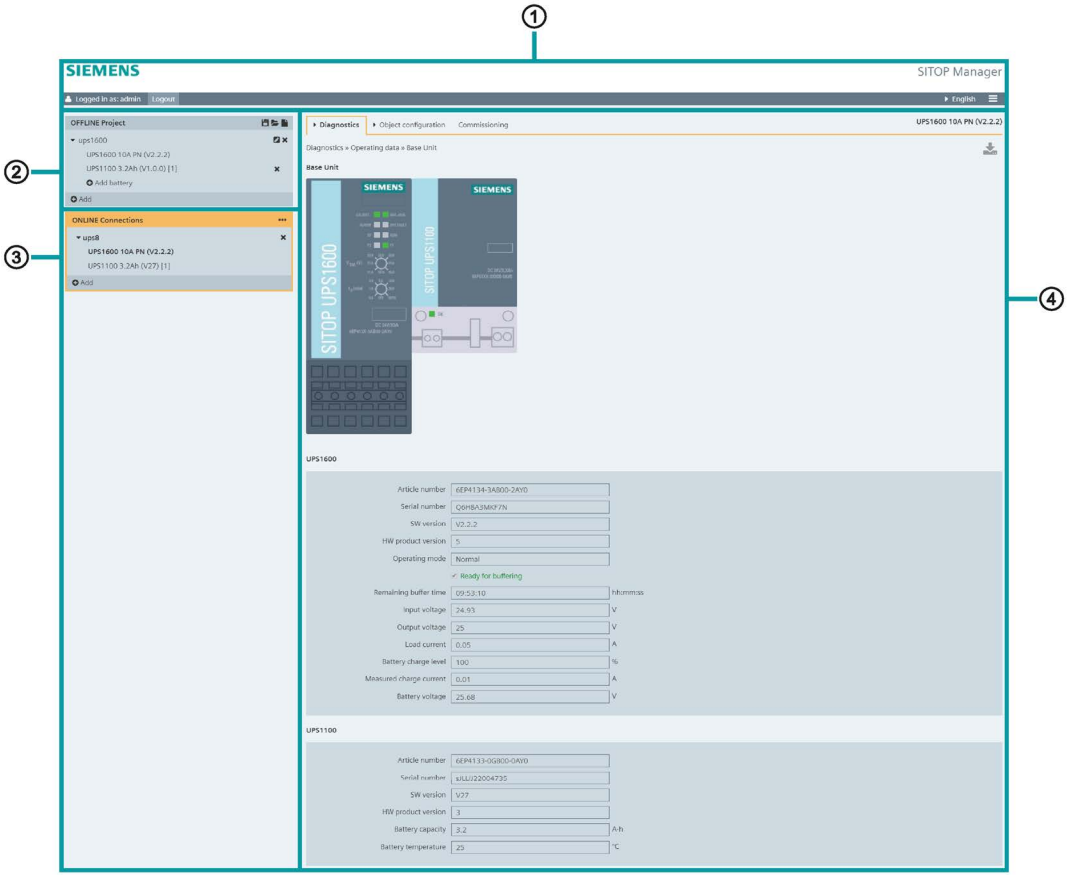
After this step, you are led to the SITOP Manager home page:



5.5 Home Page

5.5.1 Page Layout

The layout of the SITOP Manager page (both desktop web access and mobile web access) consists of four sections:



- ① Top header view
- ② Browser view - OFFLINE Project
- ③ Browser view - ONLINE Connections
- ④ Content view

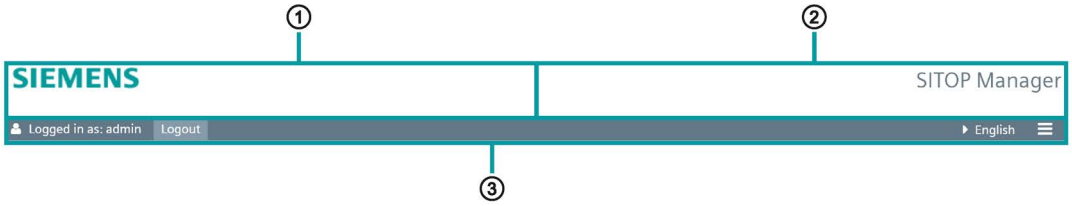
Note

The orange coloring indicates an active and in use ONLINE Connections configuration mode (please refer to figure above, ONLINE Connection section ③ and the Content view section ④).

For the corresponding mobile web access layout description, please refer to subchapter Differences between Desktop and Mobile Display (Page 47).

5.5.2 Top Header View

The Top header view consists of 3 sections:

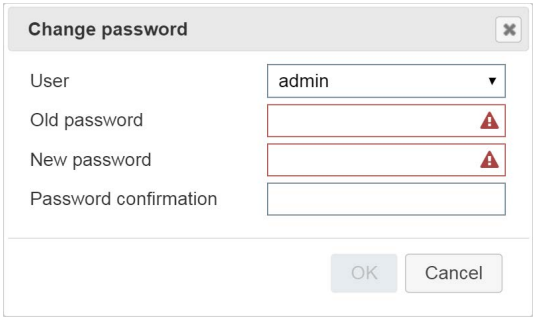


The logo section ① contains the Siemens logo. The authentication section ② contains the software identification name. The menu bar section ③ contains information about the current user login, provides logon/logout functionality, contains the language selection drop-down button and a menu button.

Note

Clicking in the logo section on Siemens, opens the Siemens home page (https://www.siemens.com), while clicking on SITOP Manager opens the SITOP power supply product website (http://www.siemens.com/sitop).

The menu bar section ③ offers the following general functions and settings:

HMI Control	Description	Action/ Info
Task Bar – Login Identification		
Logon (Logon)	This button displays the logging entries of SITOP Manager.	I
Logout (Logout)	This button provides SITOP Manager user logout and leads to the landing page.	A
Task Bar - Language		
English (English)	At mouse over, this icon opens a drop-down list for language selection.	A
Task Bar - Menu ( )		
Change password	This menu item provides a dialog for changing the password. You can change your own password either as "admin" or as "guest":  In order to successfully change the password, you have to observe the requirements for changing the password mentioned in subchapter First Logon (Page 39).	A

HMI Control	Description	Action/ Info
Import ODC	This menu item provides a dialog for importing a new ODC version into the Objects catalog. The import process starts with direct Windows file selection. The file transfer takes about 3 seconds. After importing the new ODC, the connection to the software is updated. For further detailed information regarding the importing of the ODC, please refer to subchapter Object Description Catalog (ODC) (Page 53).	A
View alarms	This menu item provides a shortcut to the SITOP Manager alarms. For further detailed information, please refer to subchapter Alarms (Page 173).	I
Download certificate	By clicking this menu item, you can download and then install the self-signed certificate as trusted certificate by using the browser Certificate Import Wizard. For further detailed information regarding the certificate installation, please refer to subchapter Securing HTTPS Access (Page 33).	A
Help	By clicking this menu item, you can access the SITOP Manager User Manual in PDF format.	I
About	This menu item provides the same information as in the Landing Page (Page 38).	I

5.5.3 Content View

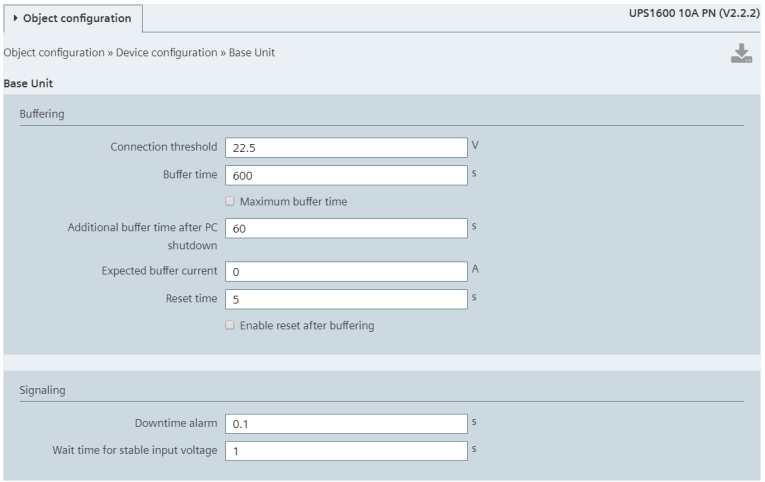
This view allows the commissioning, monitoring and configuration functionalities to be administered.

The Content view data representation depends on two factors:

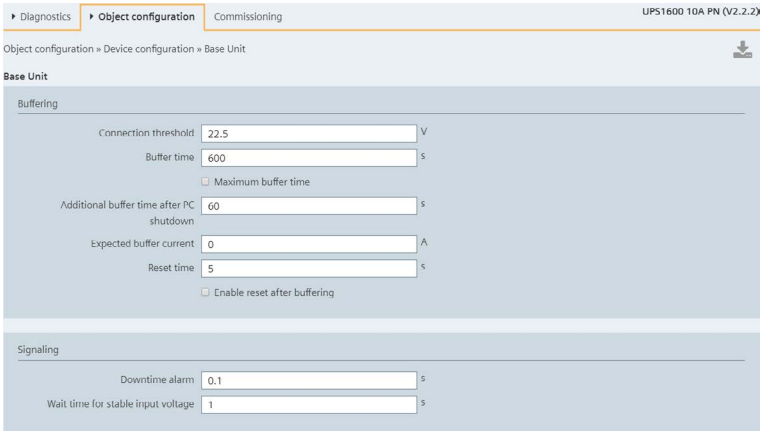
1. on whether you are offline or online in connection to SITOP Manager and
2. on the selected object in the browser view.

Depending on this selection, the following pages are displayed in the Content view:

1. For the offline engineering, the Object configuration page is shown in Content view:



2. For the online engineering, the user has access to Diagnostics, Object configuration and Commissioning pages:

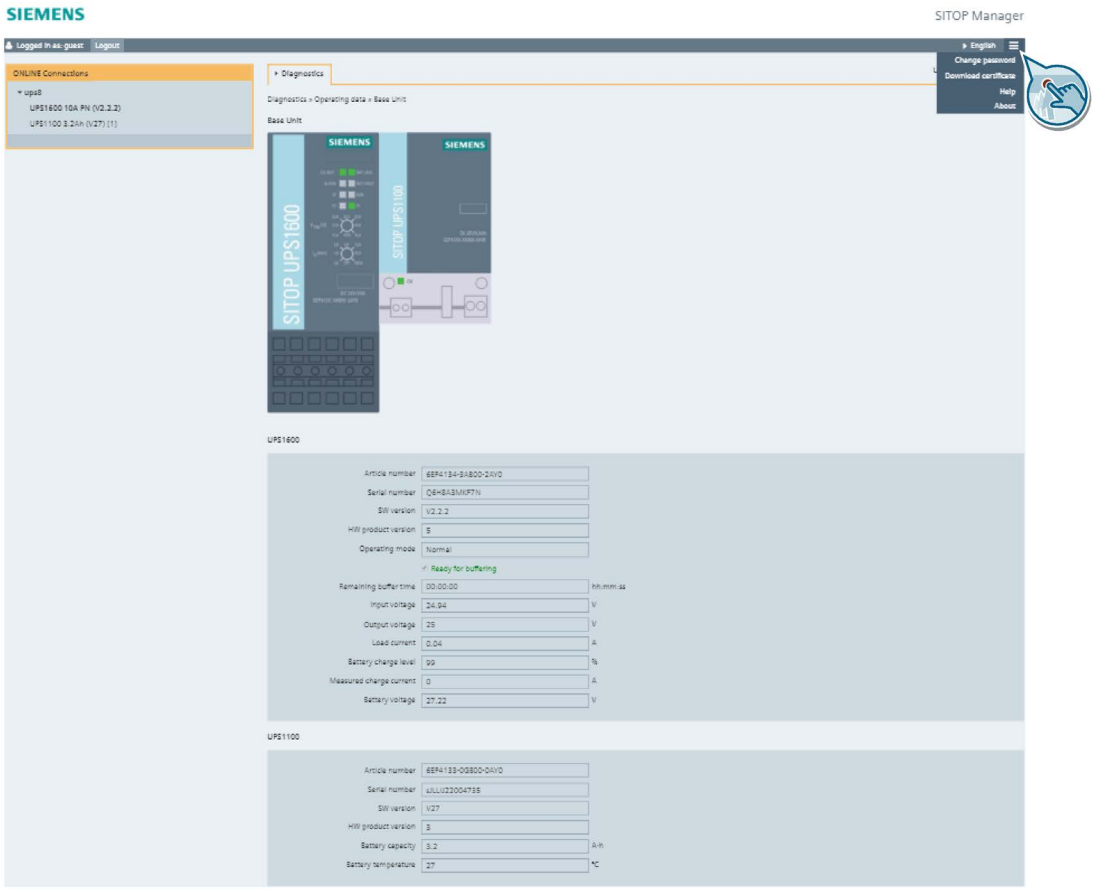


5.6 Guest User

The "guest" user has limited functionality.

After logging in with "guest", the user is only able to monitor online objects existing in ONLINE Connections. Clicking on an existing online object results in displaying the diagnostics data of the corresponding object (Operating data > Base Unit). No other web pages like Object configuration and/or Commissioning are shown.

All the displayed parameters are read-only.



The user "guest" has also the possibility to access functions within the Top header view, but only: Logon/Logout, language selection, Change password, Download certificate, Help and About. For further detailed information regarding these functions, please refer to subchapter Top Header View (Page 43).

5.7 Differences between Desktop and Mobile Display

SITOP Manager uses responsive design to reformat the view optimizing itself for display on both desktop and mobile devices.

NOTICE
Mobile web access provides the same functionalities as desktop web access.

The main difference between the mobile view and the desktop view of SITOP Manager resides in the fact that the mobile view has a vertical alignment of the content view instead of the horizontal alignment of the desktop view.

Another difference is that the mobile web access presents an icon for drag and drop ( ) functionality, while the desktop web access does not need it due to the ease of access in this view.

The layout of SITOP Manager (mobile web access) does not consist of different views because otherwise there would be too much information on just one page, which cannot be displayed well on mobile devices, yet it does always have one active view.

Using SITOP Manager on Mobile Devices

The requirements for accessing SITOP Manager with mobile phones or devices are mentioned in subchapter Preconditions (Page 17).

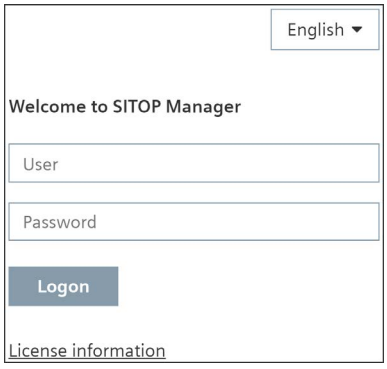
Landing Page

On the landing page, there is a "Logon" (Logon) button, a drop-down field for changing the language (English) and the menu ( ) icon.

Accessing the menu ( ) icon offers you the same options described in subchapter Landing Page (Page 38).

Login Page

After clicking the "Logon" (Logon) button in the landing page, a login page opens:

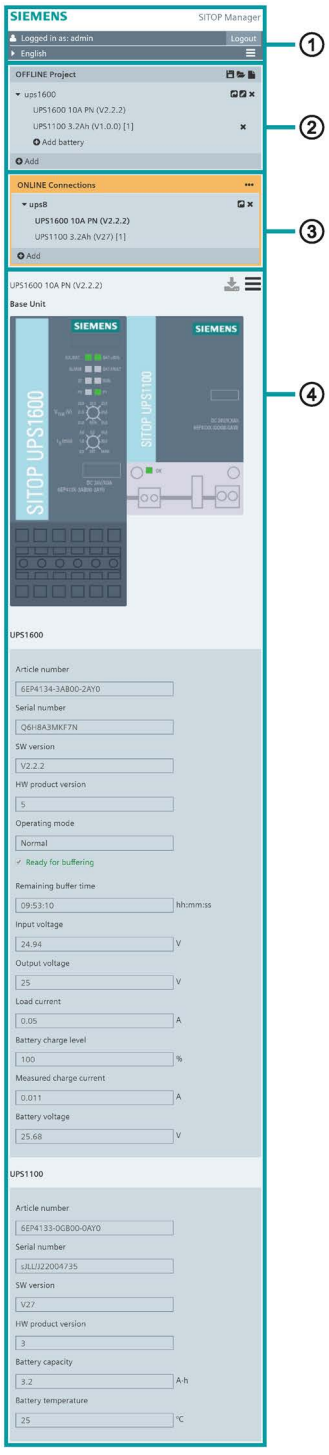


To get access to SITOP Manager (mobile web access), it is necessary to authenticate with "admin" or "guest" username and a valid password. Please make sure that you have observed the requirements for a password mentioned in subchapter First Logon (Page 39)!

SITOP Manager (Mobile Web Access) Home Page

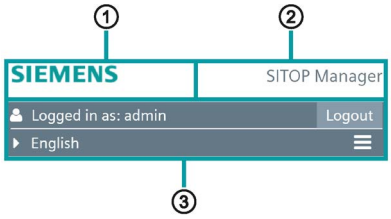
After successful login, the SITOP Manager (mobile web access) home page is as follows:

The mobile view page layout consists of the same four sections as the desktop view:



For further detailed information, please refer to subchapter Page Layout (Page 42).

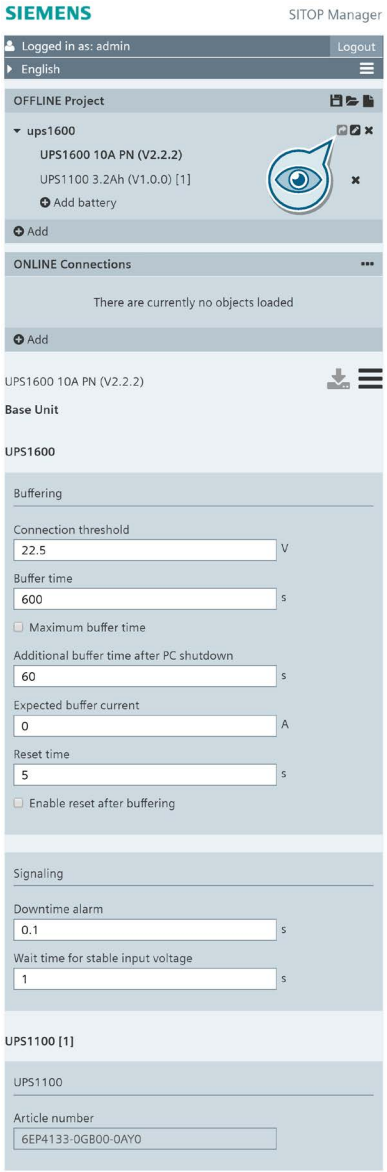
The Top header view of the mobile view presents the same 3 sections as the desktop view:



For further detailed information, please refer to subchapter Top Header View (Page 43).

As mentioned before, the Content view of the mobile view is vertically aligned, but offers the same two main functionalities, offline and online engineering, as the desktop view.

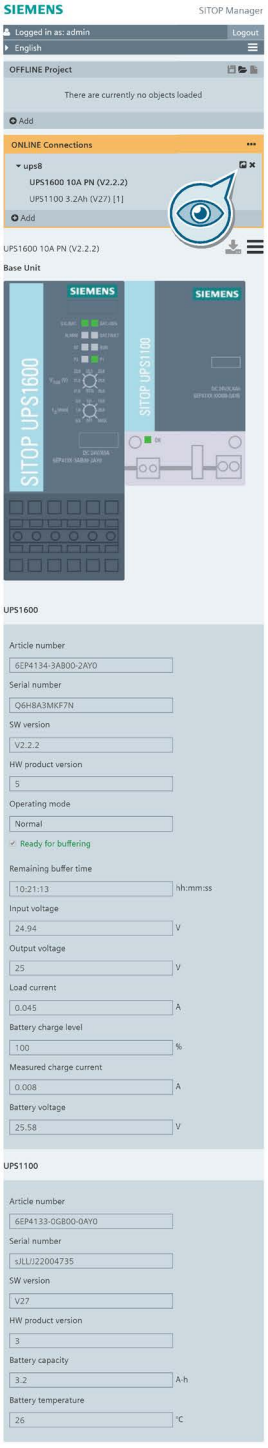
The administration of the offline engineering in this view is the same as in the desktop view:



In this view, the drag and drop ( ) icon is inactive as long as no object is loaded into the ONLINE Connections view. When an object is added in the ONLINE Connections, the drag and drop ( ) icon becomes active.

For further detailed information, please refer to subchapter Offline Engineering (Page 55).

The administration of the online engineering in this view is the same as in the desktop view:



In this view, the drag and drop ( ) icon is always active, irrespective of whether an object is or not loaded into the OFFLINE Project view.

For further detailed information, please refer to subchapter Online Engineering (Page 71).

Engineering

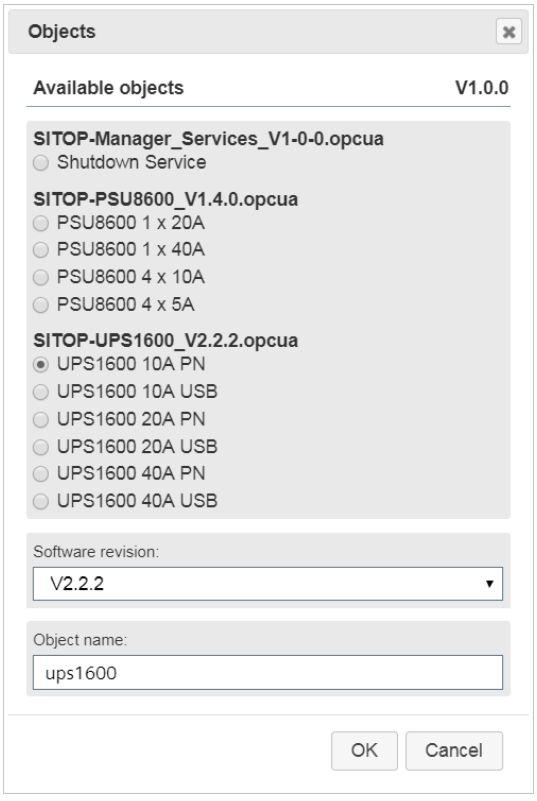
6

6.1 Object Description Catalog (ODC)

SITOP Manager engineering (meaning the software's offline and online functionalities) is based on the ODC. The ODC file contains the configuration data of all supported SITOP OPC UA communicative devices and services in all firmware revisions available until the SITOP Manager release date.

NOTICE
There is no need to reinstall SITOP Manager in case new firmware is available for the supported devices and services, as a new ODC file can be easily imported into SITOP Manager with the function "Import ODC" (please refer to point 2 below).

The ODC information is needed for offline engineering. The catalog is displayed in the OFFLINE Project view by clicking the Add (⊕) icon at the bottom of the OFFLINE Project area. The version of the ODC currently being used/imported into SITOP Manager is displayed on the right of the dialog heading, in this case V1.0.0. The list in the Objects catalog shows the objects within that can be configured offline:



These two possibilities of getting the device data into the Objects catalog are given:

1. With the delivery of SITOP Manager. A new version of SITOP Manager will always have complete history, included all the devices in the ODCs available up to the release date.
2. ODCs of new devices/services versions will be available for download from SIOS. These can then be loaded and updated with the function "Import ODC" in the menu ( ) icon in the upper right corner of the Top header view. For further detailed information regarding the "Import ODC" function, please refer to subchapter Top Header View (Page 43).

Special remarks:

- There is always only one ODC that is active.
- It is not possible to select/delete ODCs.

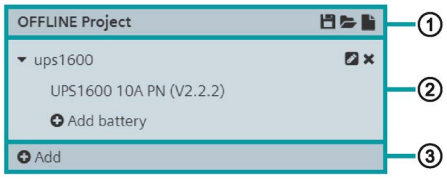
For further detailed information regarding how to administer and configure an offline object with the Objects catalog, please refer to subchapter Add Object to OFFLINE Project (Page 60).

6.2 Offline Engineering

6.2.1 Administration of an OFFLINE Project

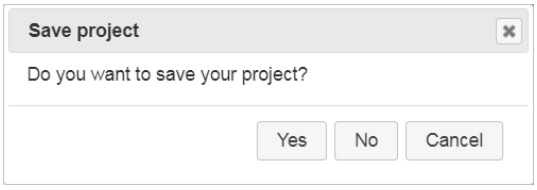
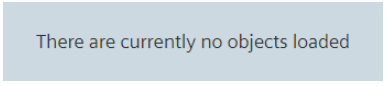
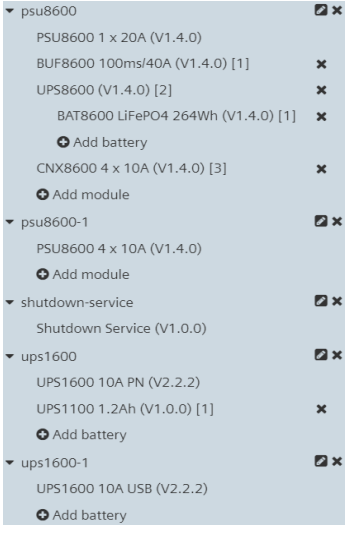
SITOP Manager provides offline engineering functionality. Offline engineering allows the user to configure an object without it being physically connected to SITOP Manager. This allows engineers to review, create and backup device configurations without the necessity of being onsite. This functionality can be performed by using the OFFLINE Project view.

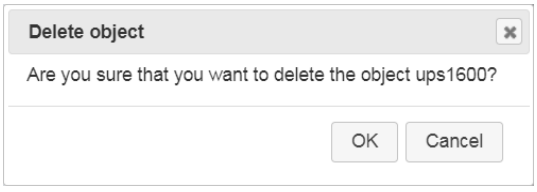
OFFLINE Project Structure

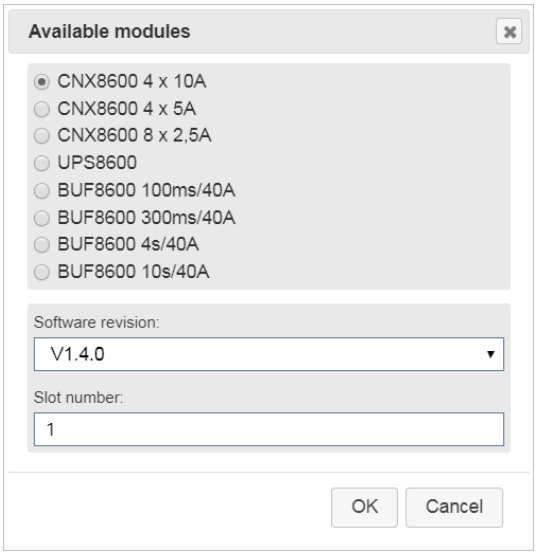


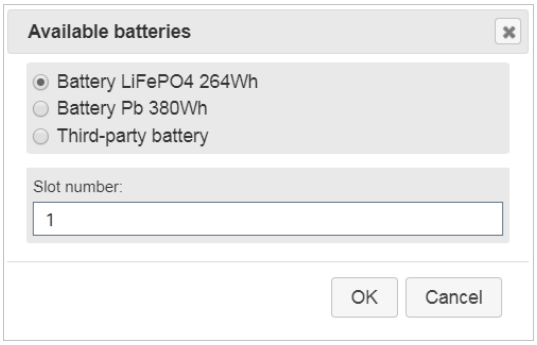
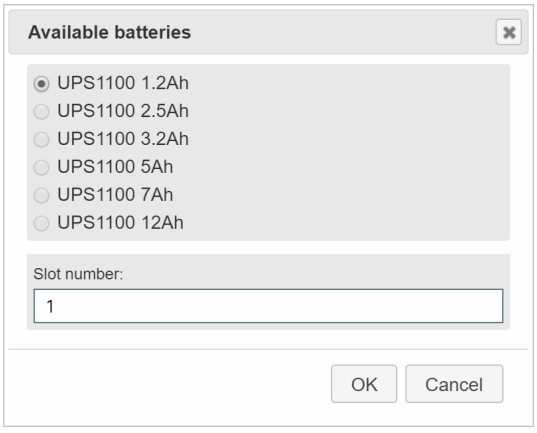
OFFLINE Project view provides the following object management:

HMI Control	Description	Action/ Info
Top ①		
Save project (💾)	Clicking this icon saves all objects residing in the OFFLINE Project area in a SITOP specific project file (.smp). Before saving, you can enter the name of the project file or use the displayed default name. When trying to save a file over an already saved file with the same name, a pop-up message appears informing you: "This will replace your current project. Press OK to continue". Confirm this message if you want to replace the existing saved file. If the project you want to save is invalid due to a wrong file and/ or format or due to a corrupt project, a pop-up message appears prompting you to select a valid project for saving: "Project is invalid. Please select a valid project".	A
Load project (📂)	Clicking this icon loads a user specific SITOP Manager project file to the OFFLINE Project view. In the browse dialog, project file (.smp) is preselected by default.	A

HMI Control	Description	Action/ Info
New project ( )	Clicking this icon deletes the current configuration in the OFFLINE Project view and provides the possibility to work on a new project. If a project content or projects content exists, then you get the option before deleting the existing object(s) and configuring a new one to save the existing object(s) into a project file. The following dialog window offers you the possibility to first save the project(s) you are working on:  Confirming this dialog message opens a save window where you can save the project(s). Denying this dialog, just deletes the project(s) content. Please note that if you deny this dialog without saving the existing configuration(s), then the corresponding configured object(s) can no longer be restored!	A
OFFLINE Project②		
Empty view message		I
Select with mouse click	Selecting an object with a mouse click shows the corresponding object configuration in the Content view.	A
Object naming	The firmware version and the slot number (for the PSU8600 and UPS1600 devices) are displayed next to the object name as additional information in parentheses and respectively in brackets:  For the PSU8600 and UPS1600 devices, there is the possibility to change the slot number of the configured offline objects. For further detailed information regarding the changing of the slot number of the configured offline objects, please refer to subchapter Add Object to OFFLINE Project (Page 60).	I

HMI Control	Description	Action/ Info
Rename object (✎)	By clicking this icon you can rename the offline object. A "Rename object" pop-up opens where you can write in a new valid object name.  After writing the desired new valid name, confirm with OK. Please make sure that the object name complies with PROFINET naming conventions: The object name must fulfill the following criteria: - Must not be empty. - Limited to a total of 240 characters. - May not contain special characters such as)(%#*+~. The hyphen (-) is the only special character allowed. - May not contain any uppercase letters. - May not start or end with the (.) character. - A name component (a string between two periods) must not exceed 63 characters. - A name component (a string between two periods) must not start or end with the (-) character - A name component must not start with the character string port-xyz (x, y, z = 0 … 9). - Must not have the form n.n.n.n (n = 0 … 999). - Must not start with a number.	A
Delete object (✖)	Clicking this icon deletes the corresponding object. The deleting process consists of two simple steps: 1. Click the delete (✖) icon in the OFFLINE Project view corresponding to the object or module you want to delete from this view. 2. If you are sure you want to delete the object selected, then click the OK button on the pop-up confirmation message that opens in order to successfully delete the object selected:  The object selected is deleted from the OFFLINE Project view. Please note that the corresponding configured object can no longer be restored!	A

HMI Control	Description	Action/ Info
Drag and drop ( )	OFFLINE Project area supports context sensitive drag and drop functionality. On mouse click it is possible to drag an object and drop it into the ONLINE Connections area. Reciprocally, it is possible to drag an object from the ONLINE Connections area here. For further detailed information regarding this offline-to-online and online-to-offline functionality, please refer to subchapters Offline-to-Online (Page 146) and respectively Online-to-Offline (Page 151). Please keep in mind that the icon for this functionality only appears in the mobile view!	A
Add module ( )	Clicking this icon opens the "Available modules" catalog for a PSU8600 system. This icon is only visible after a PSU8600 system has already been added in the OFFLINE Project area. In the "Available modules" catalog, the CNX8600 4 x 10A module is preselected by default:  Just select the radio button of the corresponding needed module if a different module than the default one is preferred. Here, you can also select another software version or another slot number for the selected available module. This icon is only available for a PSU8600 system. For further detailed information regarding this functionality, please refer to subchapter Add Object to OFFLINE Project (Page 60).	A

HMI Control	Description	Action/ Info
Add battery (⊕)	Clicking this icon opens the "Available batteries" catalog. This icon is available for both a PSU8600 system and a UPS1600 device that have already been added in the OFFLINE Project area. In the "Available batteries" catalog for a PSU8600 system, BAT8600 LiFePO4 264Wh battery is preselected by default:  In the "Available batteries" catalog for a UPS1600 device, UPS1100 1.2Ah battery is preselected by default:  The procedure is the same for both dialog windows: just select the radio button of the corresponding needed battery if a different battery than the default one is preferred. Here, you can also select another slot number for the selected available battery. Please be aware that if you add more than one battery, they have to be of the same type! For further detailed information regarding this functionality, please refer to subchapter Add Object to OFFLINE Project (Page 60).	A

HMI Control	Description	Action/ Info
Bottom ③		
Add (⊕)	Clicking this icon starts the offline Objects catalog for adding an offline object or offline objects to the OFFLINE Project view. This same icon is used to offer you the possibility to add a module or modules or a battery or batteries to a PSU8600 system or a battery or batteries to a UPS1600 device already added in the OFFLINE Project area. The module object is created with the default values specified in the ODC. Just click this icon on the left of the "Add module" or "Add battery" field and the adding process starts with the corresponding dialog windows. For further detailed information regarding this functionality, please refer to the rows above.	A

Note

The icons "Save project" and "New project" and consequently "Rename object" and "Delete object" are active only when an offline object is present in the OFFLINE Project view. Until an offline object is present in the OFFLINE Project view, the only available icons in this view are "Load project" and "Add".

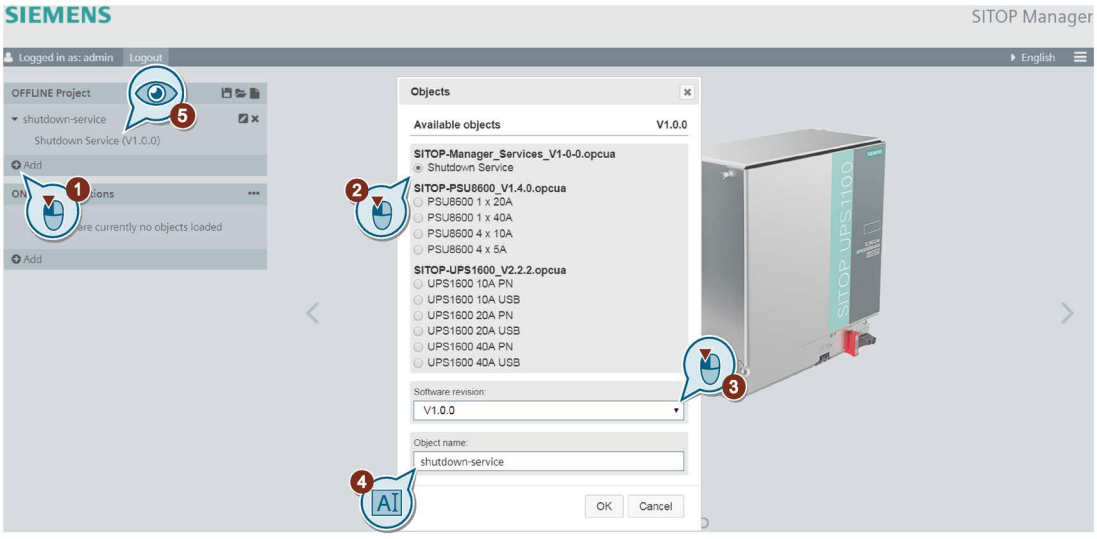
NOTICE
The maximum number of offline projects is 50.

6.2.2 Add Object to OFFLINE Project

To begin SITOP Manager offline engineering, you first have to add an object found within the Objects catalog into the OFFLINE Project view. The process of adding an object to the OFFLINE Project view consists of 5 or more steps, depending on the specific object being added.

OFFLINE Project Workflow

The workflow for adding a SITOP Shutdown Service to the OFFLINE Project view consists of the following 5 steps:



1. The Objects catalog is displayed by clicking the "Add" (⊕) icon at the bottom of the OFFLINE Project view.
2. In the Objects catalog, you can select the required object for offline configuration. There is no multi-selection supported in offline engineering. UPS1600 10A PN is selected by default when opening the Objects catalog, but a default object name is always provided for every object type within the catalog:
   - for UPS1600, the set default name is ups1600
   - for PSU8600, the set default name is psu8600
   - for Shutdown Service, the set default name is shutdown-service

NOTICE
For UPS1600 devices, the objects dialog provides only main unit objects for selection. The latest firmware version of each object is displayed by default in the "Software revision" field.

3. After selecting the object required for offline configuration, you can change the software version from the drop-down list corresponding to the "Software revision" field if a different software version than the default one is preferred.

Note

Please be aware that the default software version displayed is always the latest firmware version of the selected device!

4. After selecting the software version, enter a name for the selected object if a different name than the default one is preferred.

Note

Please be aware that if the entered object name does not comply with the requirements, then a pop-up window comes up showing you the list of the requirements the name must comply with!

5. After confirming with OK, a configurable instance of the selected offline object is created in the OFFLINE Project view.

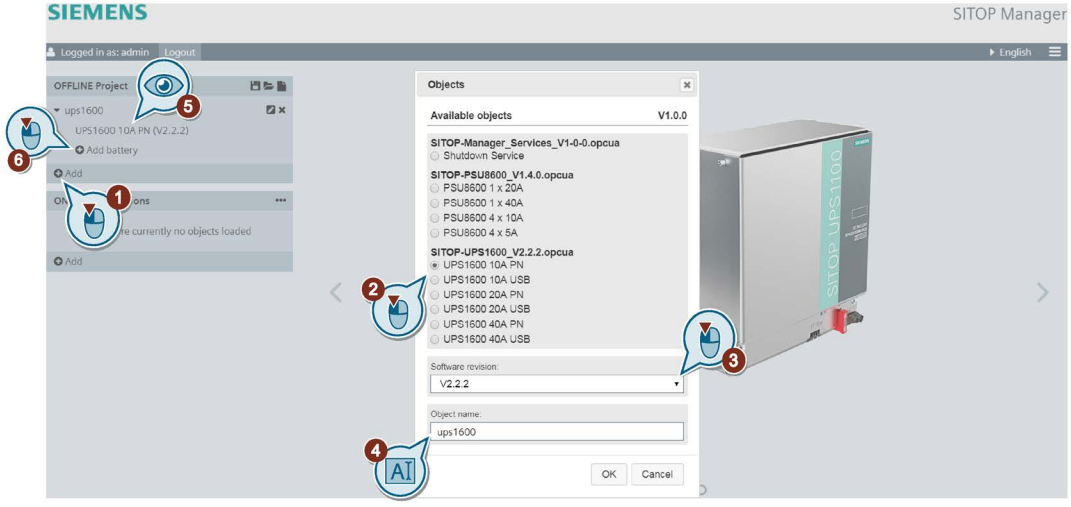
The process of adding a UPS1600 device and a PSU8600 system to the OFFLINE Project view presents the same first 5 steps as the process of adding SITOP Shutdown Service to the OFFLINE Project view, except that it has more extra steps, depending on how many modules (for the PSU8600) or batteries (for both PSU8600 and UPS1600) are needed to be added. For further detailed information regarding the adding of PSU8600 and UPS1600 to the OFFLINE Project view, please refer to the corresponding special cases below.

OFFLINE Project Workflow Detailed for the UPS1600 Special Case

The process of adding a UPS1600 device to the OFFLINE Project view observes the following:

Add Main Unit

Adding the main device of a UPS1600 system to the OFFLINE Project view follows the same first 5 steps as the process of adding SITOP Shutdown Service to the OFFLINE Project view, except that it has more extra steps, depending on how many batteries are added to the UPS1600 device:



1. The Objects catalog is displayed by clicking the "Add" (⊕) icon at the bottom of the OFFLINE Project view.
2. In the Objects catalog, you can select the required object for configuration. As mentioned above, there is no multi-selection supported in offline engineering and the set default name for UPS1600 is ups1600.

3. After selecting the object required for offline configuration, you can change the software version from the drop-down list corresponding to the "Software revision" field if a different software version than the default one is preferred.

   In the "Software revision" field, the latest firmware version is displayed by default.

4. After selecting the software version, enter a name for the selected object if a different name than the default one is preferred.

5. After confirming with OK, a configurable instance of the selected offline object is created in the OFFLINE Project view.

6. Afterwards, one or more batteries can be added to the configurable instance of the UPS1600 offline project.

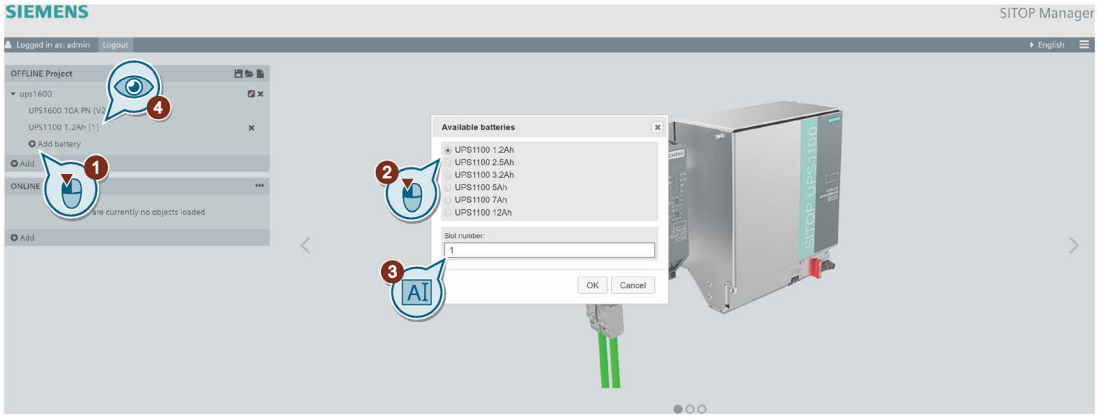
   The offline engineering provided by SITOP Manager allows you to add multiple batteries to the offline UPS1600 project.

Note

The batteries can only be added after the main unit has been successfully added to the OFFLINE Project view.

Add Batteries

In order to add a battery to a UPS1600 already added to the OFFLINE Project view, the following steps have to be considered:



1. After the configurable instance of the selected UPS1600 offline object is created in the OFFLINE Project view, click the "Add battery" ( ) icon.

2. An "Available batteries" window opens where you can select the required battery for offline configuration.

3. After selecting the battery required for offline configuration, you can change the slot number if a different slot is preferred.

Note

The next higher and free slot is automatically selected with each add. It is also possible to reorder the batteries by entering another slot number than the default one.

4. After confirming with OK, a configurable instance of the selected offline battery is created in the OFFLINE Project view.

   Please be aware that if you add more than one battery, they have to be of the same type!

   Please be aware that you can only add a maximum of 6 Siemens batteries. The maximum number of 3rd party batteries is 1.

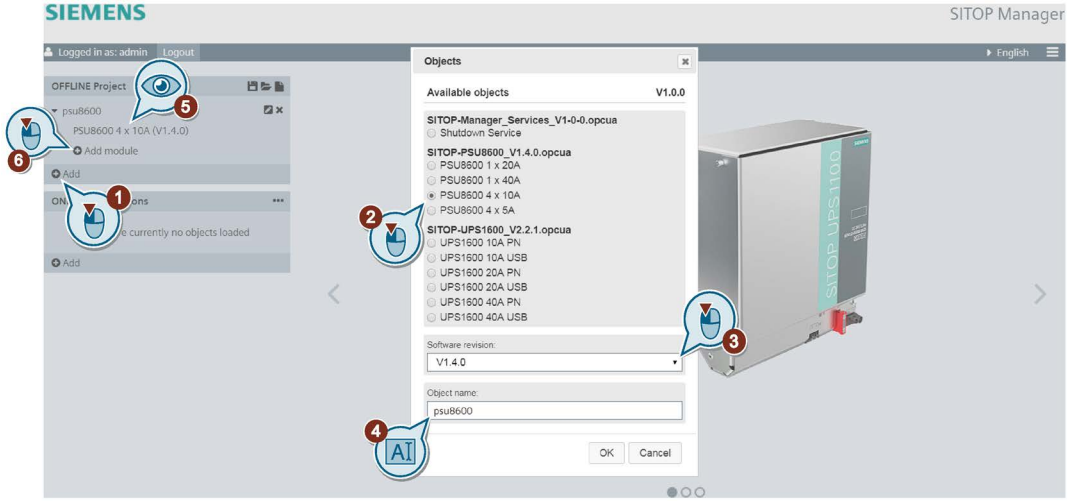
   When the maximum number of subslots has been reached (when the maximum number of batteries has been added), the "Add battery" icon appears greyed out.

OFFLINE Project Workflow Detailed for the PSU8600 Special Case

The process of adding a PSU8600 system to the OFFLINE Project view observes the following:

Add Main Unit

Adding the main unit of a PSU8600 system to the OFFLINE Project view follows the same first 5 steps as the process of adding SITOP Shutdown Service to the OFFLINE Project view, except that it has more extra steps, depending on how many modules or batteries are added to the PSU8600 system:



1. The Objects catalog is displayed by clicking the "Add" (⊕) icon at the bottom of the OFFLINE Project view.
2. In the Objects catalog, you can select the required object for configuration. As mentioned above, there is no multi-selection supported in offline engineering and the set default name for PSU8600 is psu8600.
3. After selecting the object required for offline configuration, you can change the software version from the drop-down list corresponding to the "Software revision" field if a different software version than the default one is preferred.

   In the "Software revision" field, the latest firmware version is displayed by default.
4. After selecting the software version, enter a name for the selected object if a different name than the default one is preferred.

5. After confirming with OK, a configurable instance of the selected offline object is created in the OFFLINE Project view.
6. Afterwards, one or more modules and then one or more batteries (if the added module has batteries) can be added to the configurable instance of the PSU8600 offline project.

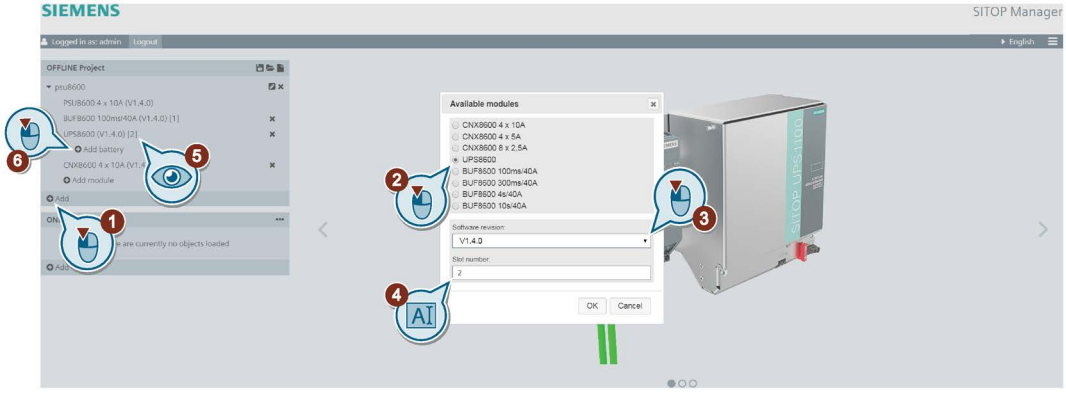
   The offline engineering provided by SITOP Manager allows you to add multiple modules and/or batteries to the offline PSU8600 project.

Note

The modules and the batteries can only be added after the main unit has been successfully added to the OFFLINE Project view.

Add Modules

In order to add a submodule to a PSU8600 already added to the OFFLINE Project view, the following steps have to be considered:



1. After the configurable instance of the selected PSU8600 offline object is created in the OFFLINE Project view, click the "Add module" (⊕) icon.
2. An "Available modules" window opens where you can select the required module for offline configuration.

   Please be aware that the maximum number of extension modules (CNX8600 devices) that can be added is 4 and the maximum number of buffer modules (BUF8600 and UPS8600) that can be added is 2!

NOTICE
Please be aware that you can only add either one BUF8600 and one UPS8600 or two of either of these devices, but no more than 2 buffer modules.

   When the maximum number of submodules has been reached (when the maximum number of submodules has been added), the "Add module" icon appears greyed out.
3. After selecting the module required for offline configuration, you can change the software version from the drop-down list corresponding to the "Software revision" field if a different software version than the default one is preferred.

Note

Please be aware that the default software version displayed is always the latest firmware version of the selected module!

In the "Software revision" field, the latest firmware version is displayed by default.

4. After selecting the required "Software revision", you can change the slot number if a different slot is preferred.

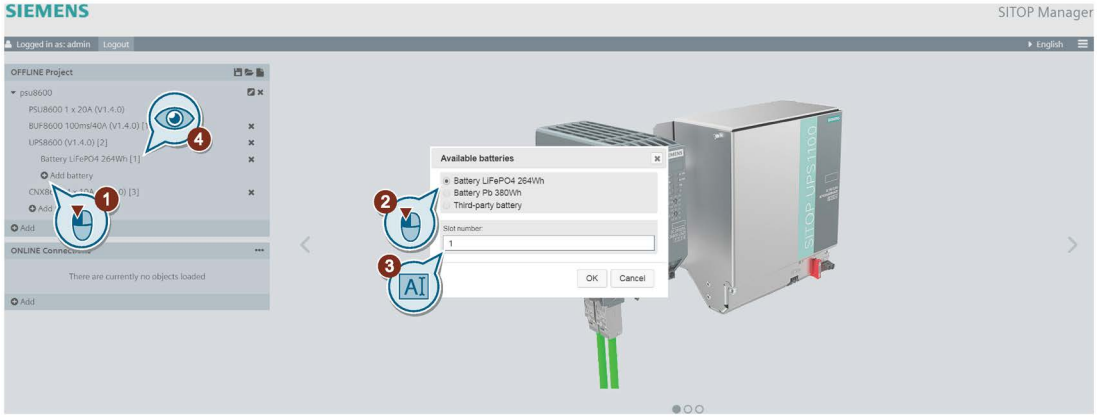
Note

The next higher and free slot is automatically selected with each add. It is also possible to reorder the modules by entering another slot number than the default one.

5. After confirming with OK, a configurable instance of the selected offline module is created in the OFFLINE Project view.
6. Afterwards, one or more batteries (if the offline added module has batteries) can be added to the configurable instance of the PSU8600 offline project.

Add Batteries

In order to add a battery to a PSU8600 already added to the OFFLINE Project view, the following steps have to be considered:



1. After the configurable instance of the selected PSU8600 offline object is created in the OFFLINE Project view, click the "Add battery" ( ) icon.
2. An "Available batteries" window opens where you can select the required battery for offline configuration.
3. After selecting the battery required for offline configuration, you can change the slot number if a different slot is preferred.

Note

The next higher and free slot is automatically selected with each add. It is also possible to reorder the batteries by entering another slot number than the default one.

4. After confirming with OK, a configurable instance of the selected offline battery is created in the OFFLINE Project view.

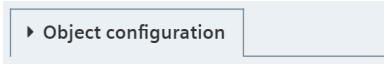
   Please be aware that if you add more than one battery, they have to be of the same type!

   Please be aware that you can only add a maximum of 5 Siemens batteries (either BAT8600 LiFePO4 264Wh or BAT8600 Pb 380Wh). The maximum number of 3rd party batteries is 1.

   When the maximum number of subslots has been reached (when the maximum number of batteries has been added), the "Add battery" icon appears greyed out.

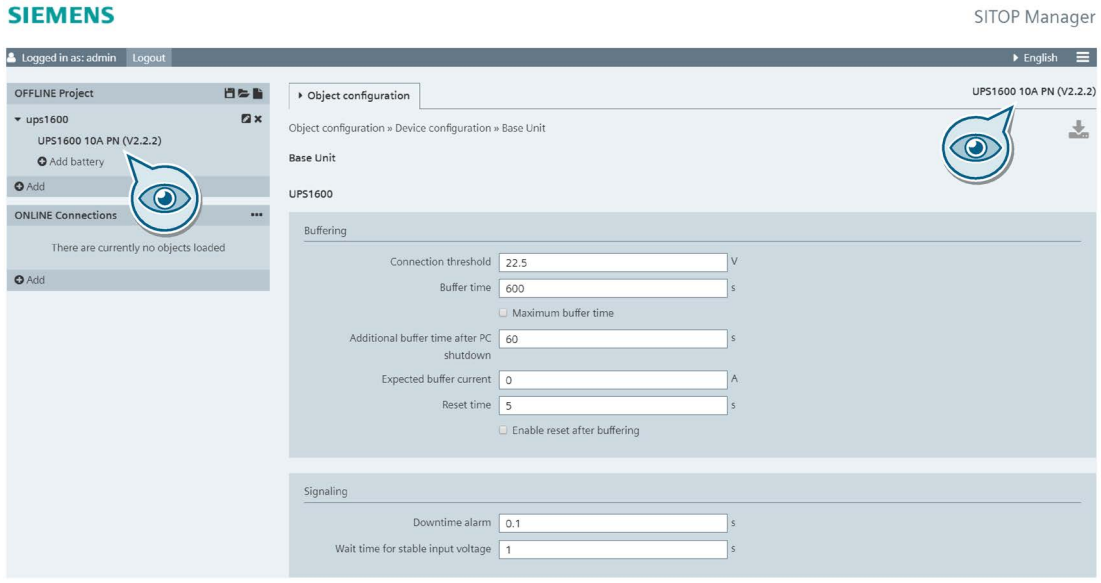
6.2.3 Configuring an Offline Object

Offline engineering only presents the Object configuration page:



Content View Object Identification

The currently selected object is displayed in the upper right corner of the Content view header by object type name.



Offline Object Configuration

In order to configure the offline selected object, you have to follow the steps below:

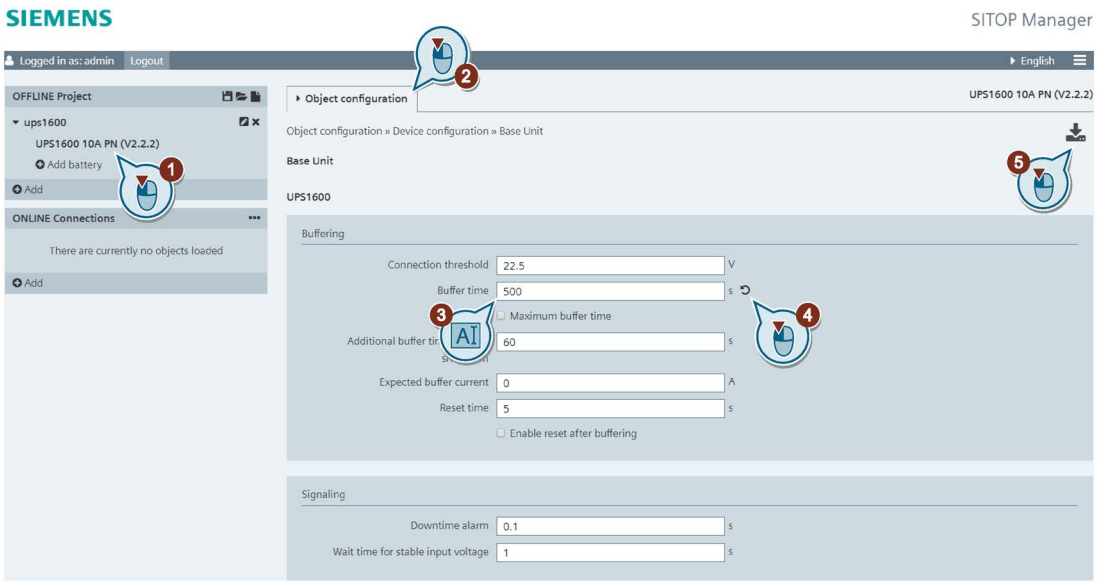
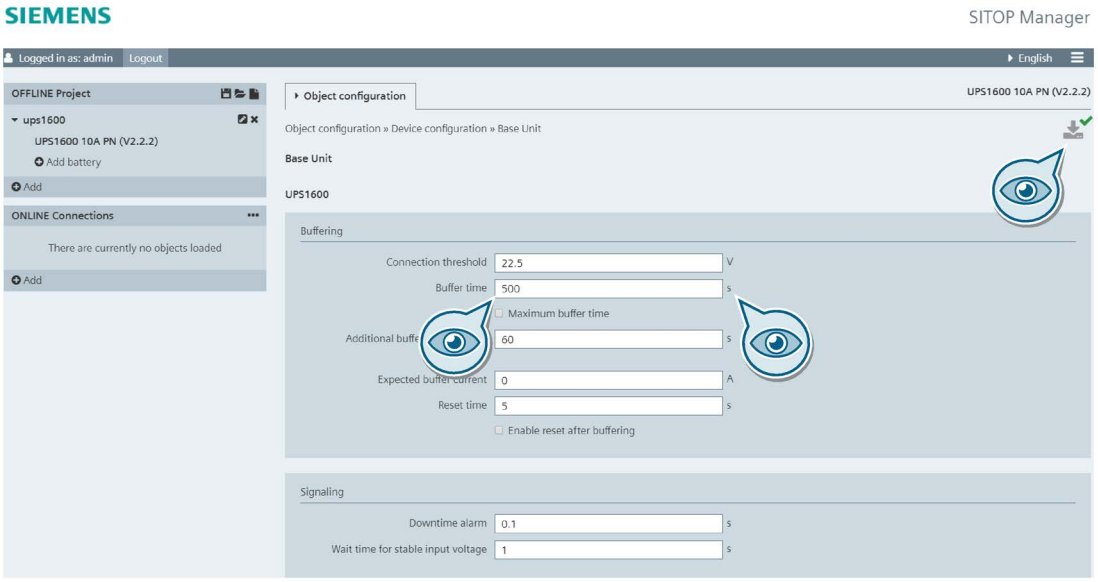


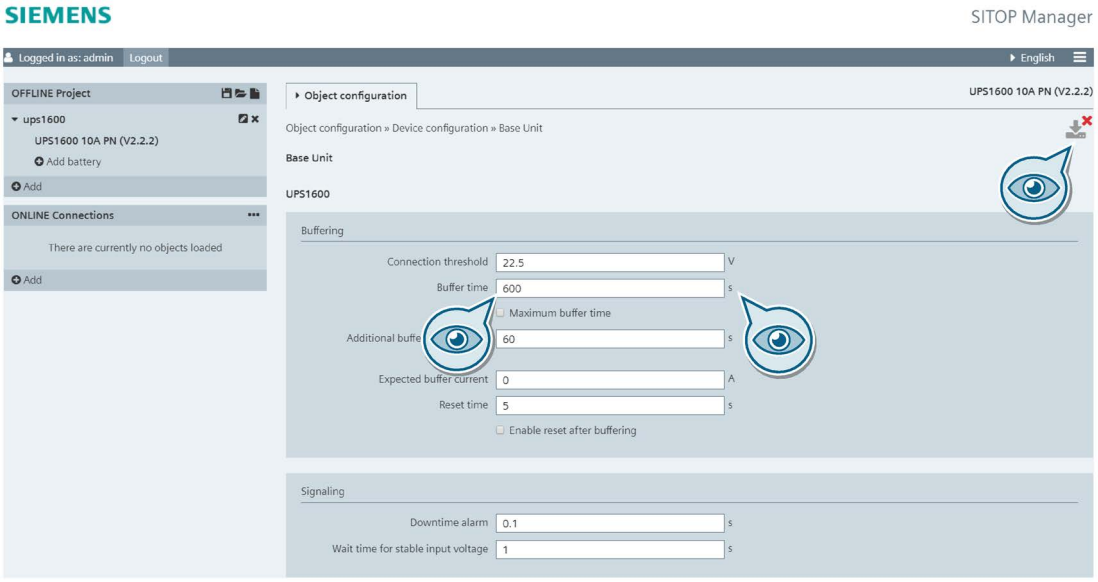
Figure 6-1 Offline Object Configuration Workflow

1. Click on the object you want to configure. The object tree opens and the corresponding component can be selected.
2. Navigate and click Object configuration > Device configuration > Base Unit page. This opens the configuration page and the offline object configuration can now be performed on this page.
3. Change to the desired configuration by modifying the parameters as needed. The changed values are marked on the right by the revert ( ) icon.
4. Clicking the revert ( ) icon reverts the parameters to the values they had before they were changed.
5. If the entered values are valid for download, the download process starts with the download ( ) button switching from grey to blinking black ( ). Download the configuration to the offline object by clicking the active and black blinking download ( ) button in the upper right corner of the Content view.

The successful download is confirmed by the green check successful download (✔) icon on the right of the download (⬇) button:



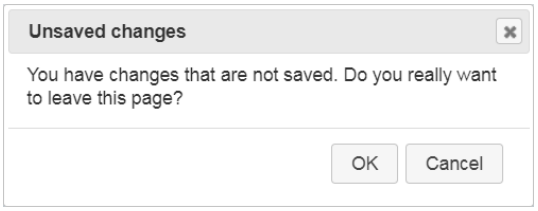
The unsuccessful download is marked by the red unsuccessful download (✖) icon on the right of the download (⬇) button:



In this case, the parameters remain unchanged as evidenced by the picture above.

NOTICE
Please be aware that changing a parameter on the configuration page does not imply an automatic download of this value! All changes and only the changes on this page are downloaded at once by clicking the active and black blinking download (⬇) button in the upper right corner of the Content view.

If you leave the page without saving the changes made, a pop-up message appears informing you that your changes are not saved and that you will lose them if you leave the page without saving them:



If you do not want to save the changes made, just confirm this message and leave the page.

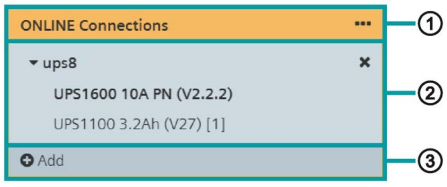
6.3 Online Engineering

6.3.1 Administration of the ONLINE Connections

SITOP Manager has the ability to configure SITOP objects online within the ONLINE Connections view.

The ONLINE Connections view represents all online SITOP objects connected to SITOP Manager. Objects are displayed as a tree structure according to their respective configuration or property.

ONLINE Connections Structure



ONLINE Connections view provides the following object administration:

HMI Control	Description	Action/ Info
Top ①		
"More" icon (▪▪▪)	This icon starts the dialog within which you can select the active network adapter.	A
ONLINE Connections②		
Empty view message	There are currently no objects loaded	I
Select with mouse click	Selecting an object with a mouse click shows the corresponding object configuration in the Content view.	A
Delete object (✖)	Clicking this icon deletes the selected object. The deleting process in the online engineering is the same as in the offline engineering. Please be aware that you cannot delete an object while the connection is being established! This button is not active (is greyed out) during connection also indicated by the orange flashing exclamation mark left to the object name in ONLINE Connections. For further detailed information regarding the deletion of an object, please refer to subchapter Administration of an OFFLINE Project (Page 55).	A

HMI Control	Description	Action/ Info
Drag and drop ( )	ONLINE Connections area supports context sensitive drag and drop. On mouse click it is possible to drag an object and drop it into the OFFLINE Project area. Reciprocally, it is possible to drop an object from the OFFLINE Project here. For further detailed information regarding this online-to-offline and offline-to-online functionality, please refer to subchapters Online-to-Offline (Page 151) and respectively Offline-to-Online (Page 146). Please keep in mind that the icon for this functionality only appears in the mobile view (it is available for portable mobile devices like a mobile phone or a tablet)!	A
Bottom ③		
Add ( )	Clicking this icon starts the wizard for adding an online connection (object).	A

SITOP Manager provides online engineering for all its three services: SITOP Manager, SITOP Gateway Service and SITOP Shutdown Service.

In order to have access to the ONLINE Connections network, you first have to select a SITOP Manager server network adapter. For further detailed information, please refer to the steps for selecting a network adapter below.

6.3.2 Selecting the Network Adapter

SITOP Manager can access devices over multiple network connections, but only actively over one network connection. Thus, it is necessary to specify the network connection that will be administered (LAN1, LAN2, WiFi, etc.).

The selection of a network adapter consists of three steps:

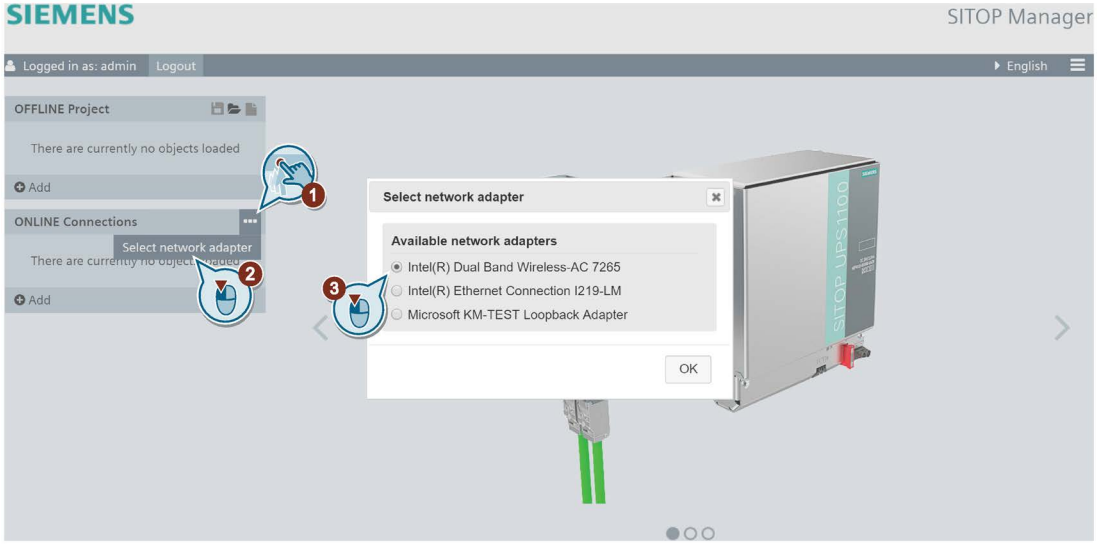


Figure 6-2 Select network adapter workflow

1. Go with the mouse over the "More" ( ) icon in the upper right corner of the ONLINE Connections area.

2. Click the "Select network adapter" (Select network adapter) button that opens. A Select network adapter dialog opens with available SITOP Manager server network adapters.
3. Select the adequate network adapter and get access to the online network. The selection of the network adapter depends on your online objects network connection.

WARNING

Active management (i.e. shut down event management) is only possible with one active network connection.

Note

Any selection remains preselected and displayed after browser termination.

6.3.3 Add Object to ONLINE Connections

The process of adding a new online connection or the "Add to the ONLINE Connections" Wizard starts with the "Add" (⊕) icon at the bottom area of the ONLINE Connections area. The title "Add" is displayed next to the icon.

Note

The supported objects are the SITOP devices PSU8600 PN, UPS1600 PN, UPS1600 USB (via Gateway Service) and SITOP Shutdown Service.

Add to the ONLINE Connections Wizard

This wizard is built in two dialog steps and shall guide you through the adding process.

In case you have already selected your network adapter, then the wizard starts directly with the first step below.

1. **Object selection:** In this first step, all supported SITOP online objects found on the selected network adapter are displayed in a top/down scrollable list:

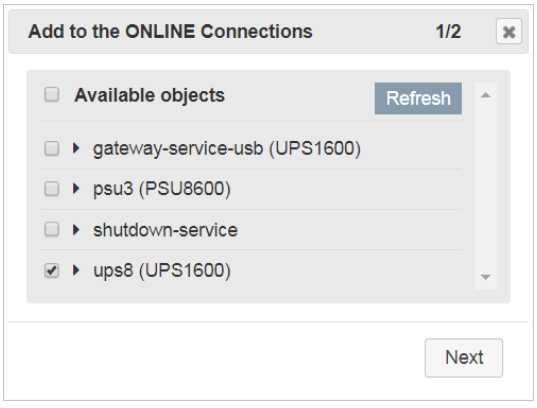


Figure 6-3 Add to ONLINE Connections Wizard Step 1 Available objects

If you cannot find the object you need, then click the "Refresh" (Refresh) button in the upper right corner of the list. It will search once again the available objects in the network and display them and also verify if the correct network adapter is selected.

Note

Multiple object selection is possible directly using the corresponding checkboxes. There is also the possibility to select all objects by checking the "Available objects" checkbox.

To aid in identifying the object, you can expand the object in the list to display the connection details (MAC address, IP and Object name):

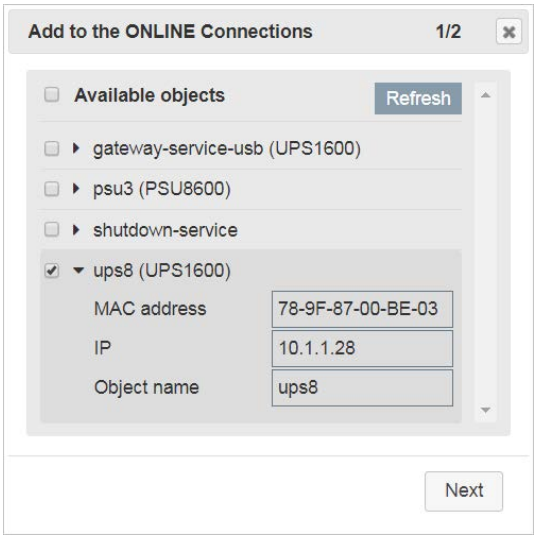


Figure 6-4 Add to ONLINE Connections Wizard - Detailed view

Click the "Next" button after your selection.

2. **Object registration**: In this second step, registration information (i.e. "User" and "Password") is required in order to establish connection.

Note

Default "User" and "Password" parameters are both "admin".

CAUTION

This password to the object is not necessarily the same password as for the access to SITOP Manager!

It is not necessary to change the password after establishing the connection.

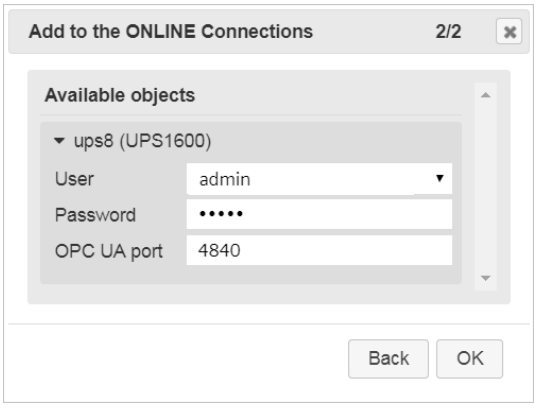


Figure 6-5 Add to ONLINE Connections Wizard Step 2 Object registration with admin

The "Back" button is available and active to go back one step.

Note

Default "OPC UA port" for PSU8600/UPS1600 PN is 4840, for UPS1600 USB (Gateway Service) is 4843 and for Shutdown Service is 4843.

Click the OK button and add objects to ONLINE Connections.

For all connection valid objects, an OPC UA data connection is established and maintained preventing other instances of SITOP Manager from establishing a connection. You can select now the corresponding object for further engineering.

While establishing a connection, an exclamation mark orange blinking ( ) symbol will appear beside the object name. It will supply more information regarding the connection process.

There is no automatic Content view data display; this appears only after selecting the online object.

CAUTION

Devices already connected via PROFINET (i.e. to a PLC) can only establish a read-only OPC UA connection.

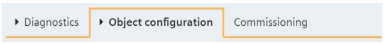
For further detailed information regarding connection validation, please refer to chapter Troubleshooting (Page 167).

ONLINE Connections Firmware Verification and Data Representation

The firmware version of the device is checked against the supported versions in the SITOP Manager ODC during OPC UA data connection verification. Unsupported firmware is symbolically marked by an exclamation mark black highlighted ( ) symbol. For further detailed information regarding proceeding possibilities, please refer to chapter Troubleshooting (Page 167).

6.3.4 Configuring an Online Object

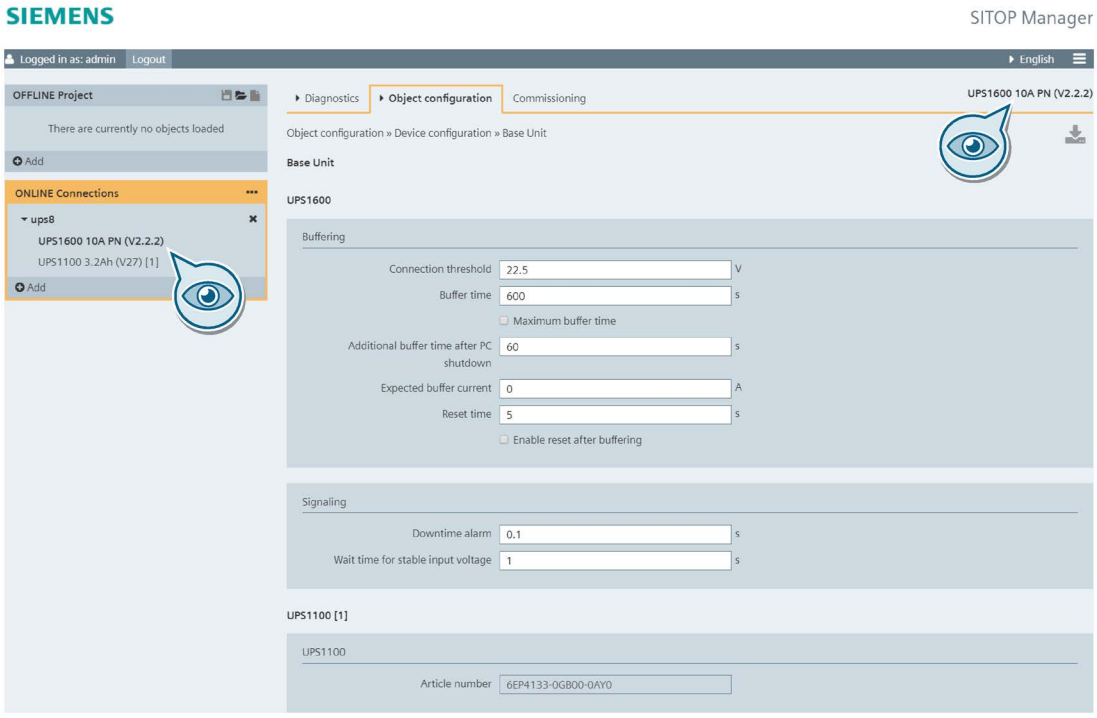
Online engineering presents the main Diagnostics, Object configuration and Commissioning pages.



The orange highlights in the menu structure identify active communication with live SITOP devices. Changes made here are directly implemented into operating objects.

Content View Object Identification

Select the object you want to configure by clicking the object type name. Navigate to the Object configuration > Device configuration > Base Unit page. The currently selected object is displayed in the upper right corner of the Content view header by object type name:



The configuration can now be performed in the Content view by navigating through the corresponding "Object configuration" pages.

Online Object Configuration

In order to configure the online selected object, you have to follow the steps below:

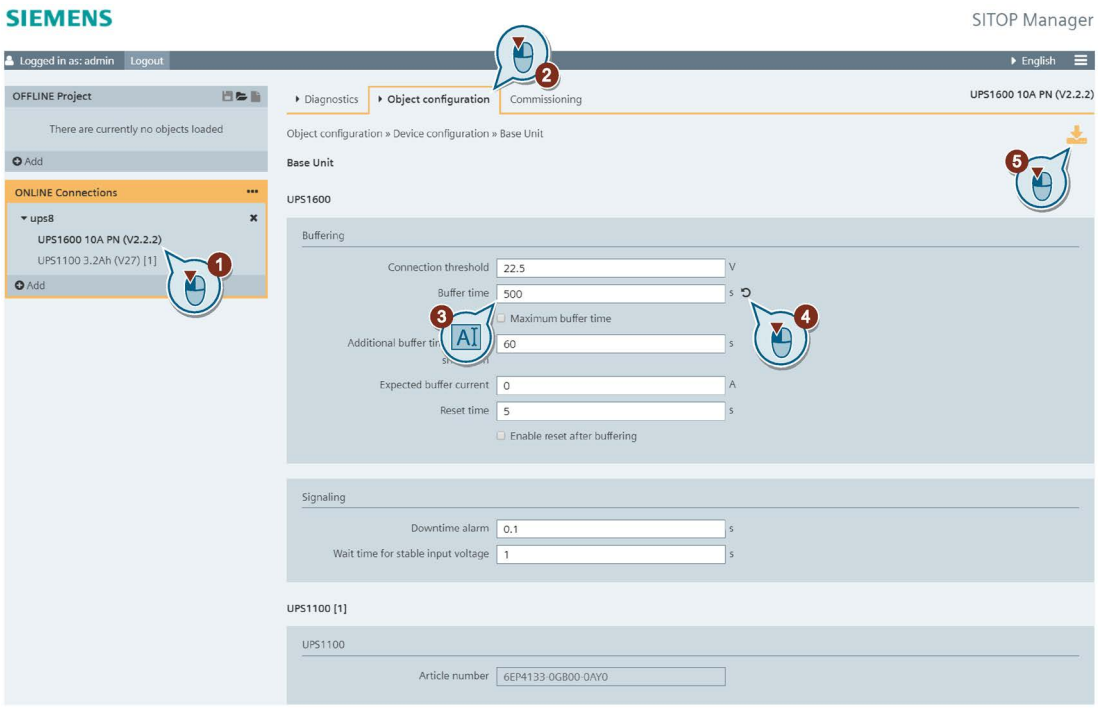


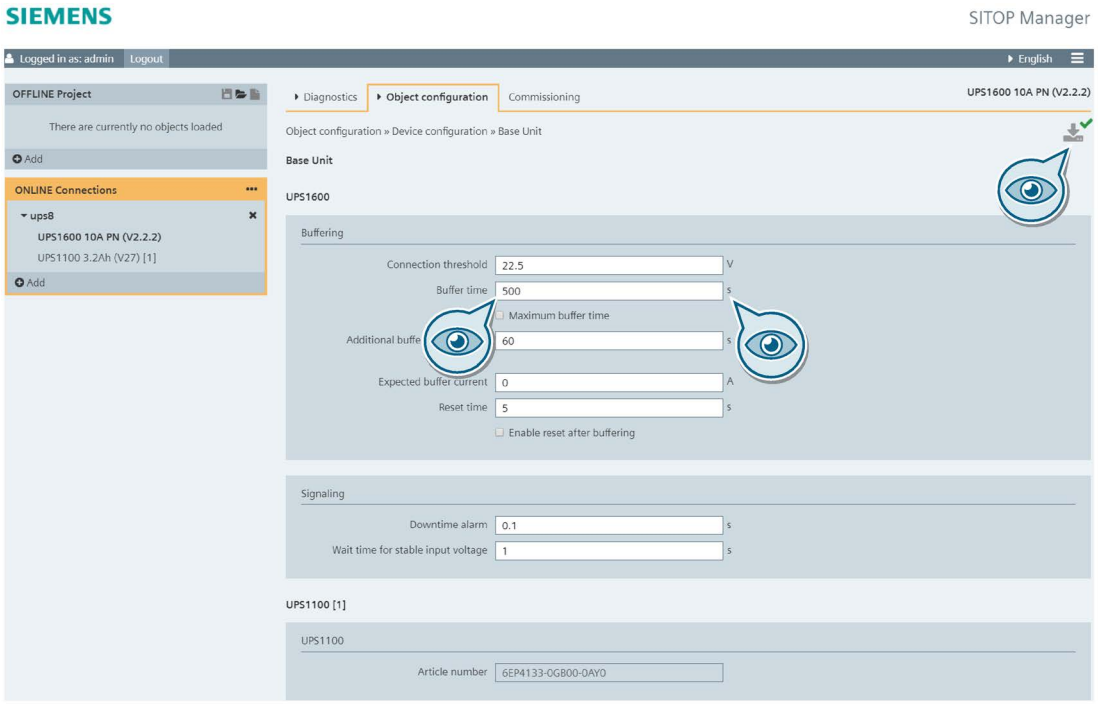
Figure 6-6 Online Object Configuration Workflow

1. Click on the object you want to configure. The object tree opens and the corresponding component can be selected.
2. Navigate and click Object configuration > Device configuration > Base Unit page. This opens the configuration page and the online object configuration can now be performed on this page.
3. Change to the desired configuration by modifying the parameters as needed. The changed values are marked on the right by the revert (↺) icon.

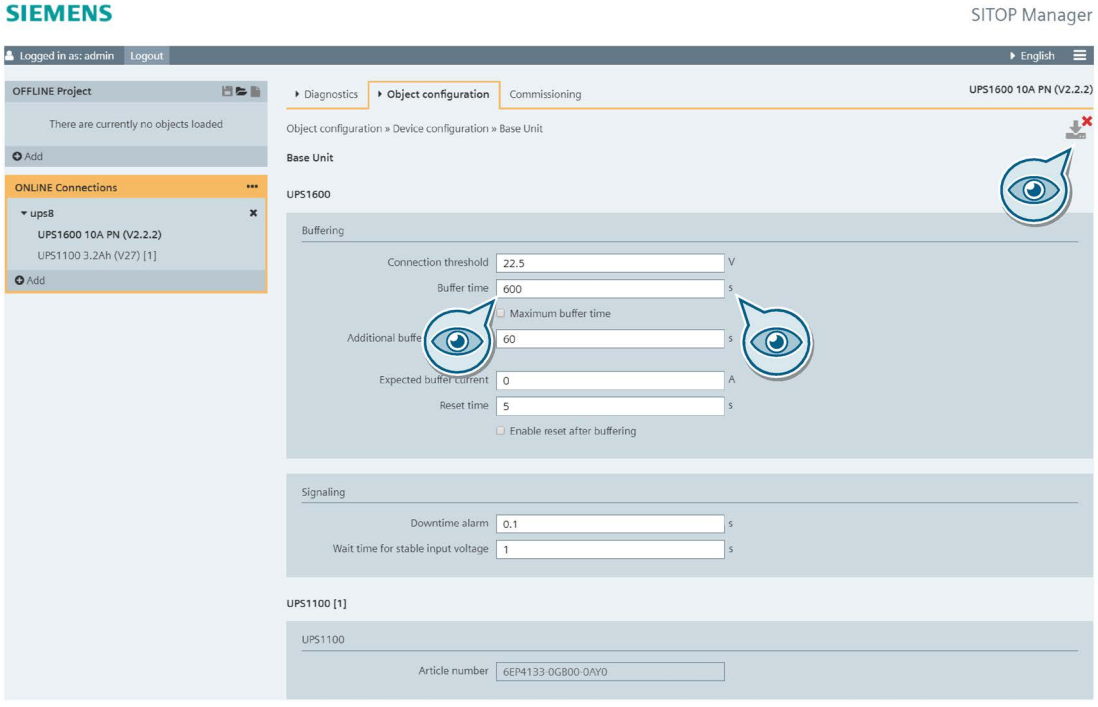
NOTICE
Please be aware that you need admin privileges in order to change the parameters and save the configuration!

4. Clicking the revert (↺) icon reverts the parameters to the values they had before they were changed.
5. If the entered values are valid for download, the download process starts with the download (⬇) button switching from grey to blinking orange (⬇). Download the configuration to the online object by clicking the active and orange blinking download (⬇) button in the upper right corner of the Content view.

The successful download is confirmed by the green check successful download (✔) icon on the right of the download (⬇) button:



The unsuccessful download is marked by the red unsuccessful download (✖) icon on the right of the download (⬇) button:



In this case, the parameters remain unchanged as evidenced by the picture above.

NOTICE
Please be aware that changing a parameter on the configuration page does not imply an automatic download of this value! All changes and only the changes on this page are downloaded at once by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

If you leave the page without saving the changes made, a pop-up message appears informing you that your changes are not saved and that you will lose them if you leave the page without saving them:

If you do not want to save the changes made, just confirm this message and leave the page.

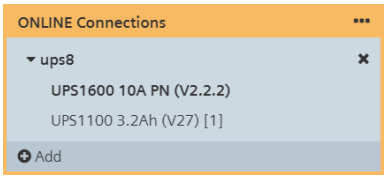
Note

Downloading the configuration to the device does not save this configuration to an offline project.

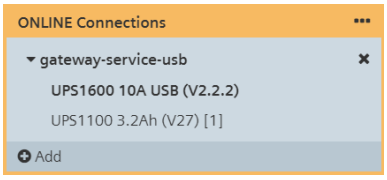
6.3.5 SITOP UPS1600

This subchapter deals with the online functions of the SITOP Manager (MGR) in relation to an online UPS1600 device and highlights the differences between a UPS1600 PN and a UPS1600 USB device.

The figure below shows successful object connection of a UPS1600 PN device:



The figure below shows successful object connection of a UPS1600 USB device:



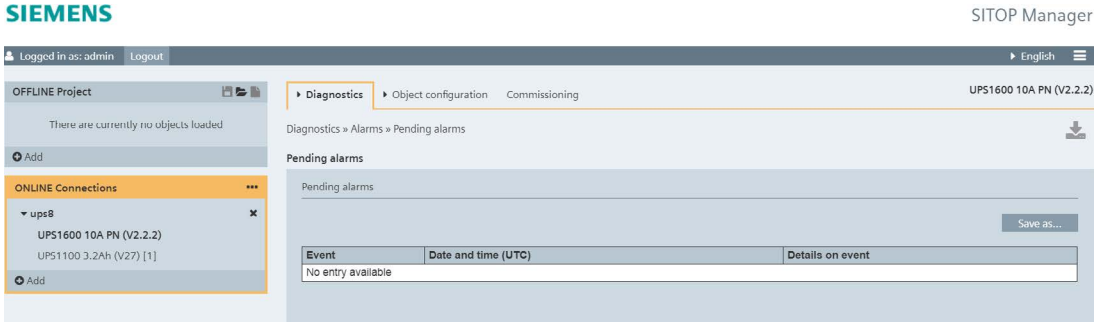
6.3.5.1 Diagnostics

UPS1600 presents the following functionalities within the Diagnostics tab: Alarms, Operating data and Online functions.

Alarms

The Alarms functionality offers the two standard alarms views: Pending alarms and Alarm history.

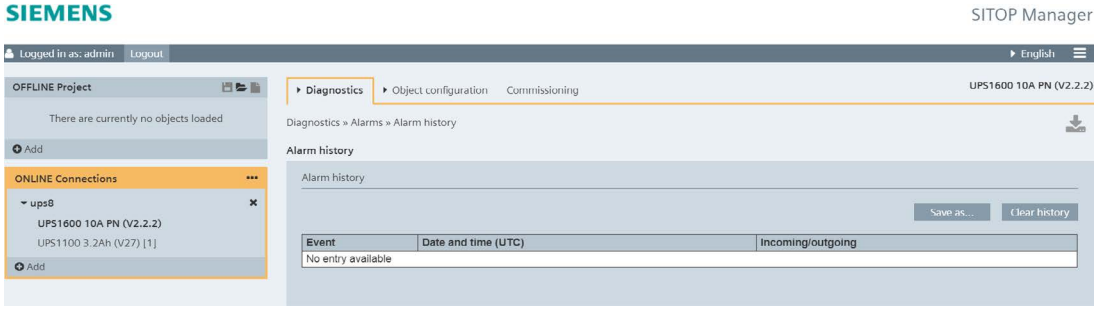
In the Pending alarms page, you can see the currently pending alarms of the selected object:



Navigation area	Description
Pending alarms	Displays the currently pending active alarms of the selected object in a tabular form with the following three columns: • Event: shows the pending event related to the selected object • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred • Details on event: provides further information about a pending alarm Displays the following button: • Save as...: this button saves the currently displayed pending alarms as a .csv file

NOTICE
Please note that a few seconds may pass between triggering an alarm and displaying it!

In the Alarm history page, the alarms for the object added to the ONLINE Connections that have occurred are shown:

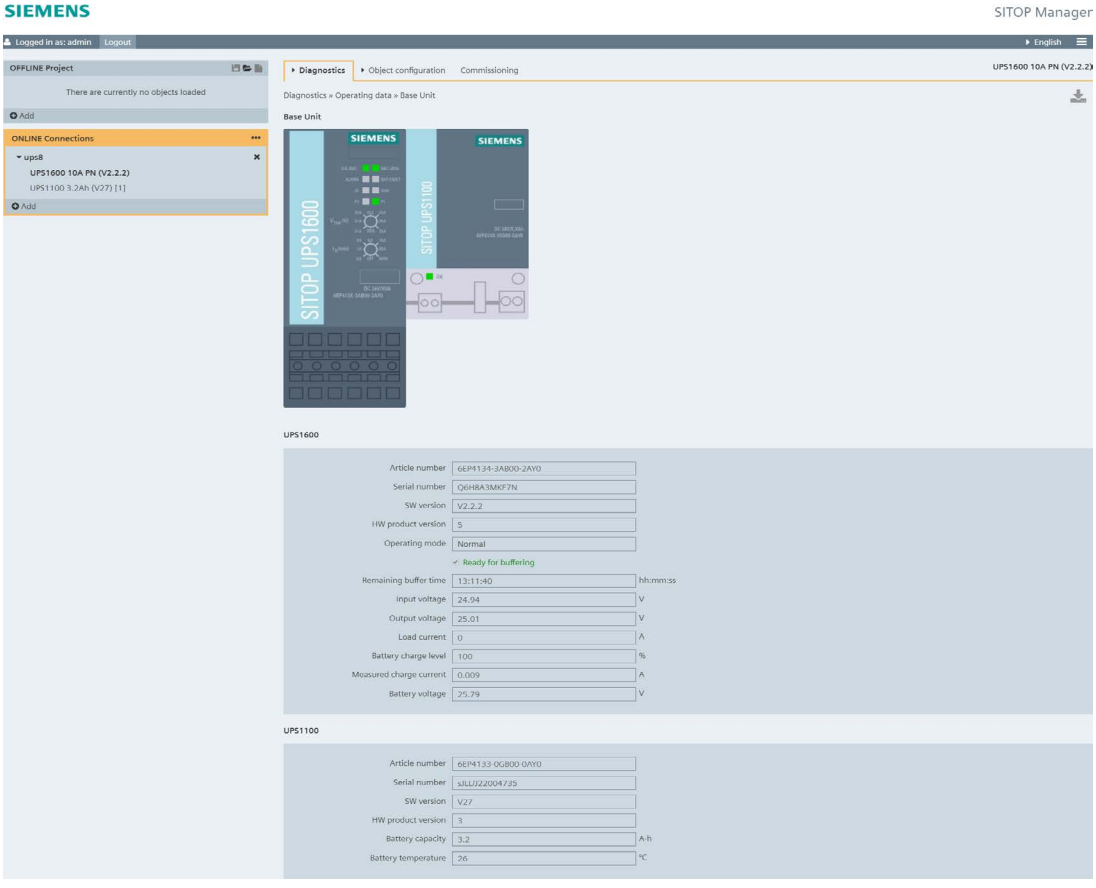


Navigation area	Description
Alarm history	Displays the alarm history for the object added to the ONLINE Connections in a tabular form with the following three columns: • Event: shows the alarm event related to the selected object • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred and respectively has been rectified • Incoming/outgoing: provides further information about an alarm, whether the alarm is incoming or outgoing, that is the occurrence or the rectification of the alarm event Displays the following two buttons: • Save as...: this button saves the alarm history as a .csv file • Clear history: this button deletes the whole history of the object alarms

A page displays a maximum of 30 alarms. In case of a higher number of alarms, the alarms are displayed on several pages. The corresponding alarms navigation is placed on the right corner at the page bottom:

Operating data

The Operating data functionality offers the Base Unit view:

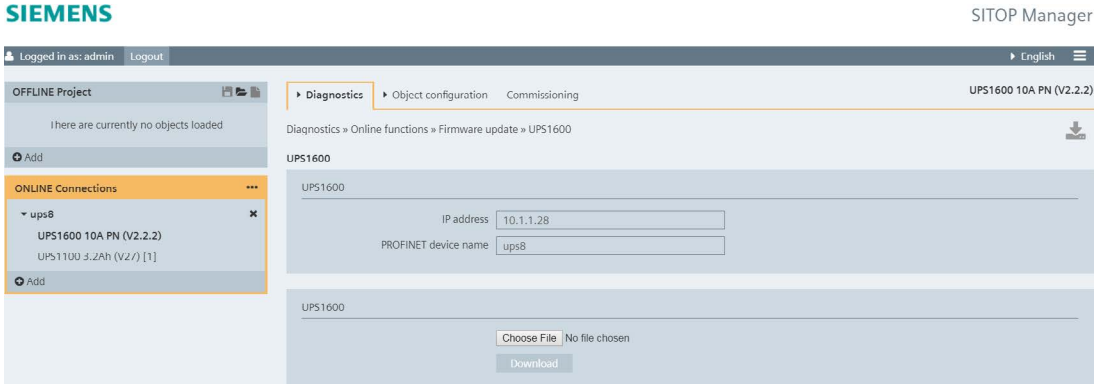


Navigation area		Description
Base Unit	UPS1600	Displays the following parameters: • Article number • Serial number • SW version: displays the software version of the main device, that is the latest software version of the device • HW product version • Operating mode: displays the operating mode of the main device. It can be "Normal" or "Buffering". Displays the following checkbox: • Ready for buffering: when enabled, this checkbox shows that the device is ready for buffering Displays the following parameters: • Remaining buffer time • Input voltage • Output voltage • Load current • Battery charge level • Measured charge current • Battery voltage All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.

Online functions

The Online functions page offers two online functions: Firmware update for the UPS1600 devices and Reset to factory settings.

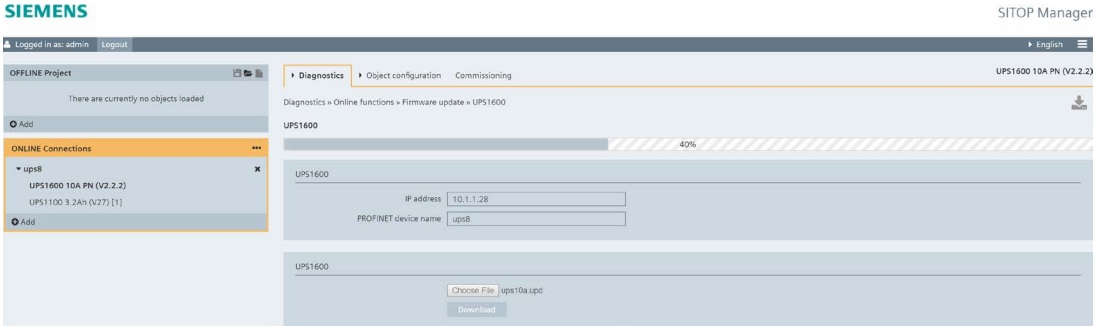
Firmware update for UPS1600 PN devices:



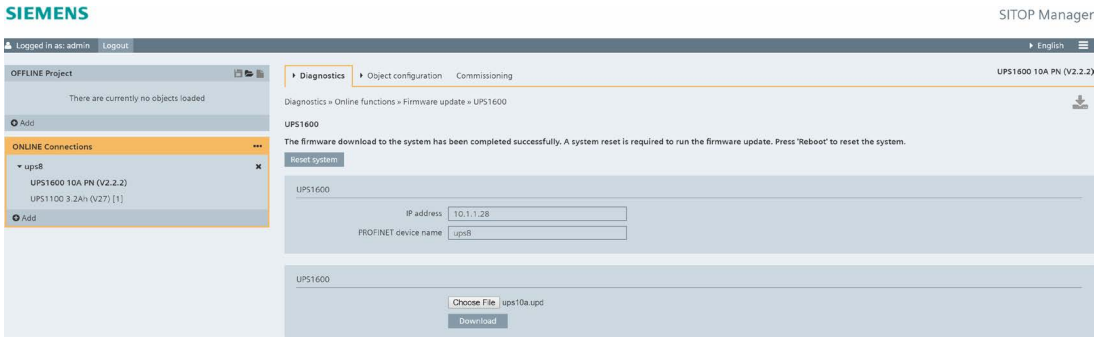
Navigation area		Description
Firmware update > UPS1600	UPS1600	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
	UPS1600	Displays the following two buttons: • Choose File: with this button, you can choose a file for the firmware update of the device The file chosen for the firmware update has to be a UPD file (.upd), that is a program update information file (text document), whose content can be viewed by any text editing or word processing application. When no file has been chosen for the firmware update of the device, then "No file chosen" is displayed next to this button. If a file has been chosen for the firmware update of the device, then the name of the file appears next to this button instead of the "No file chosen" text. • Download: with this button, you can download the file chosen for the firmware update to the device. After you choose the file for the firmware update, then click the "Download" button and the "Firmware update" shall take place automatically. When there is no file chosen for the update, then this button is not active.

The "Firmware update" function for a UPS1600 PN device observes the following steps:

1. Click the "Choose File" button in order to choose the file for the firmware update.
2. After choosing the file, click the now active "Download" button and the following progress bar shows the progress of the process:

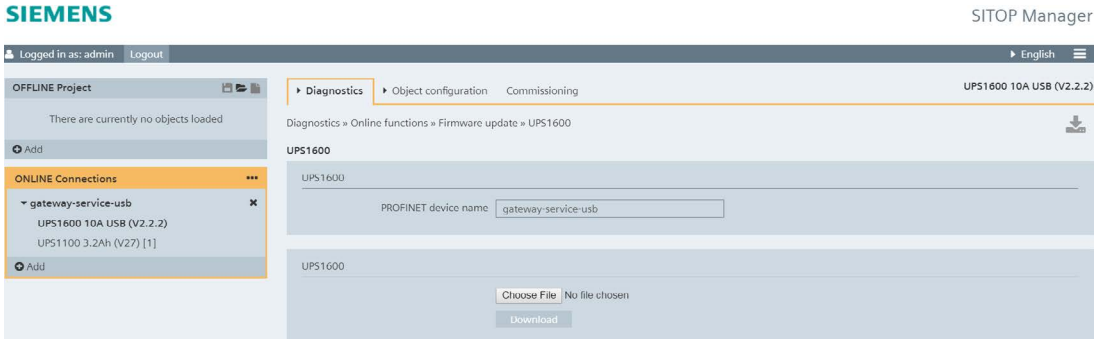


3. If the download process is successful, the following message appears on the page:



4. Click the "Reset system" button in order to complete the firmware update.

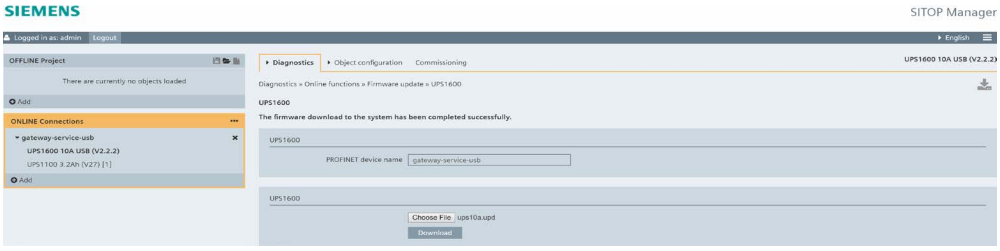
Firmware update for UPS1600 USB devices:



Navigation area		Description
Firmware update > UPS1600	UPS1600	Displays the following parameter: • PROFINET device name This parameter is read-only from the device, but it updates regularly according to the data change within the device during operation.
	UPS1600	Displays the following two buttons: • Choose File: with this button, you can choose a file for the firmware update of the device The file chosen for the firmware update has to be a UPD file (.upd), that is a program update information file (text document), whose content can be viewed by any text editing or word processing application. When no file has been chosen for the firmware update of the device, then "No file chosen" is displayed next to this button. If a file has been chosen for the firmware update of the device, then the name of the file appears next to this button instead of the "No file chosen" text. • Download: with this button, you can download the file chosen for the firmware update to the device. The "Firmware update" function shall take place automatically. When there is no file chosen for the update, then this button is not active.

The "Firmware update" function for a UPS1600 USB device observes the following steps:

1. Click the "Choose File" button in order to choose the file for the firmware update.
2. After choosing the file, click the now active "Download" button and the progress bar shows the progress of the process.
3. If the download process is successful, the following message appears on the page:



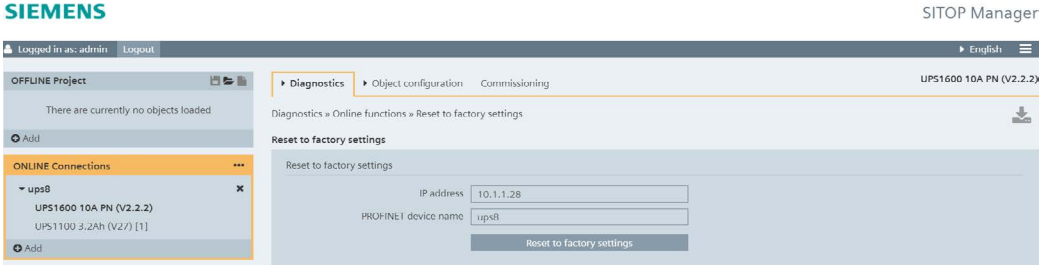
4. The firmware update has been completed.

CAUTION

Do not switch off the IPC with SITOP Manager, the IPC with GWS (when needed and potentially separate) and the device running the update during the "Firmware update" function!

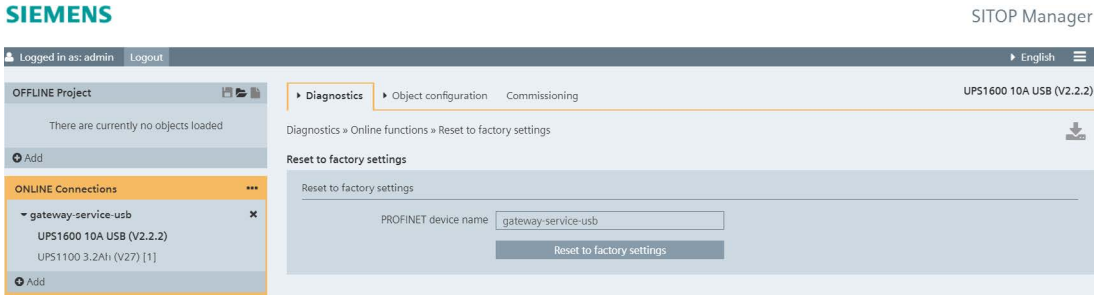
In case the firmware update is unsuccessful, an error message appears on the page detailing the issue occurred. Please review the message and redo the process correctly! In case the problem still persists, please refer to the USP1600 Manual (https://support.industry.siemens.com/cs/ww/en/view/84977415) for the firmware update specification for both UPS1600 PN and UPS1600 USB devices!

Reset to factory settings for UPS1600 PN devices:



Navigation area	Description
Reset to factory settings	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation. Displays the following button: • Reset to factory settings: this button resets the settings of the device to the factory settings

Reset to factory settings for UPS1600 USB devices:



Navigation area	Description
Reset to factory settings	Displays the following parameter: • PROFINET device name This parameter is read-only from the device, but it updates regularly according to the data change within the device during operation. Displays the following button: • Reset to factory settings: this button resets the settings of the device to the factory settings

CAUTION

Do not switch off the IPC with SITOP Manager, the IPC with GWS (when needed and potentially separate) and the device running the "Reset to factory settings" function!

There are two possibilities to "Reset to factory settings":

1. Reset to factory settings here in Diagnostics > Online functions > Reset to factory settings or
2. Reset to factory settings in Commissioning.

Both possibilities offer the same functionality.

CAUTION

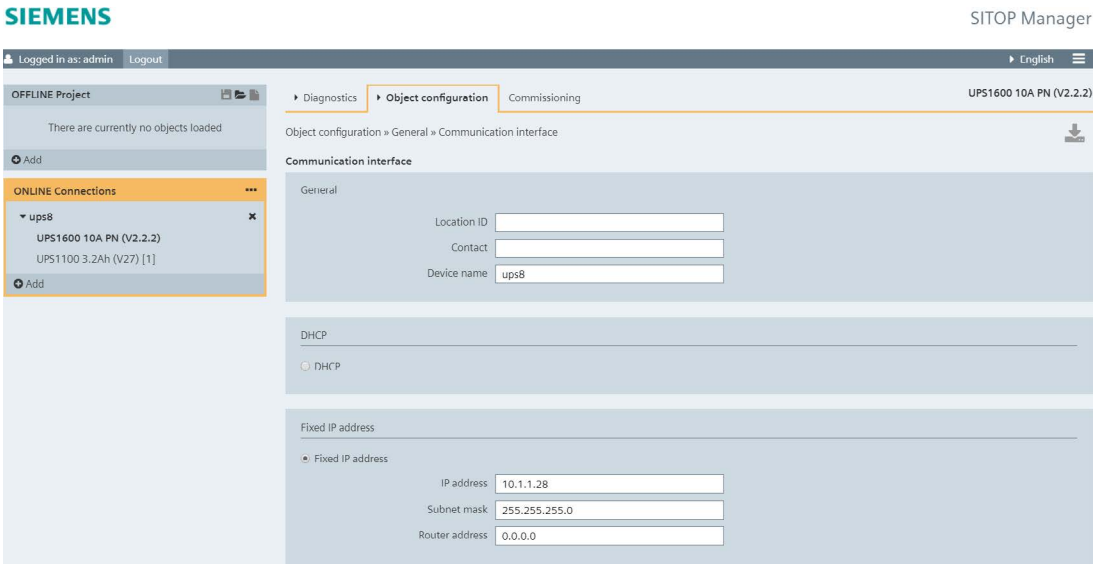
After running the "Reset to factory settings" function, all object configuration parameters are reset to the default setting; 0.0.0.0 is used for the IP address. A new IP address must then be assigned, as otherwise there is no connection to the OPC UA server. The object can now be newly commissioned as required using SITOP Manager. There is no need of any other Commissioning tool.

6.3.5.2 Object Configuration

Within the Object configuration tab, the following functionalities are offered: General, Device configuration and Load/Save.

General

Communication interface for UPS1600 PN devices:



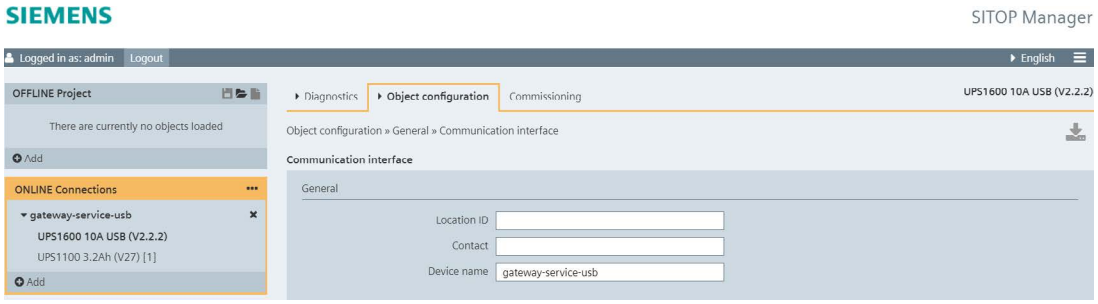
Navigation area		Description
Communication interface	General	Displays the following parameters: • Location ID • Contact: displays the contact information of the person responsible for the selected object • Device name If you change the device name here in Communication interface > Device name, then the name of the device also changes in the device interface, and everywhere where the device name is displayed, the new name appears instead of the former name of the device. All these parameters are writable.
	DHCP	Displays the following radio button: • DHCP: by selecting this button, you can access the object over your own network management protocol This button is selectable.

Navigation area		Description
	Fixed IP address	Displays the following radio button: • Fixed IP address: by selecting this button, you can access the object over a fixed IP address This button is selectable. Displays the following three parameters: • IP address • Subnet mask • Router address All these parameters are writable.

WARNING

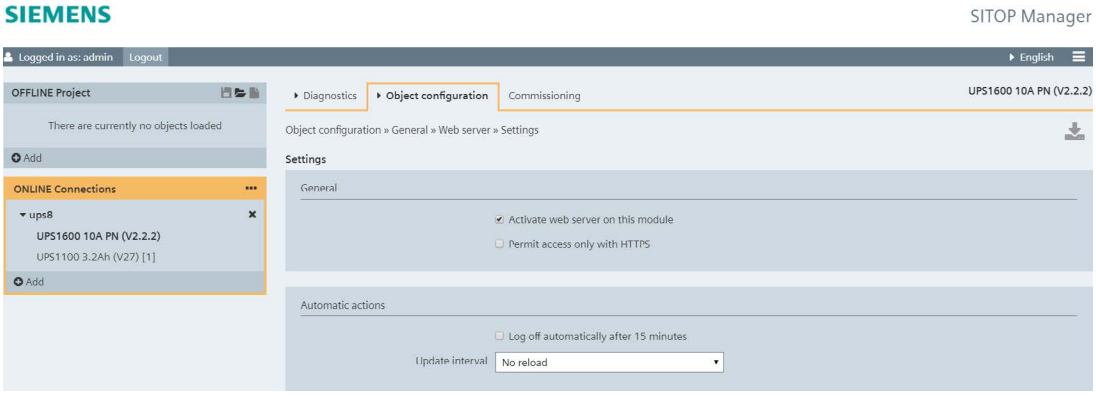
Please be aware that a correct functionality of the SITOP Manager and Shutdown Service is no longer guaranteed with DHCP usage.

Communication interface for UPS1600 USB devices:



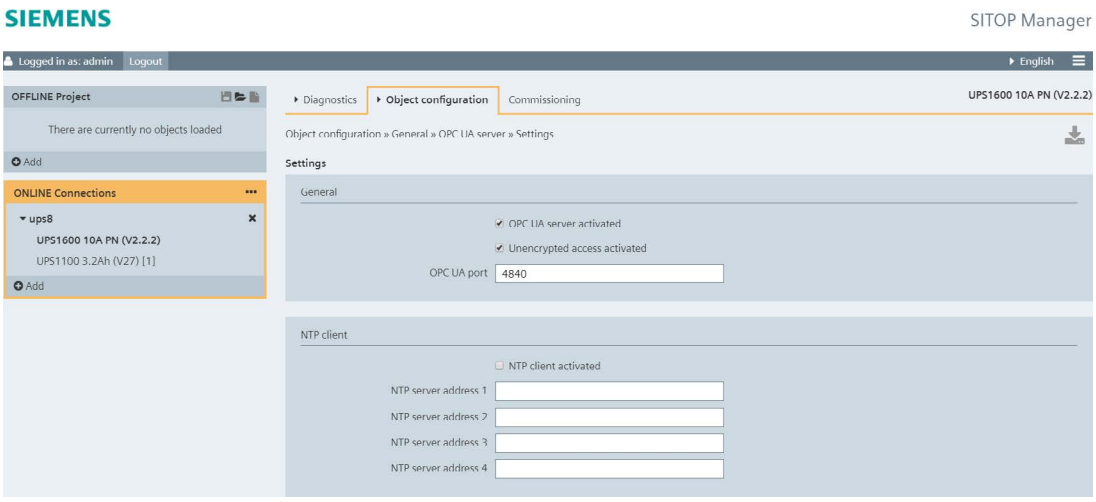
Navigation area		Description
Communication interface	General	Displays the following parameters: • Location ID • Contact: displays the contact information of the person responsible for the selected object • Device name If you change the device name here in Communication interface > Device name, then the name of the device also changes in the device interface and everywhere where the device name is displayed, the new name appears instead of the former name of the device. These parameters are writable.

Web server > Settings:



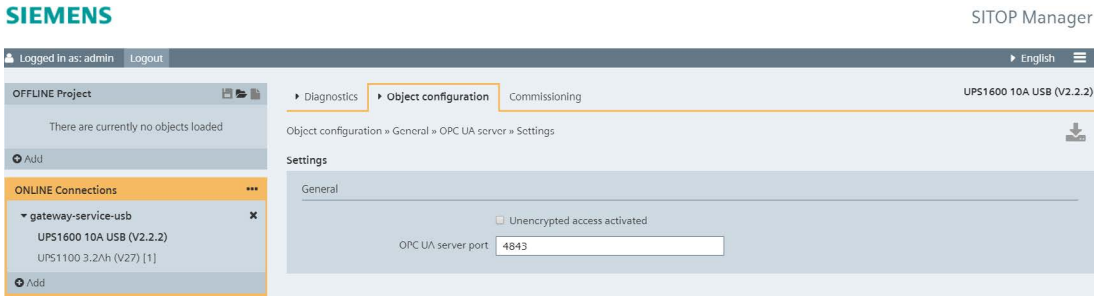
Navigation area		Description
Web server > Settings	General	Displays the following two checkboxes: • Activate web server on this module: when enabled, this checkbox shows that the web server is activated on the selected module • Permit access only with HTTPS: when enabled, this checkbox shows that access to the object is permitted only with HTTPS connection These parameters are selectable.
	Automatic actions	Displays the following checkbox: • Log off automatically after 15 minutes: when enabled, this checkbox shows that the web interface of the device will be logged off automatically after 15 minutes This parameter is selectable. Displays the following parameter: • Update interval: displays the update interval in a drop-down list (No reload, 5 seconds, 10 seconds, 20 seconds, 30 seconds and 60 seconds) This parameter can be selected from the drop-down list.

OPC UA server > Settings for UPS1600 PN devices:



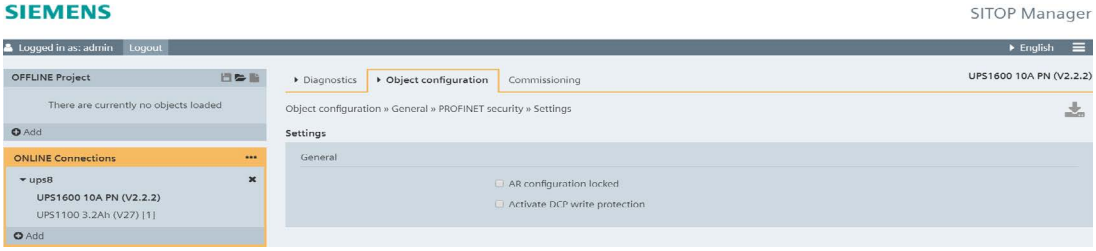
Navigation area		Description
OPC UA server > Settings	General	Displays the following checkbox: • OPC UA server activated: when enabled, this checkbox shows that the OPC UA server is activated OPC UA server must be activated for SITOP Manager to communicate with the device. Displays the following parameter: • OPC UA server port: default 4840 for PN devices Displays the following checkbox: • Unencrypted access activated: when enabled, this checkbox shows that the unencrypted OPC UA communication with the selected object is activated Please note that this option is not recommended! These parameters are selectable and respectively writable.
	NTP client	Displays the following checkbox: • NTP client activated: when enabled, this checkbox shows that the NTP client is activated You can enter up to 4 NTP IP server addresses. Displays the following parameter: • NTP server address 1 ... 4: displays the NTP IP server addresses These parameters are selectable and respectively writable.

OPC UA server > Settings for UPS1600 USB devices:



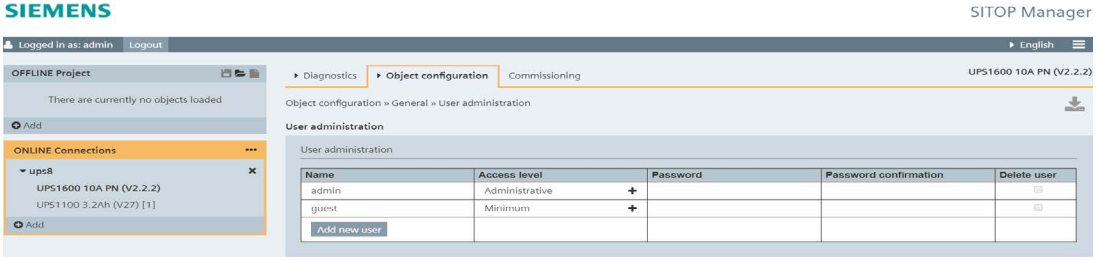
Navigation area		Description
OPC UA server > Settings	General	Displays the following checkbox: • Unencrypted access activated: when enabled, this checkbox shows that unencrypted access for the selected object is activated. Please note that this option is not recommended! Displays the following parameter: • OPC UA server port: default 4843 for GWS These parameters are selectable and respectively writable.

PROFINET security > Settings:



Navigation area		Description
PROFINET security > Settings	General	Displays the following two checkboxes: • AR configuration locked: when enabled, this checkbox shows that the AR configuration is locked • Activate DCP write protection: when enabled, this checkbox shows that the DCP write protection is activated These parameters are selectable.

User administration:



Navigation area	Description
User administration	Displays the user administration of the selected object in a tabular form with the following five columns: • Name: displays the user names • Access level: displays the access level of each user. User "admin" has administrative rights and user "guest" has minimum rights. As "admin" you have the right to add users. You can check the rights of each user by clicking the plus (+) icon corresponding to their respective access level. • Password: displays the password for each user when the changing of the password is in progress. Within this column, you can change the password. For further detailed information regarding the changing of the password, please refer to the "Procedure for changing the administrator password" section below. • Password confirmation: displays the password confirmation when the changing of the password is in progress. • Delete user: For further detailed information regarding deleting a user, please refer to the "Procedure for setting up a user account" section below. Displays the following button: • Add new user: this button adds new users

Managing device users using the "User administration" function

The description refers to device users who should have access to the Web and OPC UA server of the respective SITOP device.

NOTICE
Device access via SITOP Manager or SITOP Shutdown Service is only possible with administrator user.

Note

Users "admin" and "guest" are preset and cannot be deleted.

Procedure for changing the administrator password

Within this page, you can change the password of a service object:

1. Enter the new password in the editor area, in row "admin" under "Password"

   For further detailed information regarding the password criteria, please refer to subchapter First Logon (Page 39).

2. Enter the new password again under "Password confirmation"
3. Save to object by clicking the now active and orange blinking download ( ) button in the upper right corner of the Content view.

The new "admin" password has been successfully changed.

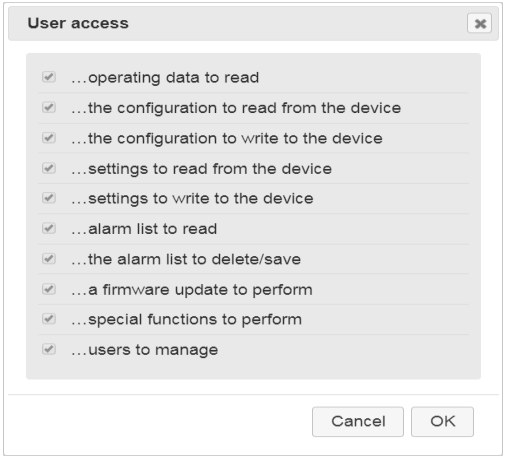
By using the same procedure, you can also change the "guest" password when you are logged in as "admin".

Procedure for setting up a user account

Within this page, as "admin", you can also add a new user and delete a user.

In order to add a new user, just click the "Add new user" button at the bottom of the "Name" column and write in the name of the new user in the row that is thusly created.

You can choose the rights for the new user by clicking the plus (+) icon in the corresponding "Access level" line. A "User access" dialog opens and there you can check the rights you want to give the new user:



According to the rights you give the new user, they shall have administrative or minimum rights.

A "guest" user has by default minimum rights, that is no rights have been granted to that specific "guest" user.

The following table describes all the rights that can be granted to a user in order to be an "admin" user.

User access level parameters:

Access level	Parameter	Description
1	operating data to read	device information and state is displayed (SVG, operating data)
2	the configuration to read from the device	• if selected, also the above access level (1) is also selected • parameters are displayed (read only) – Device configuration
3	the configuration to write to the device	• if selected, also the above access levels 1 and 2 will be selected • parameters will be also writable – Device configuration
4	settings to read from the device	• if selected, also the access levels 1 and 2 will be selected • save to local PC configuration file enable
5	settings to write to the device	• if selected, also the access levels 1, 2, 3 and 4 will be selected • upload to device configuration file enable
6	alarm list to read	alarms pending and history pages can be accessed
7	the alarm list to delete/save	• if selected, also the access levels 1-6 will be selected • alarm history can be deleted or saved
8	operating states to change	online functions enabled (Firmware update and Reset to factory settings for both PSU8600 and UPS1600 and Output On/Off, Buffering on/off just for PSU8600)
9	a firmware update to perform	firmware update enabled
10	special functions to perform	• if selected, also the access levels 1, 2 and 3 will be selected • reset to factory settings enabled
11	users to manage	user management enabled

After granting the necessary rights to the new user, write in a valid password and then the password confirmation in the corresponding columns. In order for the password to be valid, please observe the criteria for the password that appear when writing in the password. For these changes to take effect, please click the now active and orange blinking download ( ) button in the upper right corner of the Content view.

You have managed to set up a user account.

Procedure for deleting a user account

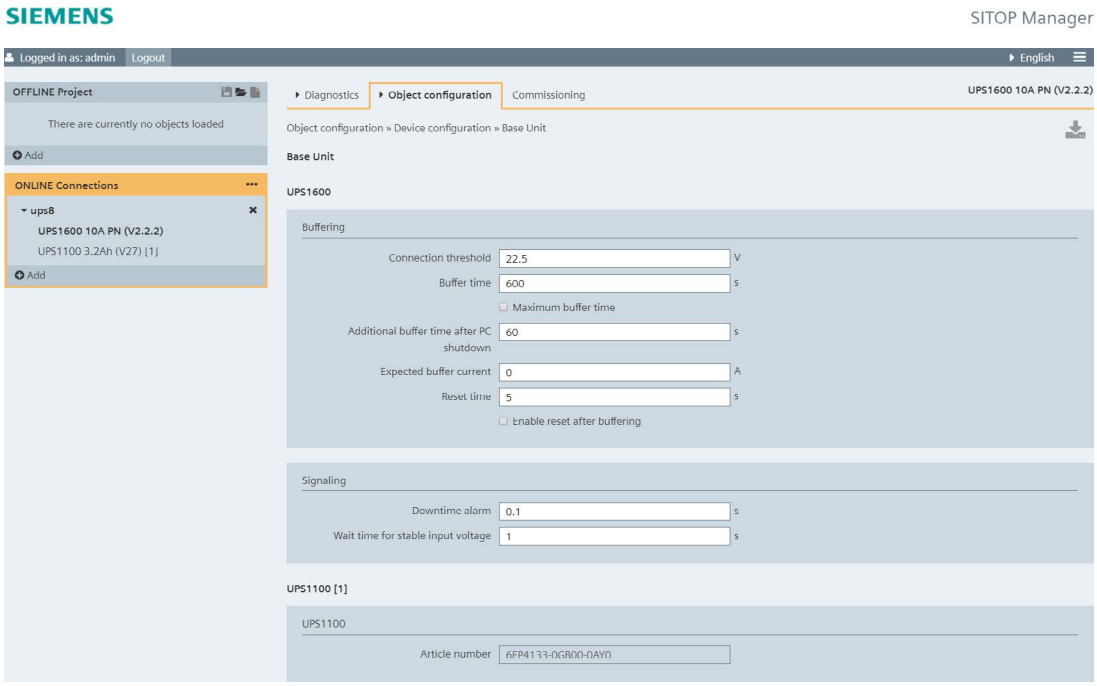
Within this page, as "admin", you can also delete a user.

In order to delete a user, just check the checkbox on the row corresponding to the user you want to delete and load these changes by clicking the same active and orange blinking download ( ) button in the upper right corner of the Content view.

Device configuration

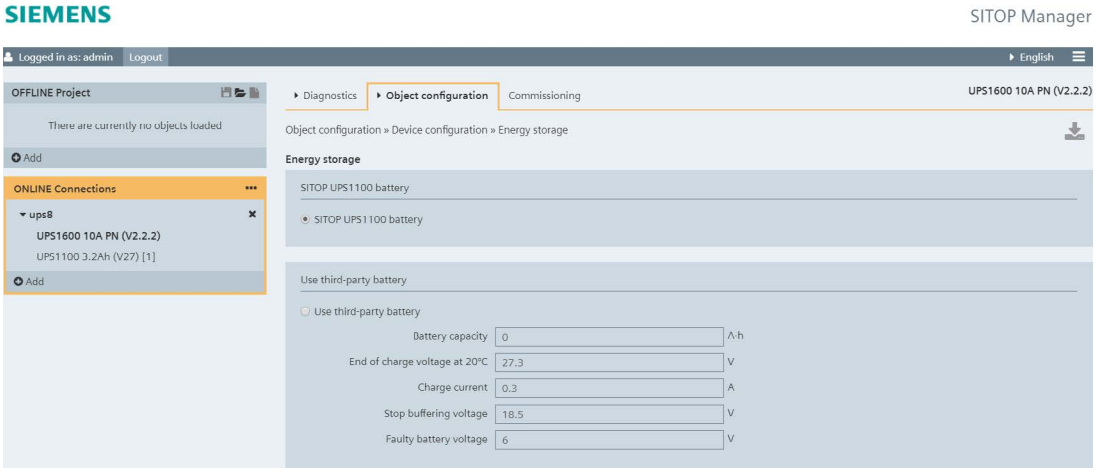
The Device configuration functionality offers for the UPS1600 devices the Base Unit and the Energy storage configuration pages:

Base Unit:



Navigation area		Description
Base Unit	Buffering	Displays the following two parameters: • Connection threshold • Buffer time Displays the following checkbox: • Maximum buffer time: when enabled, this checkbox shows that the maximum buffer time of the main device has been activated Displays the following three parameters: • Additional buffer time after PC shutdown • Expected buffer current • Reset time Displays the following checkbox: • Enable reset after buffering: when enabled, this checkbox shows that the reset is enabled after buffering
	Signaling	Displays the following two parameters: • Downtime alarm • Wait time for stable input voltage
	All these parameters are writable and respectively selectable and can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.	

Energy storage:

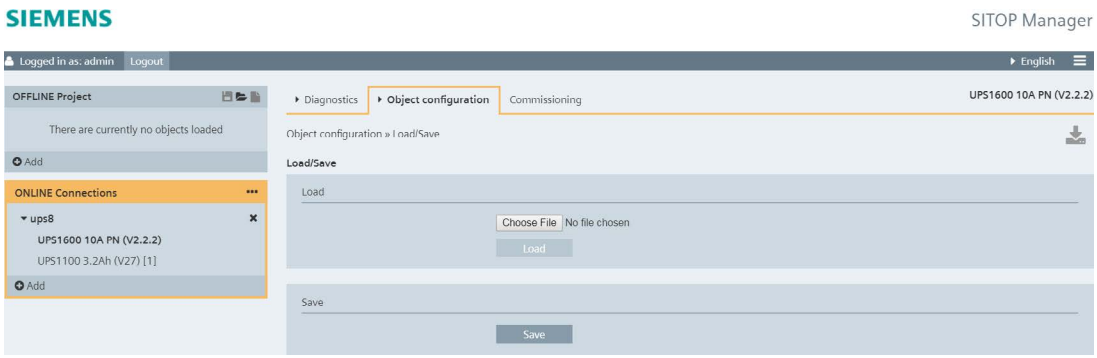


Navigation area		Description
Energy storage	SITOP UPS1100 battery	Displays the following radio button: • SITOP UPS1100 battery: by selecting this radio button, you choose UPS1100 as the energy storage medium for the UPS1600 device
	Use third-party battery	Displays the following radio button: • Use third-party battery: by selecting this radio button, you choose a third-party battery as the energy storage medium for the selected UPS1600 device Displays the following parameters: • Battery capacity: displays the battery capacity of the third-party battery selected as energy storage medium for the selected UPS1600 device • End-of-charge voltage at 20°C • Charge current • Stop buffering voltage • Faulty battery voltage When selecting the "SITOP UPS1100 battery" radio button, these parameters are read-only and when selecting the "Use third-party battery" radio button, these parameters become writable.

If you change the selection in this view, you have to download the newly-made selection to the device in order to save it.

Load/Save

The Load/Save functionality offers the same possibility for UPS1600 to load a previously saved and valid configuration into the device or to save a new device configuration as .zip file:



Navigation area		Description
Load/ Save	Load	Displays the following button: • Choose File: with this button, you can browse for a previously saved and valid configuration file for loading it into the selected device Please make sure that you choose a .zip file as loading file! When no file has been chosen, then "No file chosen" is displayed next to this button. Displays the following button: • Load: with this button, you can load the selected file into the system. After you choose the file for loading, then click the "Load" button and the loading shall take place automatically. When there is no file chosen for loading, then this button is not active.
	Save	Displays the following button: • Save: this button saves the device configuration as .zip encrypted file

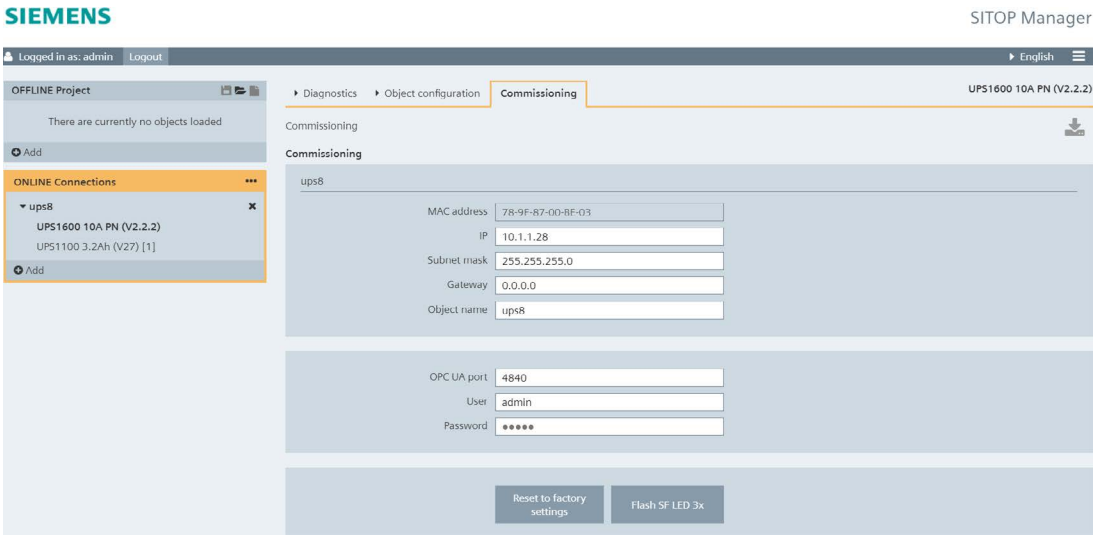
The Load/Save functionality offers the possibility to load a previously saved and valid configuration into the device or to save a new device configuration as .zip file.

Note

The Load/Save functionality within the Gateway Service pertains only to configuration data within the USB device.

6.3.5.3 Commissioning UPS1600 PN

A USB1600 PN device presents the following Commissioning page:



Navigation area	Description
Commissioning	Displays the following parameters: • MAC address • IP • Subnet mask • Gateway • Object name • OPC UA port • User: displays the user name of the selected object • Password: displays the password of the selected object All these parameters are writable, except for the MAC address, which is read-only, and consequently they can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view. Displays the following two buttons: • Reset to factory settings: this button resets the settings of the device to the factory settings • Flash SF LED 3x: this button starts the LED flashing of the device

NOTICE
In case SITOP Manager cannot establish the connection to the object, please review the exclamation mark symbol message and follow the instructions in chapter Troubleshooting (Page 167). By selecting this object, you are always and only routed to the Commissioning tab.

Managing the device connection and the commissioning data using the Commissioning functionality:

Within this page, you can change the commissioning data (IP, Subnet mask, Gateway, Object name, OPC UA port, User and Password), if required, of the selected device. Also you can connect on a different port or with different registration / login information (user, password).

Within this tab you can also "Reset to factory settings" and "Flash SF LED 3x" of the device.

Note

Resetting the device to factory settings will also break the connection to SITOP Manager.

After executing the "Flash SF LED 3x" function, the corresponding LED starts flashing on the device.

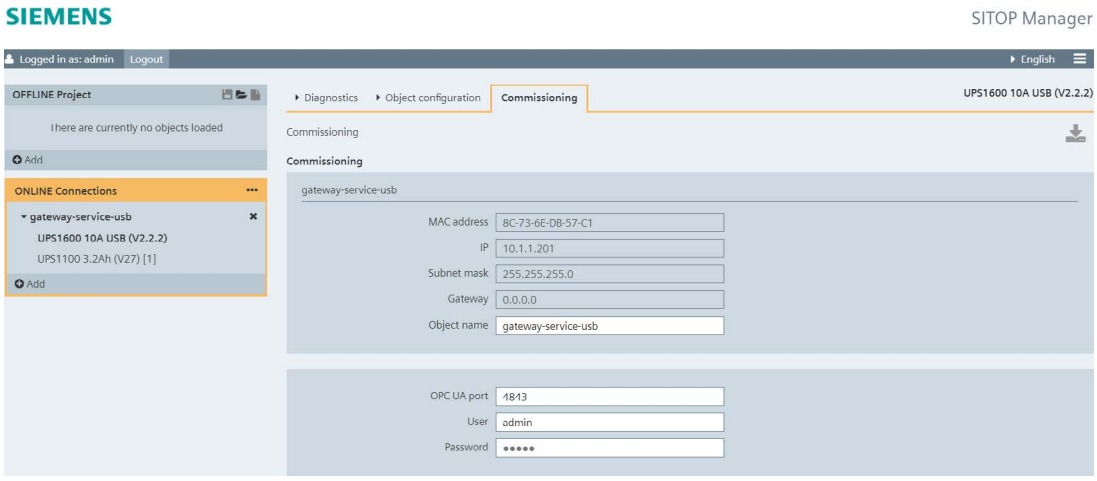
Every time you want to change an available parameter to the selected device and/or module in any page, you have to save the change by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

Note

For further detailed information regarding out of the box commissioning, please refer to subchapter Commissioning - Out of the Box (UPS1600 / PSU8600 PN) (Page 155).

6.3.5.4 Commissioning UPS1600 USB

A USB1600 USB device presents the following Commissioning page:



Navigation area	Description
Commissioning > gateway-service-usb	Displays the following parameters: • MAC address • IP • Subnet mask • Gateway • Object name • OPC UA port • User: displays the user name of the selected object • Password: displays the password of the selected object All these parameters are writable, except for the MAC address, IP, Subnet mask and Gateway, which are read-only, and consequently they can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

Managing the device connection and the commissioning data using the Commissioning functionality:

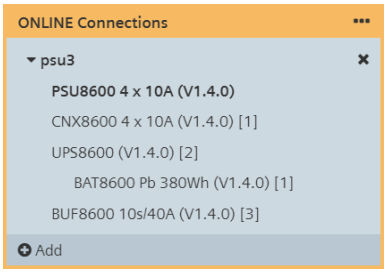
Within the Commissioning page, you can change the commissioning data (Object name, OPC UA port, User and Password), if required, of the selected device.

Every time you want to change an available parameter to the selected device in any page, you have to save the change by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

6.3.6 SITOP PSU8600

This subchapter deals with the online functions of the SITOP Manager (MGR) in relation to an online PSU8600 device.

The figure below shows successful object connection of a PSU8600 device:



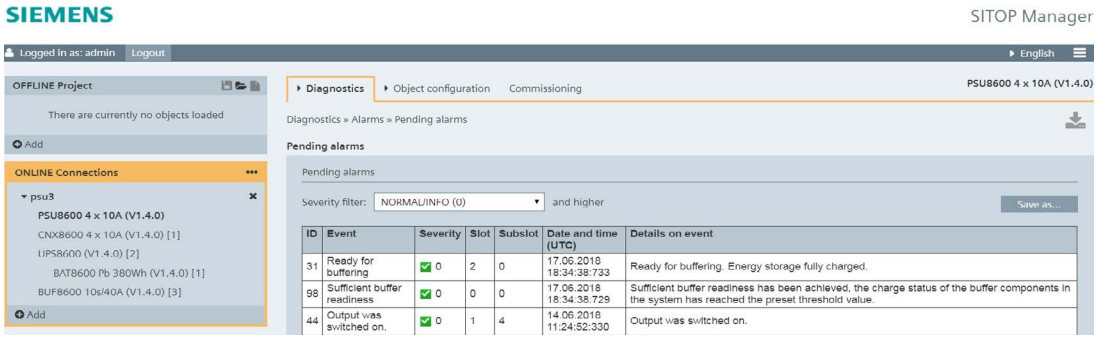
6.3.6.1 Diagnostics

PSU8600 presents the following functionalities within the Diagnostics tab: Alarms, Operating data and Online functions.

Alarms

The Alarms functionality offers the two standard alarms views: Pending alarms and Alarm history.

In the Pending alarms page, you can see the currently pending alarms of the selected object:

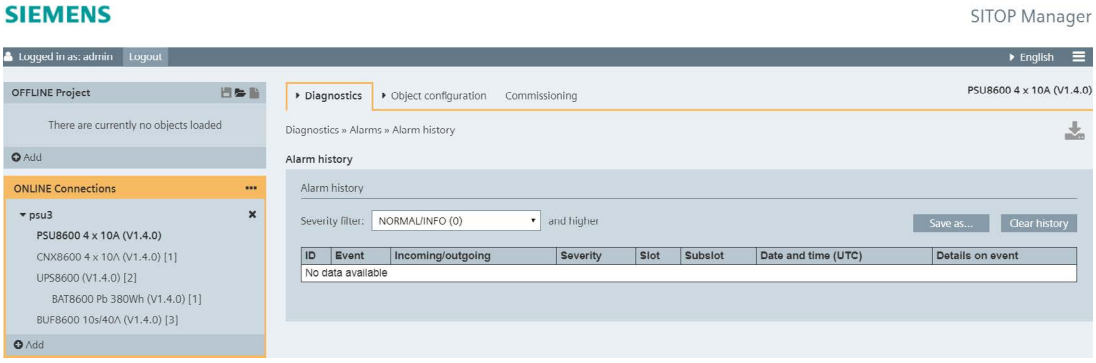


Navigation area	Description
Pending alarms	Displays the currently pending active alarms of the selected object in a tabular form with the following seven columns: • ID: displays the ID of the pending alarm related to the selected object • Event: shows the pending event related to the selected object • Severity: shows the severity of each alarm. There are 4 levels of severity for the device alarms. Using the "Severity filter" drop-down list, the alarm list can be restricted to the corresponding alarms. Each severity level has a specific icon. For further detailed information regarding the alarms severity levels, please refer to subchapter Alarms (Page 173). • Slot: shows the slot where the pending alarm occurred. PSU8600 has up to 5 slots. • Subslot: shows the subslot of the pending alarm • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred • Details on event: provides further information about a pending alarm Displays the "Severity filter" drop-down list, within which you can select to see the alarms displayed according to their severity level. Displays the following button: • Save as...: this button saves the currently displayed pending alarms as a .csv file

NOTICE
Please note that a few seconds may pass between triggering an alarm and displaying it!

There is no maximum number of pending alarms set.

In the Alarm history page, the alarms for the object added to the ONLINE Connections that have occurred are shown:



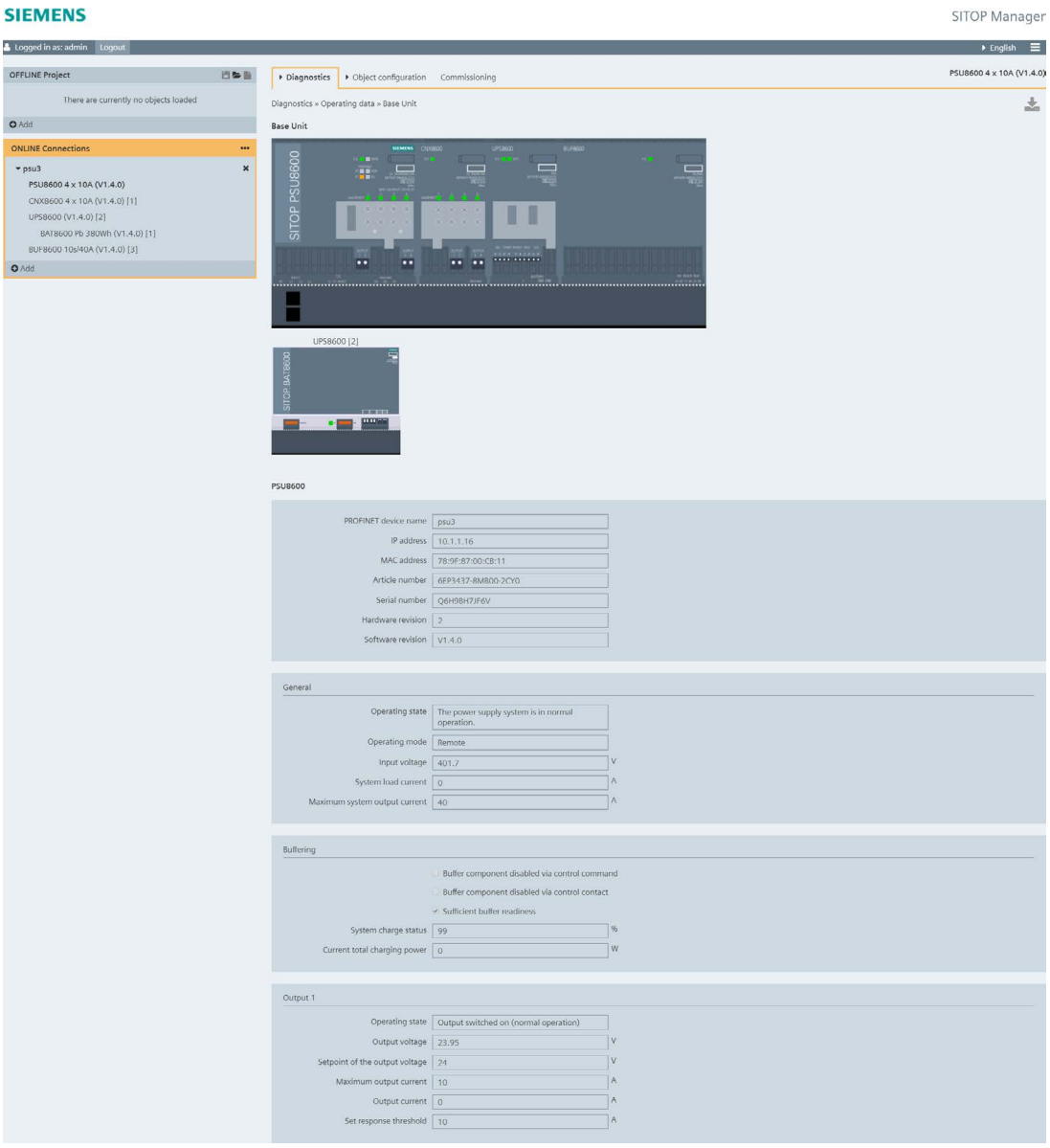
Navigation area	Description
Alarm history	Displays the alarms for the object added to the ONLINE Connections that have occurred in a tabular form with the following eight columns: • ID: displays the ID of the alarm that has occurred related to the selected object • Event: shows the alarm event related to the selected object • Incoming/outgoing: provides further information about an alarm, whether the alarm is incoming or outgoing, that is the occurrence or the rectification of the alarm event • Severity: shows the severity of the alarm. There are 4 levels of severity for the device alarms. Each severity level has a specific icon. For further detailed information regarding the alarms severity levels, please refer to subchapter Alarms (Page 173). • Slot: shows the slot where the alarm occurred. PSU8600 has up to 5 slots. • Subslot: shows the subslot where the alarm occurred • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred and respectively has been rectified • Details on event: provides further information about an alarm Displays the "Severity filter" drop-down list, within which you can select to see the alarms displayed according to their severity level. Displays the following two buttons: • Save as...: this button saves the alarm history as a .csv file • Clear history: this button deletes the whole history of the object alarms

A page displays a maximum of 30 alarms. In case of a higher number of alarms, the alarms are displayed on several pages. The corresponding alarms navigation is placed on the right corner at the page bottom:

The maximum number of alarms displayed in alarm history is 255.

Operating data

The Operating data functionality offers the Base Unit view:



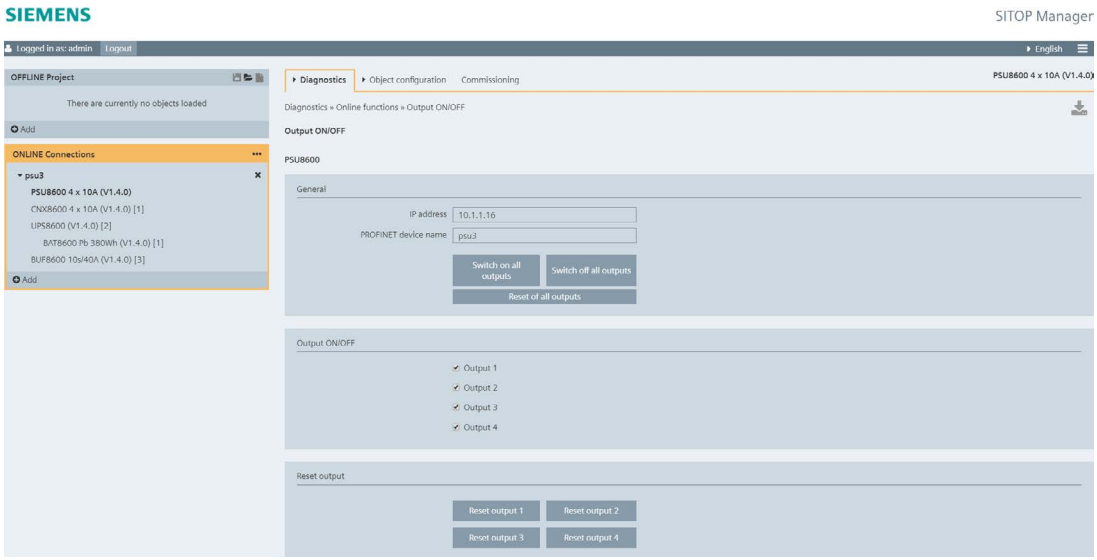
Navigation area			Description
Base Unit	PSU8600		Displays the following parameters: • PROFINET device name • IP address • MAC address • Article number • Serial number • Hardware revision • Software revision: displays the software revision of the main device, that is the latest software version of the device All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
		General	Displays the following parameters: • Operating state: displays the operating state of the main device. In the OPC UA, there are 12 operating states of the device. • Operating mode: displays the operating mode of the main device. It can be "Manual" or "Remote". • Input voltage • System load current • Maximum system output current All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
		Buffering	Displays the following checkboxes: • Buffer component disabled via control command: when enabled, this checkbox shows that the buffer component is disabled through control command • Buffer component disabled via control contact: when enabled, this checkbox shows that the buffer component is disabled via control contact • Sufficient buffer readiness: when enabled, this checkbox shows that the buffer has sufficient readiness Displays the following two parameters: • System charge status • Current total charging power All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.

Navigation area			Description
		Output 1 ... 4	Displays the following parameters: • Operating state: displays the operating state of the output. In the OPC UA, there are 12 operating states of the output. • Output voltage • Setpoint of the output voltage • Maximum output current • Output current • Set response threshold All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.

Online functions

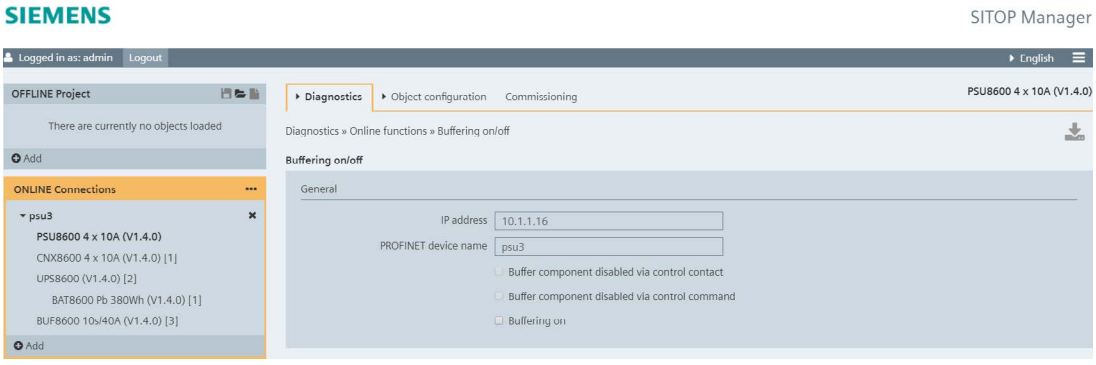
The Online functions page offers six online functions: Output ON/OFF, Buffering on/off, Battery capacity test, Firmware update, Reset system and Reset to factory settings.

Output ON/OFF:



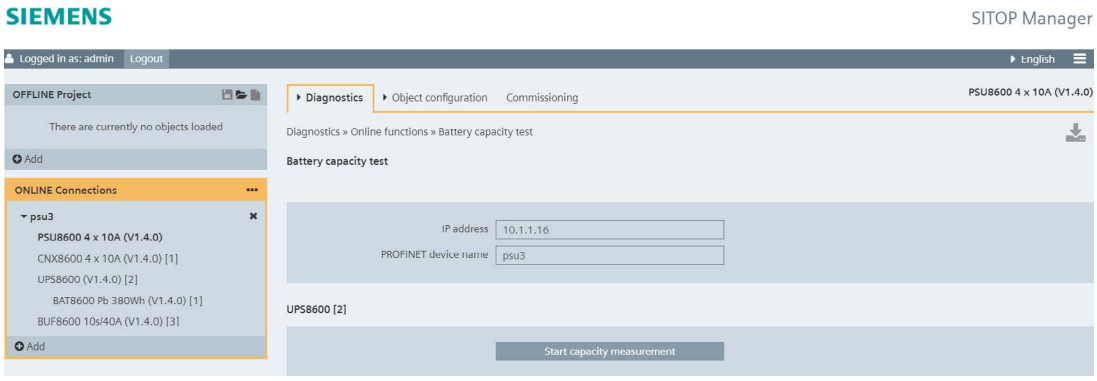
Navigation area			Description
Output ON/OFF	PSU8600	General	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation. Displays the following buttons: • Switch on all outputs: this button switches on all outputs of the main device • Switch off all outputs: this button switches off all outputs of the main device • Reset of all outputs: this button resets all outputs of the main device after a system overload
		Output ON/OFF	Displays a checkbox for each of the 4 outputs.
		Reset output	Displays the following button: • Reset button 1...4: this button resets the output of each module

Buffering on/off:



Navigation area		Description
Buffering on/off	General	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
		Displays the following three checkboxes: • Buffer component disabled via control contact: when enabled, this checkbox shows that the buffer component is disabled via control contact • Buffer component disabled via control command: when enabled, this checkbox shows that the buffer component is disabled via control command These checkboxes are read-only from the device, but they update regularly according to the data change within the device during operation. • Buffering on: when enabled, this checkbox shows that the buffering is on This checkbox is selectable.

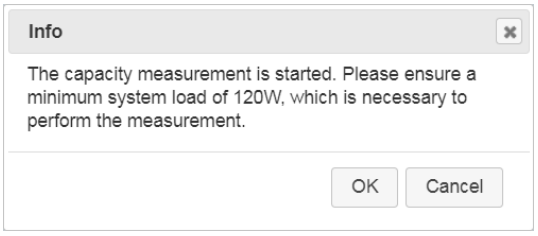
Battery capacity test:



Navigation area		Description
Battery capacity test		Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
	UPS8600 [n]	Displays the following button: • Start capacity measurement: this button starts the capacity measurement of the device battery This button is displayed for every battery.

In order to test the battery capacity, please observe the following steps:

1. Start the UPS8600 module capacity measurement by clicking the "Start capacity measurement" button.
2. An "Info" pop-up appears on the screen informing you that you must ensure a minimum system load of 120 W in order for the capacity measurement to take place:



   After conforming this message and if the conditions allow, the battery capacity test starts. You can verify if the test has started by checking if the alarm "Battery 'state of health' (SOH) tests are in progress." has appeared as incoming in the pending alarms or in the alarm history list.

   The test does not start in the following cases:

   – Not fully charged batteries: SOC < 100%
   – Insufficient system load: < 120W
   – Test canceled by user
   – Buffering started: Input voltage too high or input voltage too low
   – Input voltage too high: > 575V
   – Configuration changed
   – There is already a test running

   Note

   Please be aware that only one test can be run at one time!

3. After the capacity measurement starts, the "Start capacity measurement" button changes to "End capacity measurement".

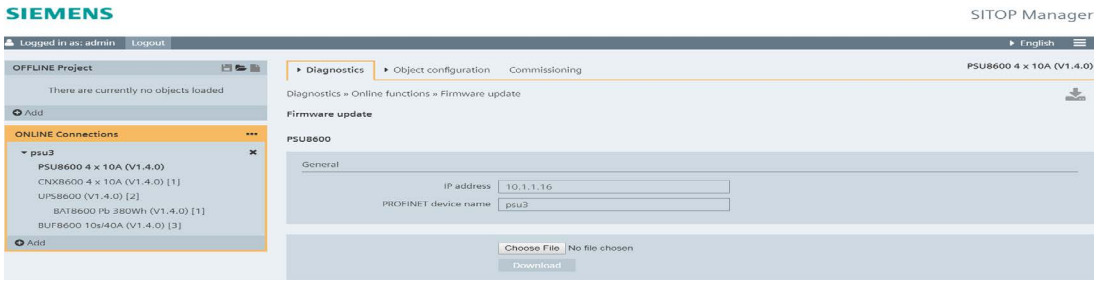
   In this step, you can choose to stop the test by clicking the "End capacity measurement" button.

4. The test has ended when the alarm "Battery 'state of health' (SOH) tests are in progress." appears as outgoing in the pending alarms or in the alarm history list.

Note

Please be aware that this test can last a few minutes!

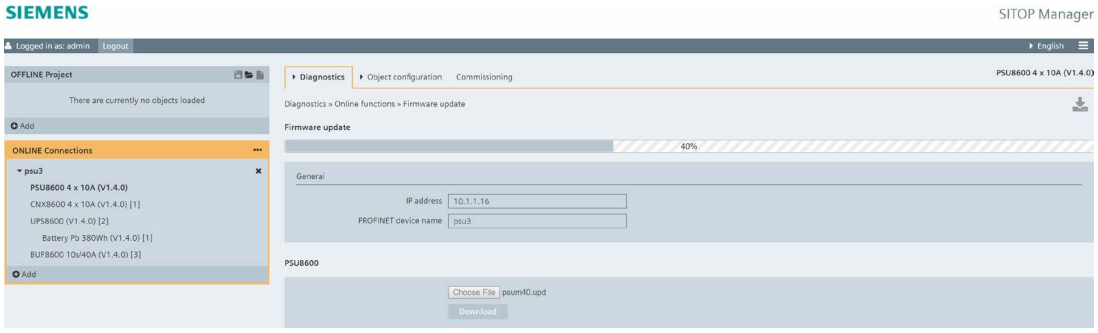
Firmware update:



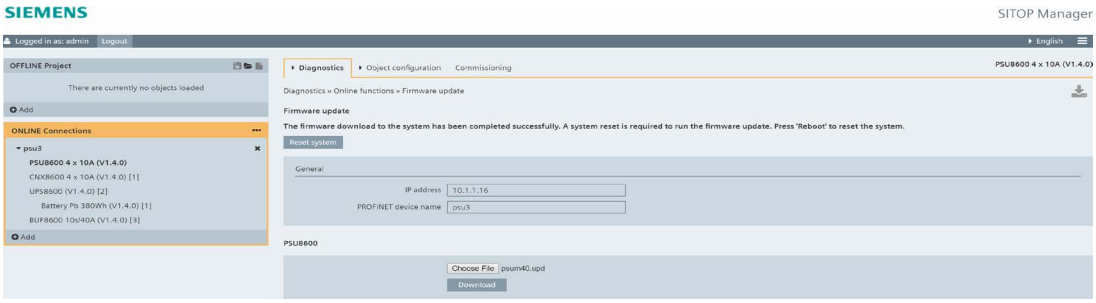
Navigation area			Description
Firm-ware update	PSU8600	General	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.
			Displays the following two buttons: • Choose File: with this button, you can choose a file for the firmware update of the device The file chosen for the firmware update has to be a UPD file (.upd), that is a program update information file (text document), whose content can be viewed by any text editing or word processing application. When no file has been chosen for the firmware update of the device, then "No file chosen" is displayed next to this button. • Download: with this button, you can download the file chosen for the firmware update to the device. The "Firmware update" function shall take place automatically. When there is no file chosen for the update, then this button is not active.

The "Firmware update" function for a PSU8600 device observes the following steps:

1. Click the "Choose File" button in order to choose the file for the firmware update.
2. After choosing the file, click the now active "Download" button and the following progress bar shows the progress of the process:



3. If the download process is successful, the following message appears on the page:



4. Click the "Reset system" button in order to complete the firmware update.

CAUTION

Do not switch off the IPC with SITOP Manager and the device running the update during the "Firmware update" function!

Note

Each module has to be individually updated as there cannot be multiple firmware updates at the same time.

In case the firmware update is unsuccessful, an error message appears on the page detailing the issue occurred. Please review the message and redo the process correctly! In case the problem still persists, please refer to the PSU8600 Manual (https://support.industry.siemens.com/cs/ww/en/view/105867947) for the firmware update specification!

Reset to factory settings:

Navigation area		Description
Reset to factory settings	General	Displays the following parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation. Displays the following button: • Reset to factory settings: this button resets the settings of the device to the factory settings.

There are two possibilities to "Reset to factory settings":

1. Reset to factory settings here in Diagnostics > Online functions > Reset to factory settings or
2. Reset to factory settings in Commissioning.

Both possibilities offer the same functionality.

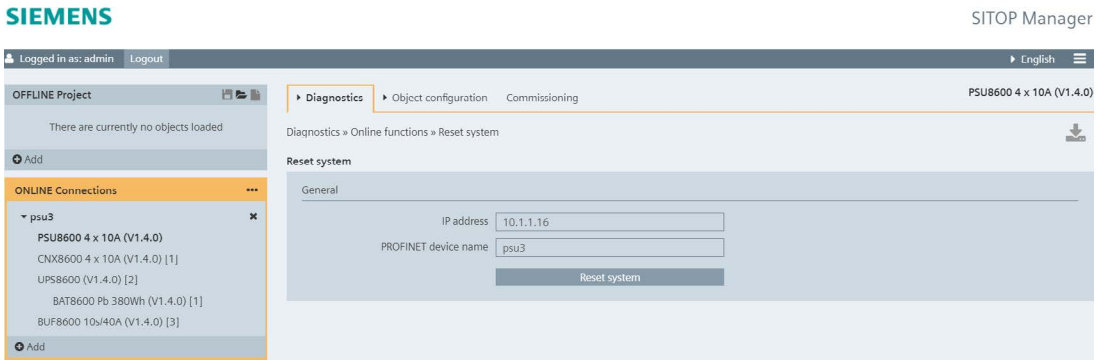
CAUTION

Do not switch off the IPC with SITOP Manager and the device running the update during the "Reset to factory settings" function!

CAUTION

After running the "Reset to factory settings" function, all object configuration parameters are reset to the default setting; 0.0.0.0 is used for the IP address. A new IP address must then be assigned, as otherwise there is no connection to the OPC UA server. The object can now be newly commissioned as required using SITOP Manager. There is no need of any other Commissioning tool.

Reset system:



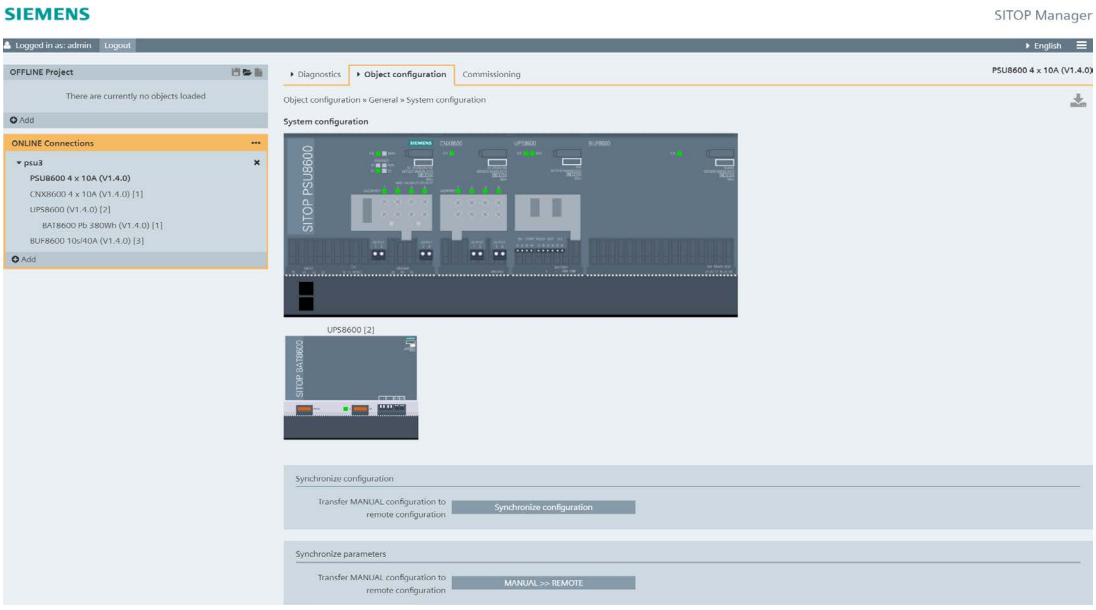
Navigation area		Description
Reset system	General	Displays the following two parameters: • IP address • PROFINET device name All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation. Displays the following button: • Reset system: this button resets the whole system, switching it off and then immediately on once again

6.3.6.2 Object Configuration

Within the Object configuration tab, the following functionalities are offered: General, Device configuration and Load/Save.

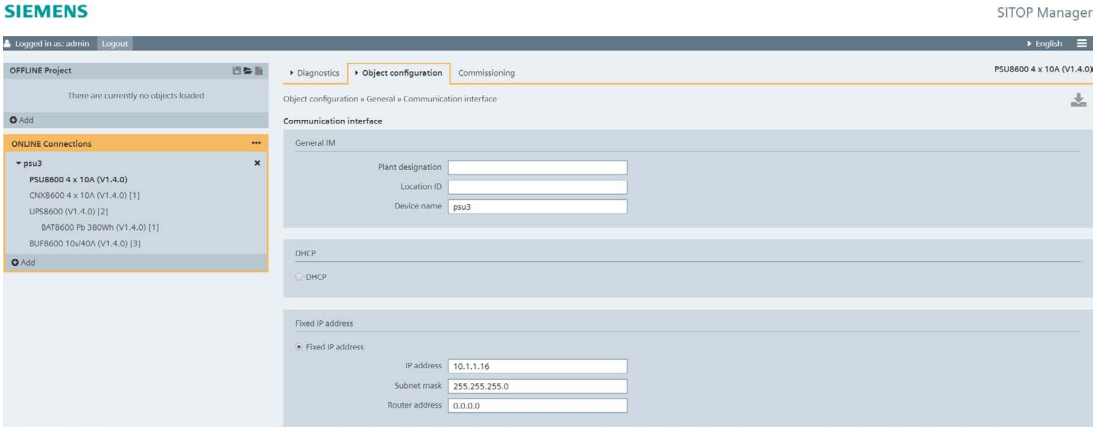
General

System configuration:



Navigation area		Description
System configuration	Synchronize configuration	Displays the following button: • Synchronize configuration: this button allows for the newly connected submodules to be configurable in remote mode
	Synchronize parameters	Displays the following button: • MANUAL >> REMOTE: this button transfers the manually configured parameters to the remote configuration of the device

Communication interface:

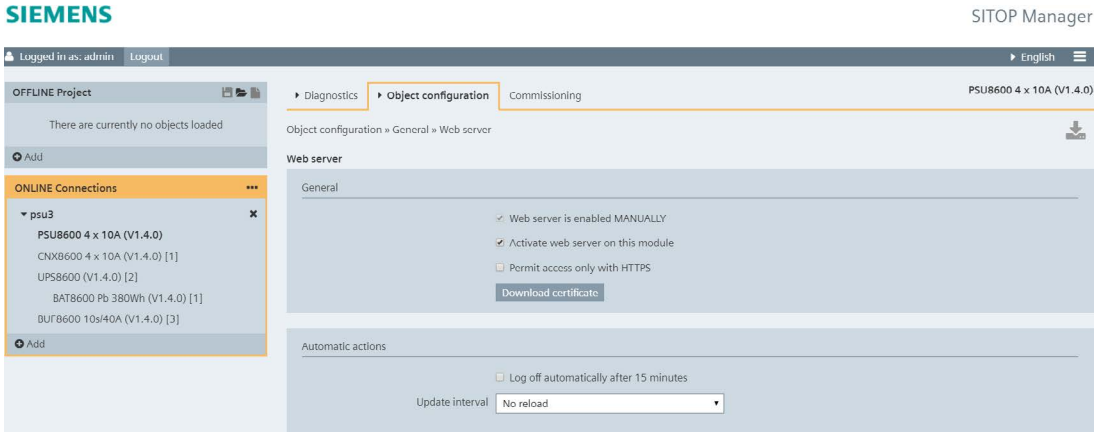


Navigation area		Description
Commu-nication interface	General IM	Displays the following identification and maintenance (IM) parameters: • Plant designation • Location ID • Device name If you change the device name here in Communication interface > Device name, then the name of the device also changes in the device interface, and everywhere where the device name is displayed, the new name appears instead of the former name of the device. All these parameters are writable.
	DHCP	Displays the following radio button: • DHCP: by selecting this button, you can access the object over your own network management protocol This button is selectable.
	Fixed IP address	Displays the following radio button: • Fixed IP address: by selecting this button, you can access the object over a fixed IP address This button is selectable. Displays the following three parameters: • IP address • Subnet mask • Router address All these parameters are writable.

WARNING

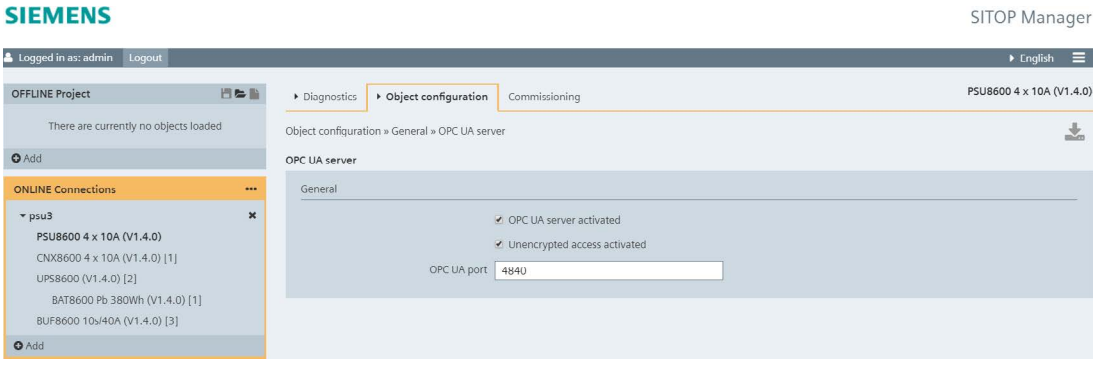
Please be aware that a correct functionality of the SITOP Manager and Shutdown Service is no longer guaranteed with DHCP usage.

Web server:



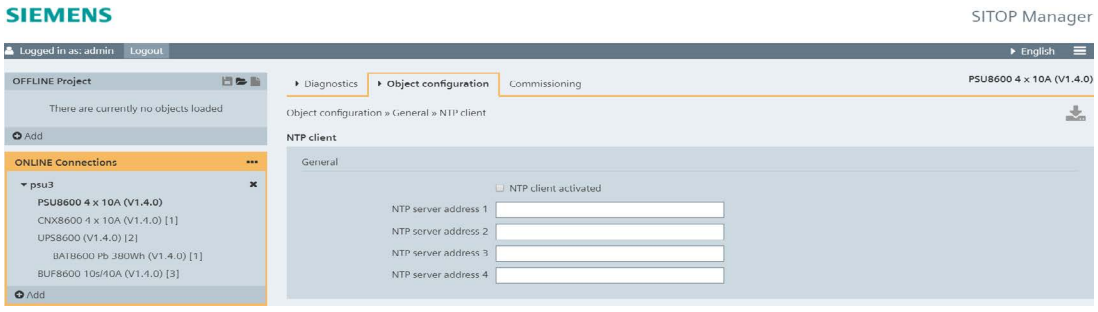
Navigation area		Description
Web server	General	Displays the following two checkboxes: • Web server is enabled MANUALLY: when enabled, this checkbox shows that the web server is enabled manually This parameter is read-only from the device, but it updates regularly according to the data change within the device during operation. • Activate web server on this module: when enabled, this checkbox shows that the web server is activated on this module • Permit access only with HTTPS: when enabled, this checkbox shows that access to the device is permitted only with HTTPS connection These two parameters are selectable. Displays the following button: • Download certificate: this button downloads the certificate for secure HTTPS connection
	Automatic actions	Displays the following checkbox: • Log off automatically after 15 minutes: when enabled, this checkbox shows that the web interface of the device will be logged off automatically after 15 minutes Displays the following parameter: • Update interval: displays the update interval (No reload, 5 seconds, 10 seconds, 20 seconds, 30 seconds and 60 seconds) This parameter can be selected from the drop-down list.

OPC UA server:



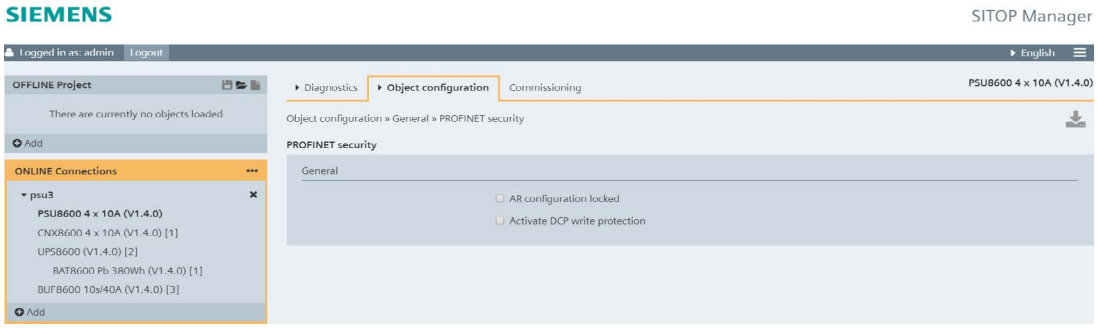
Navigation area		Description
OPC UA server	General	Displays the following two checkboxes: • OPC UA server activated: when enabled, this checkbox shows that the OPC UA server is activated OPC UA server must be activated for SITOP Manager to communicate with the device. • Unencrypted access activated: when enabled, this checkbox shows that unencrypted access is activated for the selected object Please note that this option is not recommended! These parameters are selectable. Displays the following parameter: • OPC UA server port: default 4840 for PN devices This parameter is writable.

NTP client:



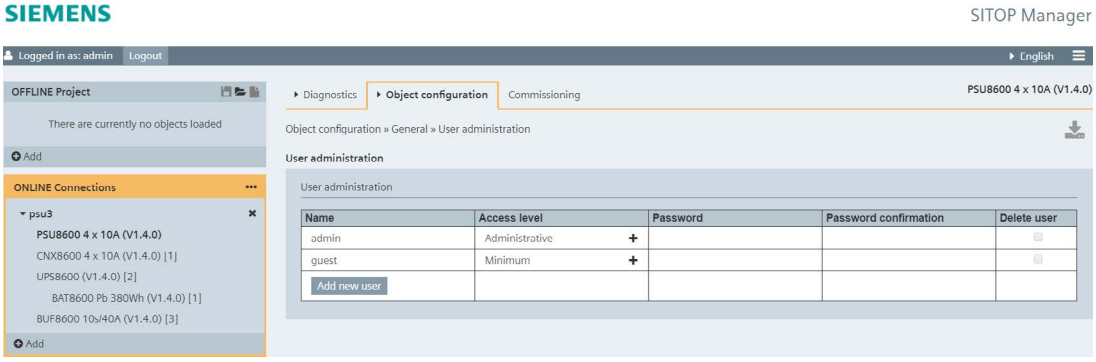
Navigation area		Description
NTP client	General	Displays the following checkbox: • NTP client activated: when enabled, this checkbox shows that the NTP client is activated Displays the following parameter: • NTP server address 1... 4: displays the NTP IP server address You can enter up to 4 NTP IP server addresses. These parameters are selectable and respectively writable.

PROFINET security:



Navigation area		Description
PROFINET security	General	Displays the following two checkboxes: • AR configuration locked: when enabled, this checkbox shows that the AR configuration is locked • Activate DCP write protection: when enabled, this checkbox shows that the DCP write protection is activated These parameters are selectable.

User administration:

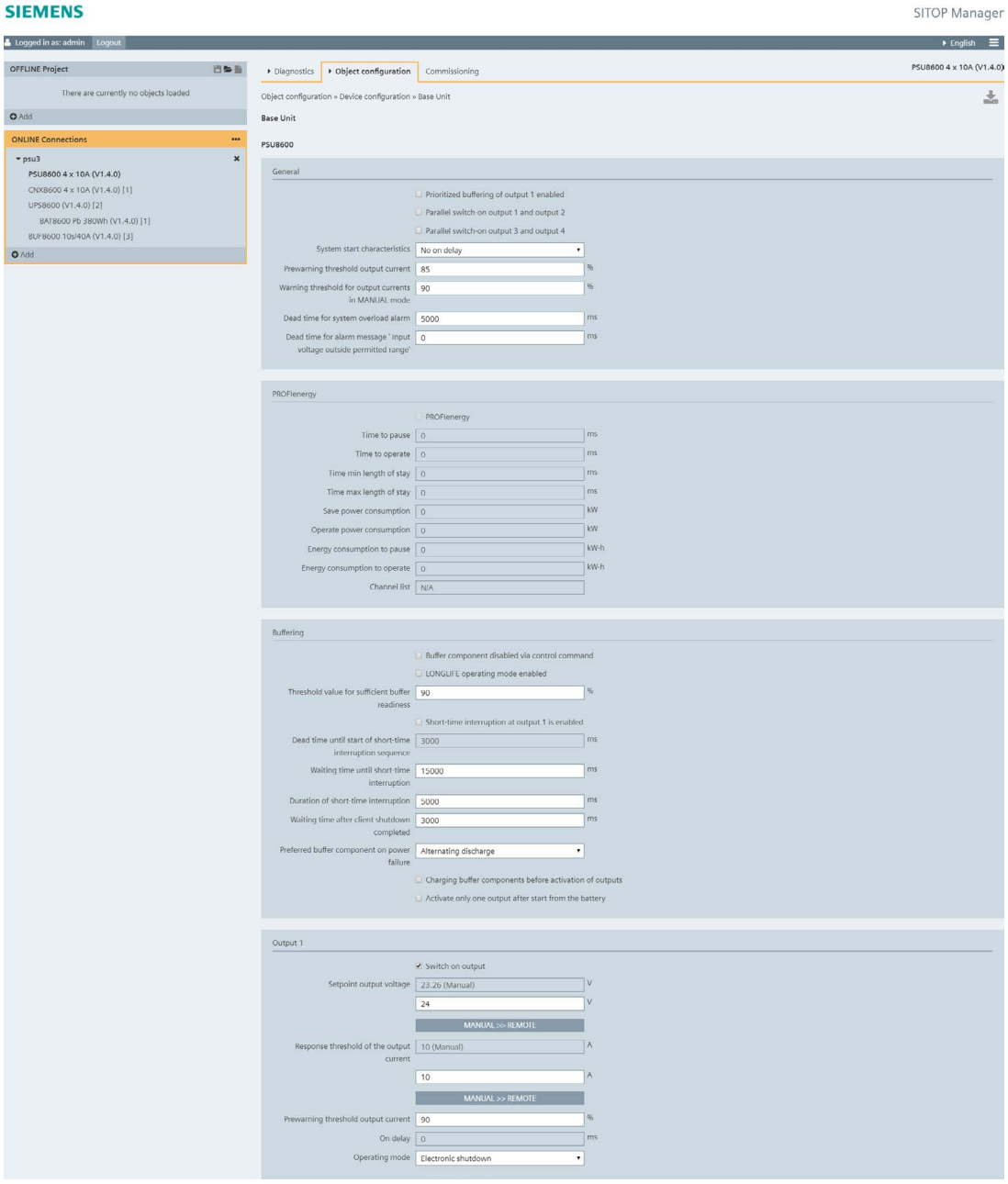


Navigation area	Description
User administration	Displays the user administration of the selected object as a table with the following five columns: • Name: displays the users names • Access level: displays the access level of each user. User "admin" has administrative rights and user "guest" has minimum rights. As "admin" you have the right to add users, but they will only have minimum rights. • Password: displays the password for each user when the changing of the password is in progress. Within this column, you can change the password. For further detailed information regarding the changing of the password, please refer to the "Procedure for changing the administrator password" section in subchapter Object Configuration (Page 87). • Password confirmation: displays the password confirmation when the changing of the password is in progress. • Delete user: For further detailed information regarding deleting a user, please refer to the "Procedure for setting up a user account" section in subchapter Object Configuration (Page 87). Displays the following button: • Add new user: this button adds new users

The "Managing object users using the User administration function" section also applies to PSU8600 devices. For further detailed information, please refer to this section in subchapter Object Configuration (Page 87) mentioned above!

Device configuration

The Device configuration functionality offers for the PSU8600 devices the Base Unit configuration page:

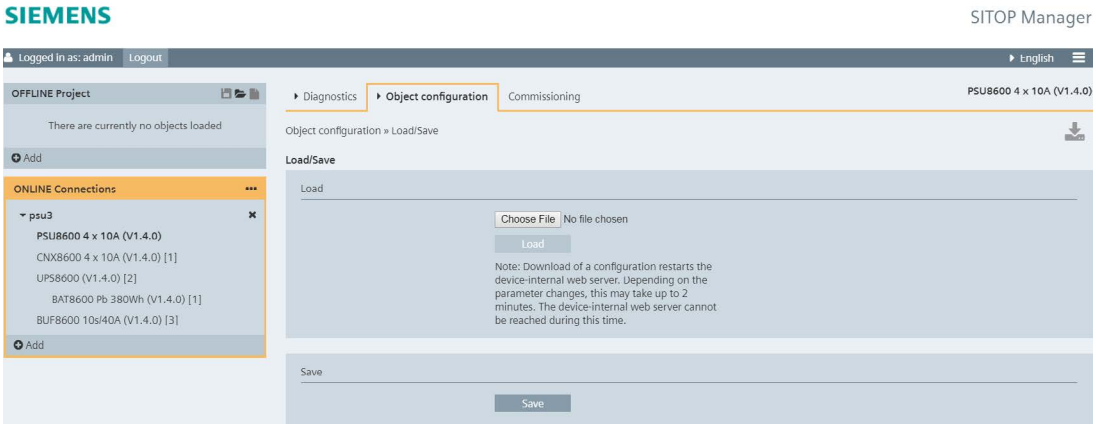


Navigation area			Description
Base Unit	PSU8600	General	Displays the following three checkboxes: • Prioritized buffering of output 1 enabled: when enabled, this checkbox shows that the prioritized buffering of output 1 is enabled • Parallel switch-on output 1 and output 2: when enabled, this checkbox shows that the parallel switch-on of output 1 and output 2 of the main device is activated • Parallel switch-on output 3 and output 4: when enabled, this checkbox shows that the parallel switch-on of output 2 and output 3 of the main device is activated Displays the following parameters: • System start characteristics • Prewarning threshold output current • Warning threshold for output currents in MANUAL mode This parameter is only writable in the manual mode. • Dead time for system overload alarm • Dead time for alarm message "Input voltage outside permitted range" All these parameters are selectable and respectively writable and can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download () button in the upper right corner of the Content view.
		PROFIenergy	Displays the following checkbox: • PROFIenergy: when enabled, this checkbox shows that the PROFIenergy of the main device is activated Displays the following parameters: • Time to pause • Time to operate • Time min length of stay: displays the time for the minimum length of stay of the main device • Time max length of stay: displays the time for the maximum length of stay of the main device • Save power consumption • Operate power consumption • Energy consumption to pause • Energy consumption to operate • Channel list All these parameters are read-only from the device, but they update regularly according to the data change within the device during operation.

Navigation area			Description
		Buffering	Displays the following checkboxes: • Buffer component disabled via control command: when enabled, this checkbox shows that the buffer component is disabled through control command of the main device • LONGLIFE operating mode enabled: when enabled, this checkbox shows that the operating mode LONGLIFE is enabled Displays the following parameter: • Threshold value for sufficient buffer readiness Displays the following checkbox: • Short-time interruption at output 1 is enabled: when enabled, this checkbox shows that the short-time interruption at output 1 is enabled Displays the following parameters: • Dead time until start of short-time interruption sequence This parameter is read-only from the device, but it updates regularly according to the data change within the device during operation. • Waiting time until short-time interruption • Duration of short-time interruption • Waiting time after client shutdown completed • Preferred buffer component on power failure This parameter can be selected from the drop-down list. Displays the following two checkboxes: • Charging buffer components before activation of outputs: when enabled, this checkbox shows that the charging power components before activation of outputs of the main device is activated • Activate only one output after start from the battery: when enabled, this checkbox shows that only one output is activated after start from battery All these parameters are selectable and respectively writable.

Navigation area			Description
		Output 1 ... 4	Displays the following checkbox: • Switch on output: when enabled, this checkbox shows that the output of the main device is switched on Displays the following parameters: • Setpoint output voltage Displays the following button: • MANUAL >> REMOTE: this button transfers the manually configured parameters to the remote configuration of the device Displays the following parameters: • Response threshold of the output current Displays the following button: • MANUAL >> REMOTE: this button transfers the manually configured parameters to the remote configuration of the device Displays the following parameters: • Prewarning threshold output current • On delay • Operating state All these parameters are selectable and respectively writable only in remote mode.

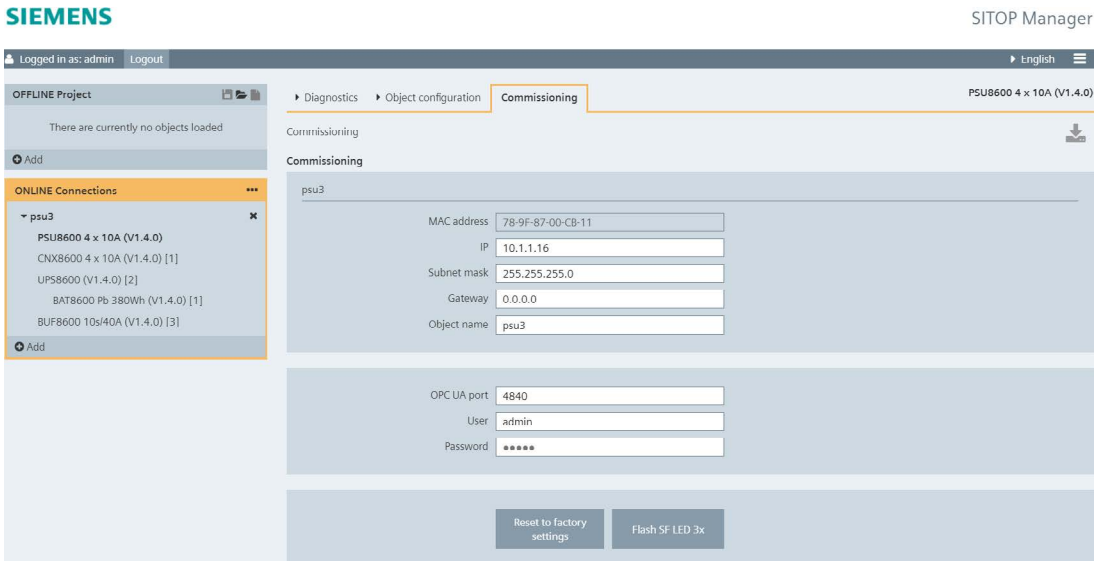
The Load/Save functionality offers the same possibility for PSU8600 to load a previously saved and valid configuration into the device or to save a new device configuration as .zip file:



Navigation area		Description
Load/ Save	Load	Displays the following button: • Choose File: with this button, you can browse for a previously saved and valid configuration file for loading it into the system When no file has been chosen, then "No file chosen" is displayed next to this button. Displays the following button: • Load: with this button, you can open the file selected for loading into the system. After you choose the file for loading, then click the "Load" button and the loading shall take place automatically. When there is no file chosen for loading, then this button is not active. This page displays the following note that warns you of the time it takes to download a configuration and that during this time the web server of the device cannot be reached: Download of a configuration restarts the device-internal web server. Depending on the parameter changes, this may take up to 2 minutes. The device-internal web server cannot be reached during this time.
	Save	Displays the following button: • Save: this button saves a new device configuration as .zip encrypted file

6.3.6.3 Commissioning

A PSU8600 device presents the following Commissioning page:



Navigation area	Description
Commissioning	Displays the following parameters: • MAC address • IP • Subnet mask • Gateway • Object name • OPC UA port • User: displays the user name of the selected object • Password: displays the password of the selected object All these parameters are writable, except for the MAC address, which is read-only, and consequently they can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view. Displays the following two buttons: • Reset to factory settings: this button resets the settings of the device to the factory settings • Flash SF LED 3x: this button starts the LED flashing of the device

NOTICE
In case SITOP Manager cannot establish the connection to the object, please verify the exclamation mark symbol message and follow the instructions in chapter Troubleshooting (Page 167). By selecting this object, you are always and only routed to the Commissioning tab.

Managing the device connection and the commissioning data using the Commissioning functionality:

Within this page, you can change the commissioning data (IP, Subnet mask, Gateway, Object name, OPC UA port, User and Password), if required, of the selected device. Also you can connect on a different port or with different registration / login information (user, password).

Within this tab you can also "Reset to factory settings" and "Flash SF LED 3x" of the device.

Note

Resetting the device to factory settings will also break the connection to SITOP Manager.

After executing the "Flash SF LED 3x" function, the corresponding LED starts flashing on the device.

Every time you want to change an available parameter to the selected device and/or module in any page, you have to save the change by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

Note

For further detailed information regarding out of the box commissioning, please refer to subchapter Commissioning - Out of the Box (UPS1600 / PSU8600 PN) (Page 155).

6.3.7 SITOP Gateway Service (USB Devices)

Functionality of the Service and User Interface

Network interfaces detection

Because the SITOP devices with USB interface cannot communicate with SITOP Manager directly, an OPC UA communicative middleware (SITOP Gateway Service) is needed.

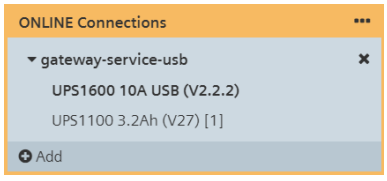
The SITOP device with USB interface plus the SITOP Gateway Service acts to the outside world as a SITOP device with an Ethernet interface.

Prerequisite:

- The SITOP Gateway Service has to run on the IPC where the SITOP device with USB interface is connected to.

In order to successfully add the Gateway Service to the ONLINE Connections, you have to follow the steps described in subchapter Add Object to ONLINE Connections (Page 73).

The figure below shows a successfully connected Gateway Service object referencing to the UPS1600 USB in ONLINE Connections:



In case the SITOP Manager cannot establish the connection to the Gateway Service, please verify the exclamation mark icon ( ) message and follow the instructions in chapter Troubleshooting (Page 167).

6.3.8 SITOP Shutdown Service

Functionality of the Service

The SITOP Shutdown Service (SDS) is responsible for the controlled shutdown of the IPC on which it is installed in the event of power supply failure and buffer operation start. Furthermore, the service triggers on certain alarms of the assigned buffer component user specified command scripts (Events).

Following service events can be triggered on the PC where the service is running in connection with an assigned buffer component:

- Power failure
- Power return
- Start shutdown sequence
- Ready for shutdown
- Buffer operation or shutdown not possible

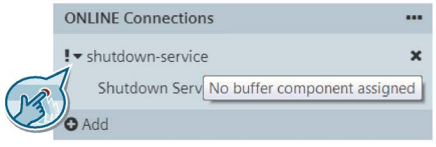
The service offers two different configuration and application possibilities. It can be configured within the MGR, but also directly via a Standalone web interface (necessary for installations without MGR).

In order to successfully add the Shutdown Service to the ONLINE Connections, you have to follow the steps described in subchapter Add Object to ONLINE Connections (Page 73).

Buffer component assignment

The SITOP Shutdown Service must be linked to a device with buffering capabilities in order for the shutdown events and triggers to be correctly initiated. This process is referred to as buffer component assignment.

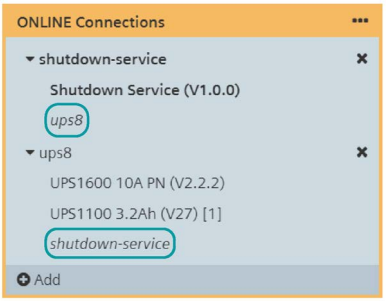
After adding the Shutdown Service to the ONLINE Connections, you can see the new online SDS without buffer component assignment. After the connection between MGR and SDS is established, the object is marked by an exclamation mark black highlighted (!) symbol near the arrow (▶) symbol pointing to a missing buffer component assignment. At mouse over, the tooltip shows you that there is no buffer component assigned:



Buffer component assignment can be made in two different ways:

1. Within the MGR interface: via Manager (recommended)

   A successful assignment is visualized by references of the assigned objects in ONLINE Connections. The figure below shows a successful assignment example of a Shutdown Service assigned to a UPS1600 PN device:



Service and buffer component are referenced and linked identifying the involved assignment objects. This functionality provides the right assignment overview.

You can access either the object name of each object or the corresponding references of the assigned objects. The view depends on the selection.

Note

Please be aware that when accessing the references, the Commissioning page is not shown!

For further detailed information regarding the assignment steps via Manager, please refer to subchapter Shutdown Management via SITOP Manager (Page 134).

2. Within the MGR and the Standalone interface: directly

   For further detailed information regarding the assignment of the buffer component directly, please refer to subchapter Shutdown Management Directly (Page 142).

6.3.8.1 Diagnostics

Within the Diagnostics tab the following two functionalities are offered: Alarms and Status.

Alarms

The Alarms functionality offers the two standard alarms views: Pending alarms and Alarm history.

In the Pending alarms page, you can see the currently pending alarms of the selected object:

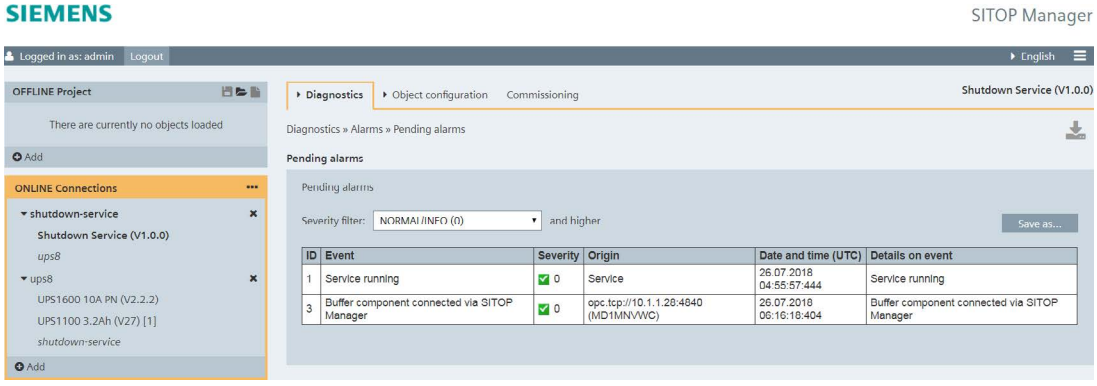


Figure 6-7 SDS with assigned buffer component - Pending alarms

Navigation area	Description
Pending alarms	Displays the currently pending active alarms of the selected object in a tabular form with the following six columns: • ID: displays the ID of the pending alarm related to the selected object • Event: shows the pending event related to the selected object • Severity: shows the severity of each alarm. There are 4 levels of severity for the device alarms. Using the "Severity filter" drop-down list, the alarm list can be restricted to the corresponding alarms. Each severity level has a specific icon. For further detailed information regarding the alarms severity levels, please refer to subchapter Alarms (Page 173). • Origin: shows the origin of the pending alarm • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred • Details on event: provides further information about a pending alarm Displays the "Severity filter" drop-down list, within which you can select to see the alarms displayed according to their severity level. Displays the following button: • Save as...: this button saves the currently displayed pending alarms as a .csv file

NOTICE
Please be aware that a few seconds may pass between triggering an alarm and displaying it!

In the Alarm history section, the alarms for the object added to the ONLINE Connections that have occurred are shown:

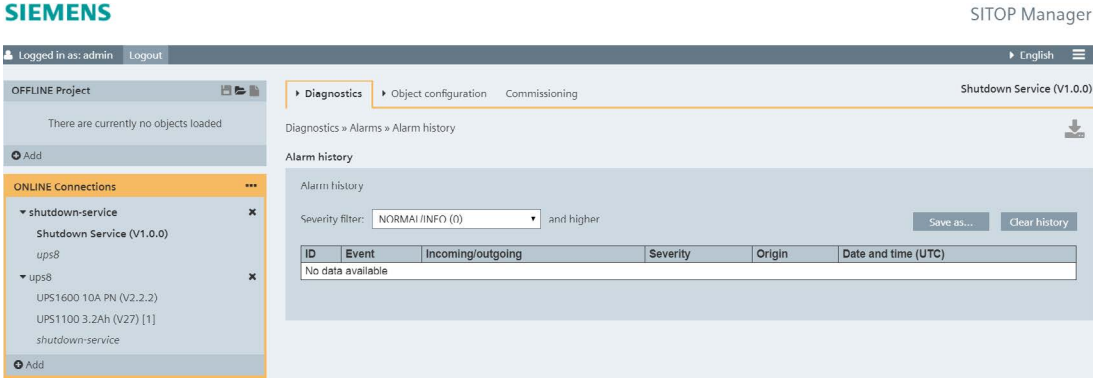


Figure 6-8 SDS with assigned buffer component - Alarm history

Navigation area	Description
Alarm history	Displays the currently pending active alarms of the selected object in a tabular form with the following six columns: • ID: displays the ID of the pending alarm related to the selected object • Event: shows the pending event related to the selected object • Incoming/outgoing: provides further information about an alarm, whether the alarm is incoming or outgoing, that is the occurrence or the rectification of the alarm event • Severity: shows the severity of each alarm. There are 4 levels of severity for the device alarms. Using the "Severity filter" drop-down list, the alarm list can be restricted to the corresponding alarms. Each severity level has a specific icon. For further detailed information regarding the alarms severity levels, please refer to subchapter Alarms (Page 173). • Origin: shows the origin of the pending alarm • Date and time (UTC): displays the date and time when each alarm related to the selected object has occurred Displays the "Severity filter" drop-down list, within which you can select to see the alarms displayed according to their severity level. Displays the following button: • Save as...: this button saves the currently displayed pending alarms as a .csv file • Clear history: this button deletes the whole history of the object alarms

A page displays a maximum of 30 alarms. In case of a higher number of alarms, the alarms are displayed on several pages. The corresponding alarms navigation is placed on the right corner at the page bottom:

Status

Within the Diagnostics > Status page, you can check the diagnostics of the assigned buffer component: "Connected" or "Not connected" to the Shutdown Service. In this case, "Connected":

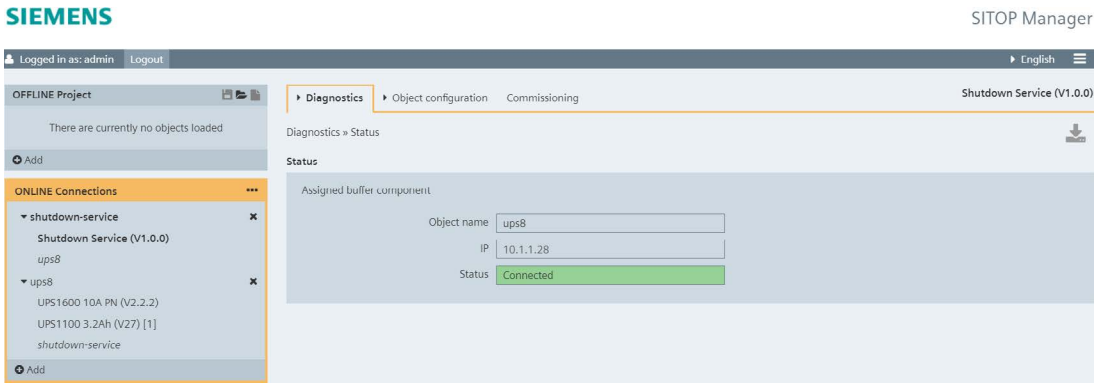


Figure 6-9 SDS with assigned buffer component - Diagnostics > Status Connected

Navigation area	Description
Status > Assigned buffer component	Displays the following parameters: • Object name: displays if available the buffer component object name • IP: displays the IP address of the buffer component the Shutdown Service is assigned to • Status: displays the status of the object, "Connected" in case of successful assignment to the buffer component and "Disconnected" in case of unsuccessful assignment

6.3.8.2 Object Configuration

Within the Object configuration tab, three pages are offered: General and Software configuration and User administration.

General

Within the Object configuration > General page, you can select the option how to assign and connect the buffer component to the Shutdown Service: either "via SITOP Manager" or "directly" to the buffer component:

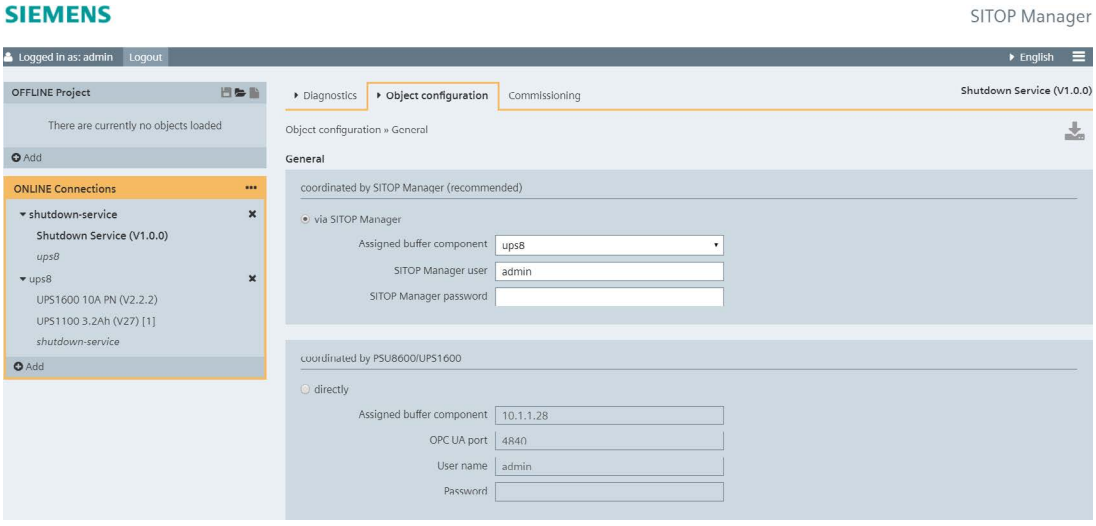


Figure 6-10 SDS with assigned buffer component - Object configuration > General

Navigation area		Description
Object configuration > General	coordinated by SITOP Manager (recommended)	Displays the following radio button: • via SITOP Manager: by selecting this radio button you choose to assign Shutdown Service and the buffer component for controlled shutdown via SITOP Manager. Up to 8 PCs are possible. Displays the following parameters: • Assigned buffer component: provides as a drop down list all valid buffer components out of ONLINE Connections • SITOP Manager user: enter the MGR administrator user name • SITOP Manager password: enter the corresponding password
	coordinated by PSU8600/ UPS1600	Displays the following radio button: • directly: by selecting this radio button you choose to assign Shutdown Service and the buffer component for controlled shutdown directly On switching from "via SITOP Manager" to "directly", MGR and GWS are running on local PC1 and SDS is running on remote PC2. Displays the following parameters: • Assigned buffer component: enter here the IP address of the buffer component • OPC UA port: enter here the OPC UA port of the buffer component • User name: enter here the buffer component administrator user name • Password: enter here the corresponding password
	Depending on the option selected within this page, either "via SITOP Manager" or "directly", the respective parameters are either writable or read-only.	

NOTICE
Mixed operation mode of "directly" and "via SITOP Manager" is not recommended on the same buffer component as it can create a conflict between the two different ways of shutdown management leading to an uncontrolled shutdown behavior.

Software configuration

Within the Object configuration > Software configuration page, you can configure the controlled shutdown:

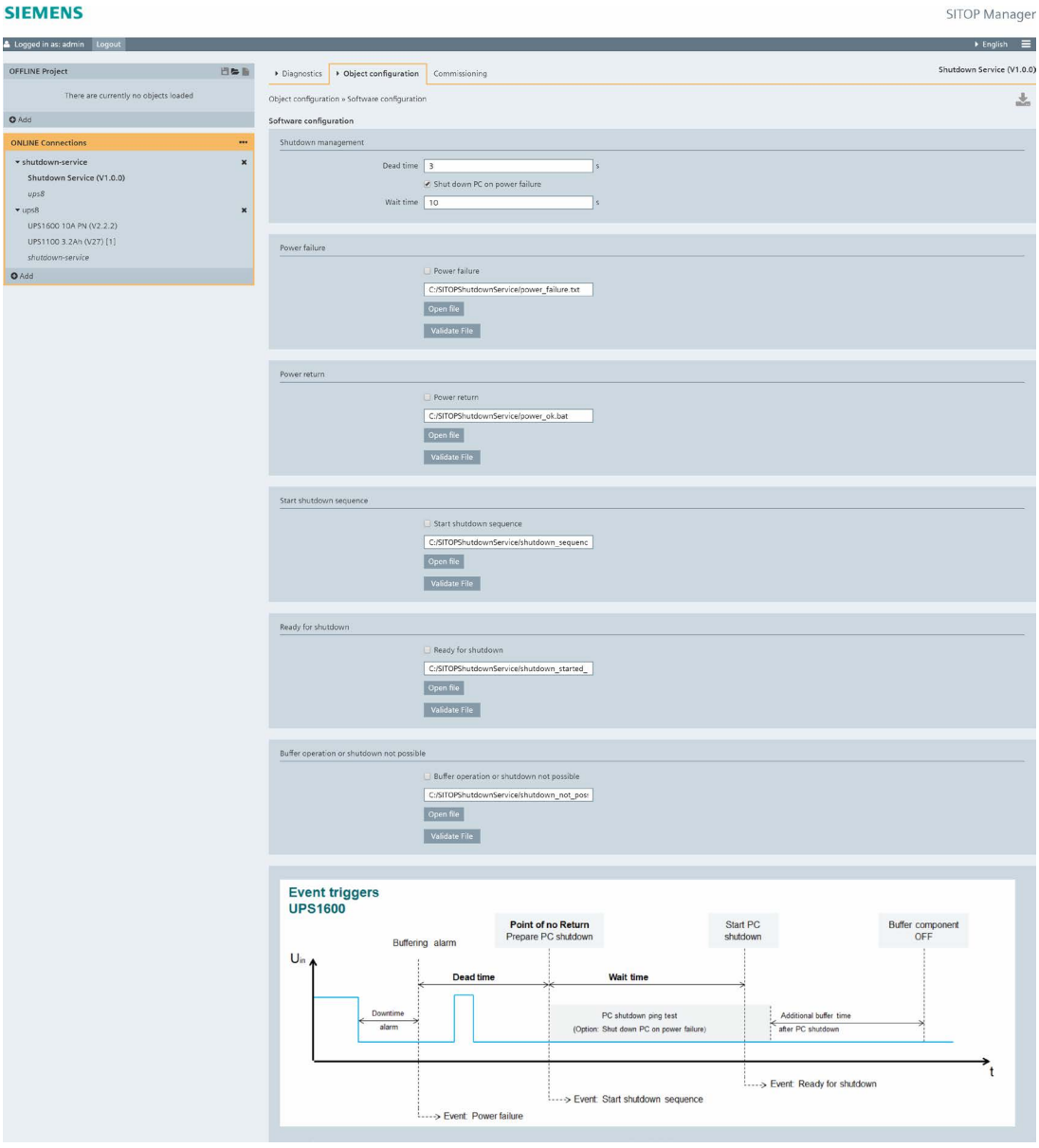


Figure 6-11 SDS with assigned buffer component - Object configuration > Software configuration

Navigation area		Description
Object configuration > Software configuration	Software management	Displays the following parameter: • Dead time Displays the following checkbox: • Shut down PC on power failure: when checked, this checkbox shows that on power failure the PC shall shut down. The checkbox is enabled by default. Displays the following parameter: • Wait time
	Power failure	Displays the following checkbox: • Power failure: when checked, this checkbox shows that the "Power failure" option is activated Displays the following button: • Open file: with this button, you can choose the batch file for executing the corresponding function • Validate File: with this button, you can verify if the selected file is available locally on the corresponding Shutdown Service PC.
	Power return	Displays the following checkbox: • Power failure: when checked, this checkbox shows that the "Power failure" option is activated Displays the following button: • Open file: with this button, you can choose the batch file for executing the corresponding function • Validate File: with this button, you can verify if the selected file is available locally on the corresponding Shutdown Service PC.
	Start shutdown sequence	Displays the following checkbox: • Power failure: when checked, this checkbox shows that the "Power failure" option is activated Displays the following button: • Open file: with this button, you can choose the batch file for executing the corresponding function • Validate File: with this button, you can verify if the selected file is available locally on the corresponding Shutdown Service PC.
	Ready for shutdown	Displays the following checkbox: • Power failure: when checked, this checkbox shows that the "Power failure" option is activated Displays the following button: • Open file: with this button, you can choose the batch file for executing the corresponding function • Validate File: with this button, you can verify if the selected file is available locally on the corresponding Shutdown Service PC.

Navigation area		Description
	Buffer operation or shutdown not possible	Displays the following checkbox: • Power failure: when checked, this checkbox shows that the "Power failure" option is activated Displays the following button: • Open file: with this button, you can choose the batch file for executing the corresponding function • Validate File: with this button, you can verify if the selected file is available locally on the corresponding Shutdown Service PC.
	All these parameters are selectable and respectively writable.	

Note

"Specify the whole path. Note that the search is only performed locally on the web client." when using the "Open file" function.

The Object configuration > Software configuration page is the SITOP Manager shutdown management page.

For each function present in this view (Power failure, Power return, Start shutdown sequence, Ready for shutdown, Buffer operation or shutdown not possible) in order for the shutdown to take successfully place, you have two possibilities:

1. Enable the checkbox corresponding to each event and write in the path of the .bat file with your commands to execute this function in the corresponding field if the path is not already displayed.

   Note

   Please make sure that the .bat file is already created beforehand!

   Download the selection and the files by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

   The new configuration is saved and it shall be used for each shutdown event.

2. Upload the .bat files corresponding to each event by clicking the corresponding "Open file" button.

   NOTICE

   Please make sure that the .bat file is already created beforehand!

   NOTICE

   Please be aware that some browsers may not automatically write in the entire name of the path and you have to fill it manually in order for the file to be uploaded!

   Download the selection and the files by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

   The new configuration is saved and it shall be used for each shutdown event.

Within this page, when a certain buffer component (either UPS1600 or PSU8600) is assigned and connected, then a diagram detailing the shutdown process for the corresponding buffer component is displayed.

For further detailed information regarding Shutdown Management, please refer to subchapter Shutdown Management via SITOP Manager (Page 134).

User administration

Within the Object configuration > User administration page, you can change the password for the service, you can add or delete users:

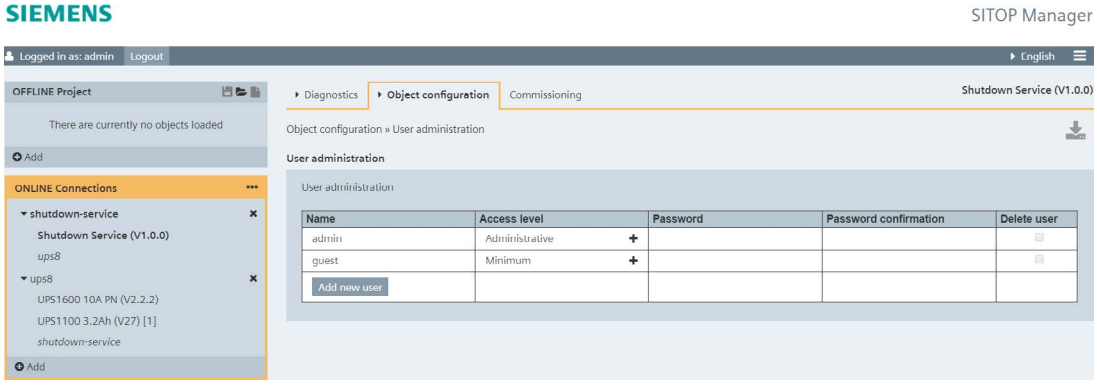


Figure 6-12 SDS with assigned buffer component - Object configuration > User administration

Navigation area	Description
User administration	Displays the user administration of the selected object as a table with the following five columns: • Name: displays the user names • Access level: displays the access level of each user. User "admin" has administrative rights and user "guest" has minimum rights. As "admin" you have the right to add new users. • Password: displays the password for each user when the changing of the password is in progress. Within this column, you can change the password. For further detailed information regarding the changing of the password, please refer to the "Procedure for changing the administrator password" section in subchapter Object Configuration (Page 87). • Password confirmation: displays the password confirmation when the changing of the password is in progress. • Delete user: For further detailed information regarding deleting a user, please refer to the "Procedure for deleting a user account" section in subchapter Object Configuration (Page 87). Displays the following button: • Add new user: this button adds new users to SITOP Shutdown Service and its functions

NOTICE
SITOP Shutdown Service access via SITOP Manager is only possible with administrator user.

6.3.8.3 Commissioning

SITOP Shutdown Service presents the following Commissioning page:

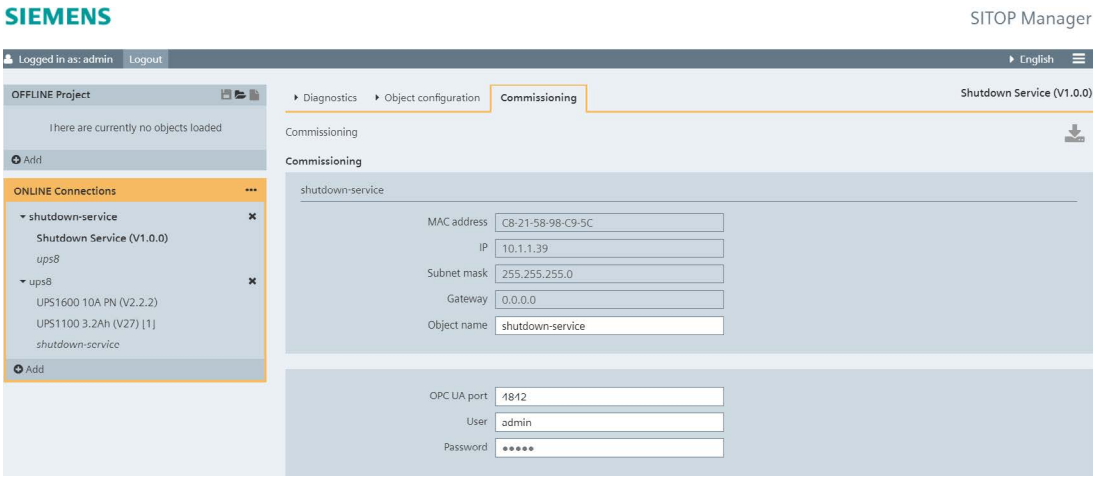


Figure 6-13 SDS with assigned buffer component - Commissioning

Navigation area	Description
Commissioning > shutdown-service	Displays the following parameters: • MAC address • IP • Subnet mask • Gateway • Object name • OPC UA port • User: displays the user name of the selected object • Password: displays the password of the selected object All these parameters are writable, except for the MAC address, IP, Subnet mask and Gateway, which are read-only, and consequently they can be changed by configuring new parameters and saving them to the device by clicking the active and orange blinking download ( ) button in the upper right corner of the Content view.

Managing the device connection and the commissioning data using the Commissioning functionality:

Within the Commissioning page, you can change the commissioning data, if required, of the selected device.

6.3.9 Shutdown Management via SITOP Manager

Note

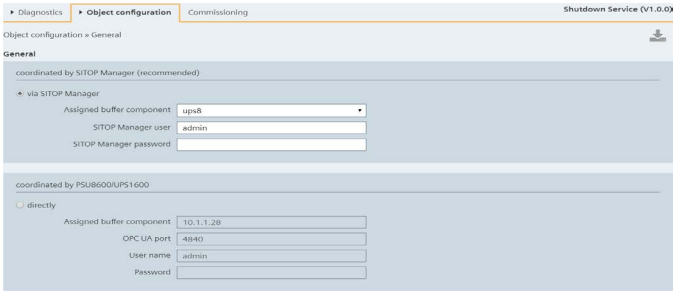
In order to benefit from the full functionality of SITOP Manager, we recommend you use the SITOP Shutdown Service via SITOP Manager.

NOTICE
The functionality “Shut down PC on power failure” is only available if a UPS8600 or a BUF8600 4s/10s is part of the PSU8600 system configuration. The functionality is not available for BUF8600 100ms/300ms modules.

The shutdown management offered by the SITOP Shutdown Service via SITOP Manager takes place as follows over the two steps described below.

1. **Buffer component assignment (the "via SITOP Manager" option)**

   In the Object configuration > General page, please select first the assignment option "**via SITOP Manager**" using the corresponding radio button:



   – Select the buffer component out of the drop-down list.

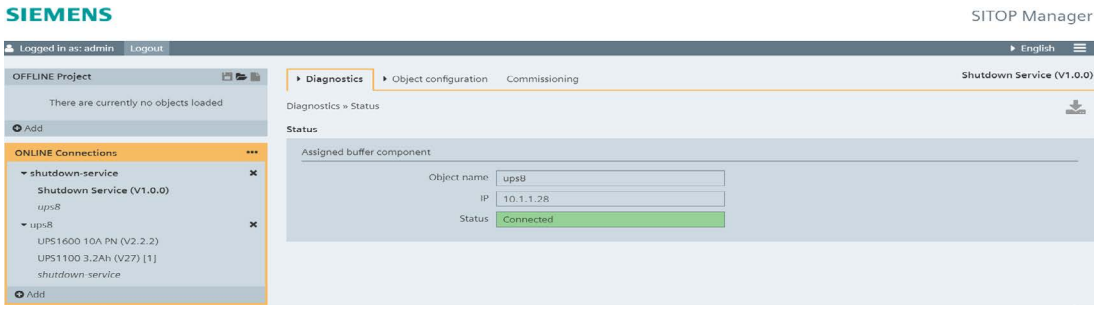
   Note

   To remove the buffer component assignment just select in the drop-down list "No buffer component assigned".

   – For security reasons, please enter "SITOP Manager user" and "SITOP Manager password" to connect the Shutdown Service to the Manager.

   – Click the now active and orange blinking download ( ) button in the upper right corner of the Content view to accept the changes.

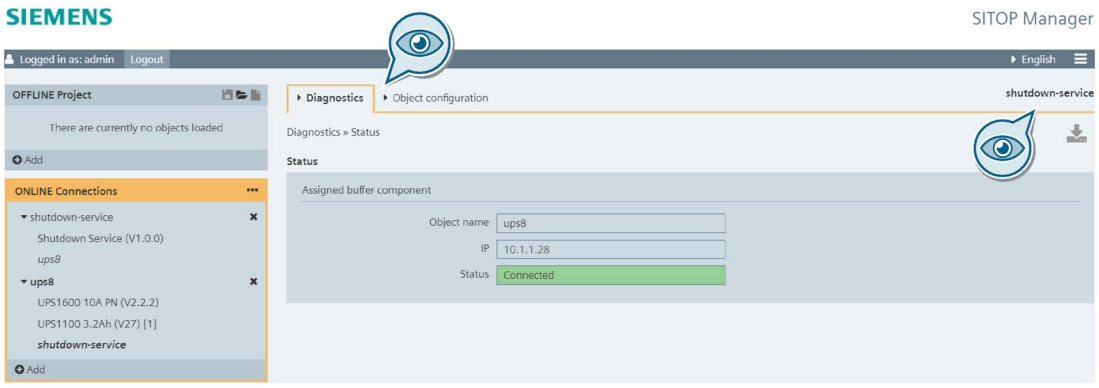
   On successful assignment, the status on Diagnostics > Status page is set to "Connected":



In addition, the references in ONLINE Connections have been created.

Note

On references selection within the corresponding object only two functionalities are available in the Content view: Diagnostics and Object configuration. Commissioning page is not present in this view. See image below:

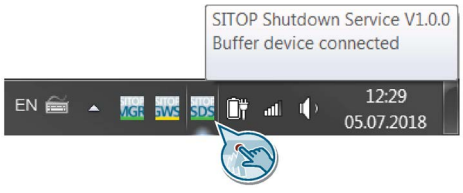


CAUTION

An IP address modification of the buffer component leads to an assignment interruption. The assignment needs to be performed again.

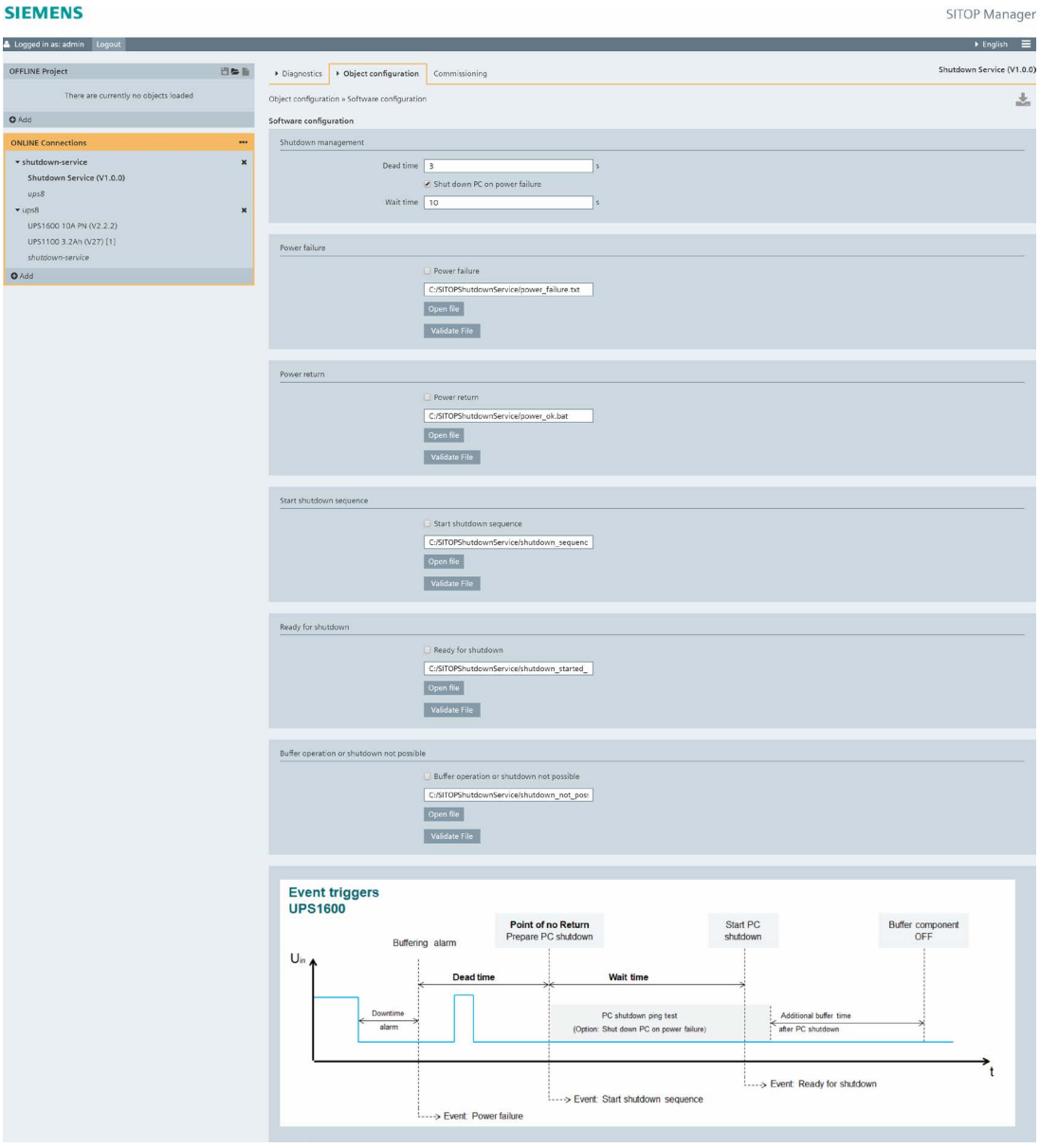
Note

The SDS tray icon also changes to green and the message "Buffer device connected" appears at mouse over as evidenced in the picture below:



2. **Software configuration**

   Please switch now to the Object configuration > Software configuration page to configure the controlled shutdown when a certain event occurs:



In this page, as necessary, select the time (Dead time and Wait time) and the controlled shutdown of the buffer component.

CAUTION
For UPS1600, it is recommended to set for all shutdown services the identical Dead time in order to avoid uncontrolled shutdown caused by power recovery conflicts or overrun of the SITOP Manager shutdown management time (Dead time + Wait time).

NOTICE
Select the Dead time and Wait time so that the IPC can completely shut down safely before the buffer component buffer time has expired!

Please take into account the detailed description of individual parameters in the following table:

Parameters description:

HMI Control	Description	Action/ Info
Batch script description	Third party execution files in the course of the shutdown: The SITOP Shutdown Service is able to execute third party batch files in the course of the shutdown. Due to technical restrictions by Microsoft Windows, it is not possible to execute GUI-based applications from a Windows service. Of course, it is possible to execute command line-based applications within batch scripts.	I
Dead time	Dead time (X), in s. The time the PC needs to shut down safely. Timer X starts counting when the buffer mode of the buffer component is initiated by receiving the buffering alarm. Only continuous main power outages lasting longer than X initiate the IPC shutdown (option: General PC shutdown). The Point of no return is reached and the shutdown will be performed even in case of power return. The time is provided by the buffer component in case of PSU8600 only.	A/I
Shut down PC on power failure	If this checkbox is enabled, then the IPC is correctly powered down and switched off by the Shutdown Service after Wait time (A) has passed. The checkbox is by default enabled.	A
Wait time	Wait time (A), in s. Time to prepare the controlled shutdown of the IPC. The time counter A is started at time X after a continuous main power outage occurred.	A
Power failure event	If this checkbox is enabled, then the Shutdown Service event triggers on the incoming Buffering alarm of the buffer component.	A
Power return event	If this checkbox is enabled, then the Shutdown Service event triggers on the outgoing Buffering alarm of the buffer component.	A
Start shut-down sequence event	If this checkbox is enabled, then the Shutdown Service event triggers on the Point of no return or right after Time X has passed (no buffer component interaction).	A
Ready for shutdown event	If this checkbox is enabled, then the Shutdown Service event triggers right after Time A has passed (no buffer component interaction). This is the last event before the Shutdown Service triggers the IPC shutdown commands.	A
Batch script	Batch script for tasks (saving data etc.) that need to be executed on the IPC in relation to the corresponding event and before the IPC running down. On download to SDS the file path is verified.	I
Buffer operation not possible	If this checkbox is enabled, then the Shutdown Service event triggers on the corresponding incoming Alarms and only before the Point of no Return. For further detailed information regarding the alarms list, please refer to subchapter Alarms (Page 173).	
Static event triggers illustration	Supporting static illustration description of the events trigger order (option: Shut down PC on power failure) in the context of the buffer component.	I

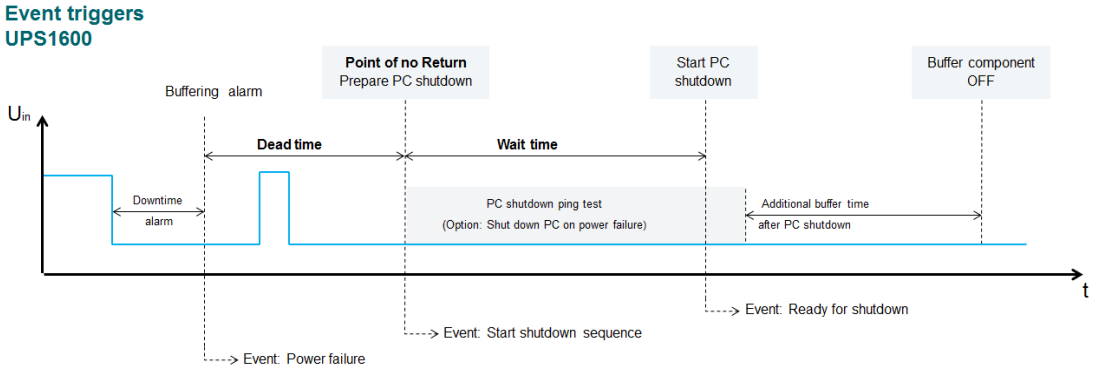
Event triggers description in case of different power recovery scenarios

Precondition:

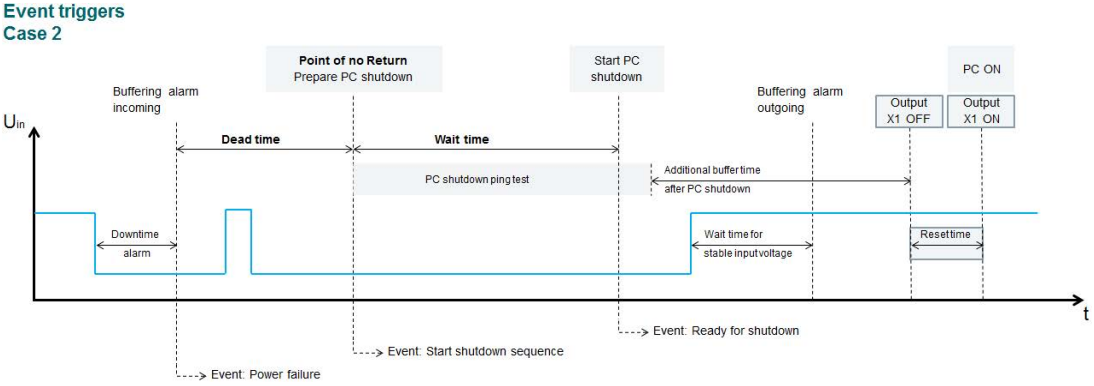
- "Shut down PC on power failure" option is enabled for all scenarios!

UPS1600

Event triggers illustration without power return scenario for UPS1600:

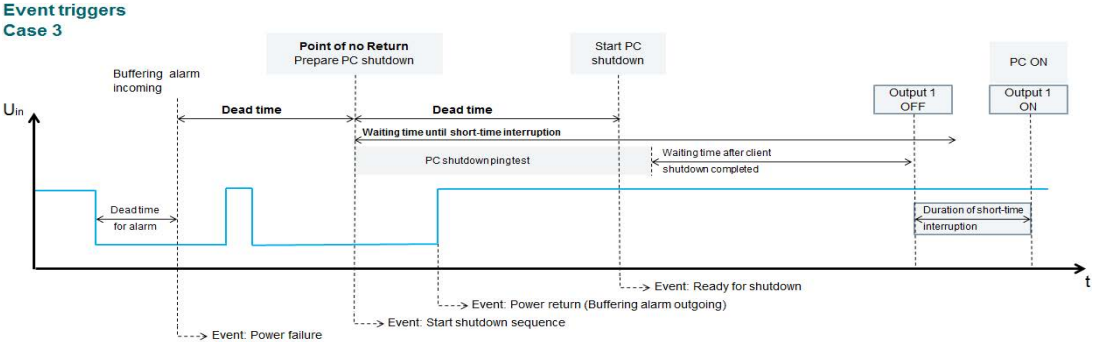


Event triggers illustrations with power return scenarios and enabled "Reset after buffering" for UPS1600:



In the above example, the input voltage returns during "Additional Buffer Time"!

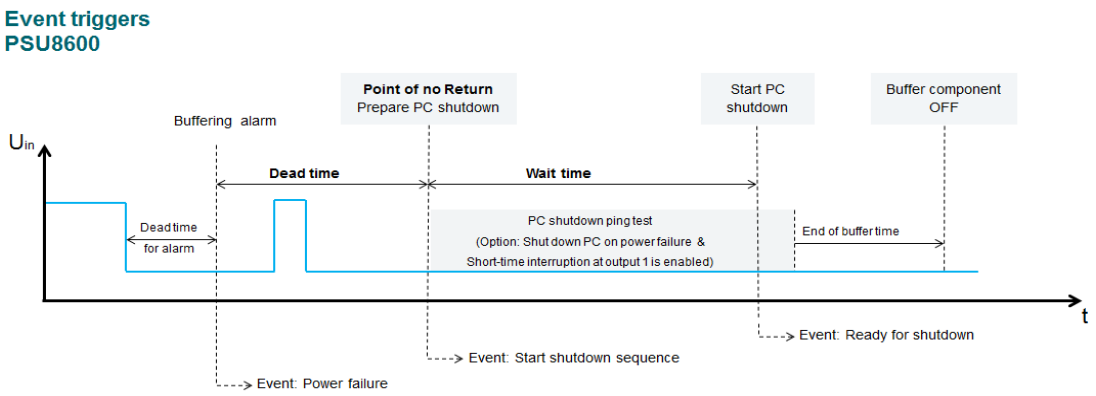
The device interrupts the output [X1 OUT] for the selected reset time in case the "Reset after buffering" functionality is enabled. This will lead to a restart of the IPC.



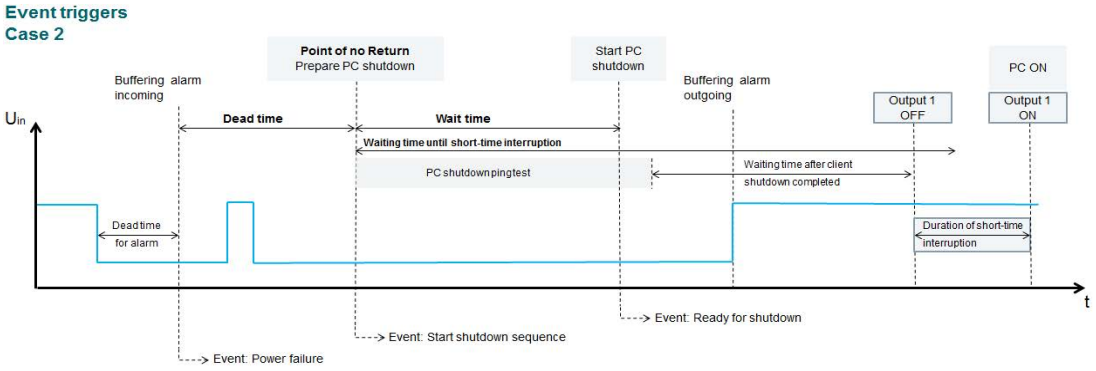
In the above example, the main power returns during "Wait Time" (device ping test)!

PSU8600

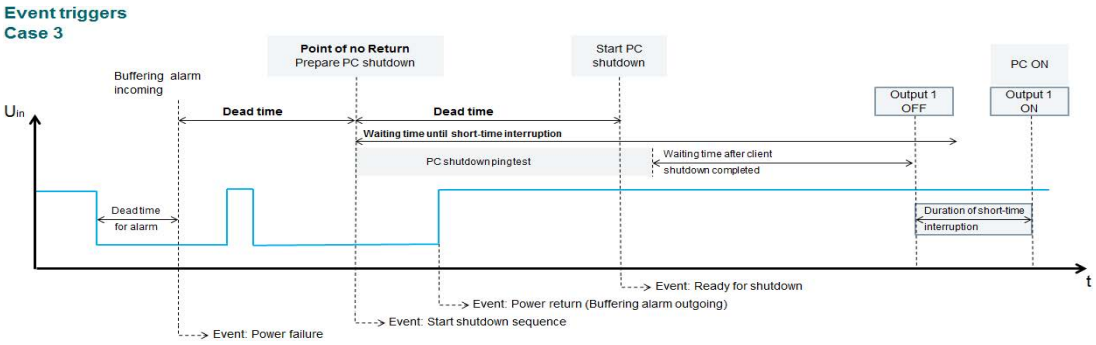
Event triggers illustration without power return scenario and enabled "Short-time interruption on output 1" for PSU8600:



Event triggers illustrations with power return scenarios and enabled "Short-time interruption on output 1 is enabled" for PSU8600:



The device interrupts the output [X1 OUT] for the selected reset time in case the "Reset after buffering" functionality is enabled. This will lead to a restart of the IPC.



In the above example, the main power returns during "Wait time" (device ping test)!

There is just one single connection from SITOP Manager to a SITOP device. Therefore, the SITOP Shutdown Service is able to retrieve and process data from SITOP Manager using the OPC UA interface. All the data needed by the SITOP Shutdown Service is transferred over this interface. So there is no extra connection between the SITOP Shutdown Service and the SITOP device needed.

6.3.10 Shutdown Service Standalone Engineering

The Shutdown Service also provides a web access to serve the clients (Browser) standalone in order to manage the controlled shutdown of the buffered system (IPC 24 Volt).

Secure OPC UA communication or data exchange takes place directly between service and device.

Note

The service is part of the SITOP Manager download package and it can be installed only within the SITOP Manager installer.

The steps for downloading and installing this service are identical with the steps for downloading and installing SITOP Manager. For further detailed information regarding this functionality, please refer to subchapter Installing SITOP Manager (Page 20). Select only the SITOP Shutdown Service component out of the components list during the installation process and perform the installation.

NOTICE
The service has to be installed on every buffered IPC that requires to be shutdown controlled.

Note

Using this standalone functionality prevents writable access to the device web interface!

6.3.10.1 System Overview

The Standalone system can be build up as the following examples show:

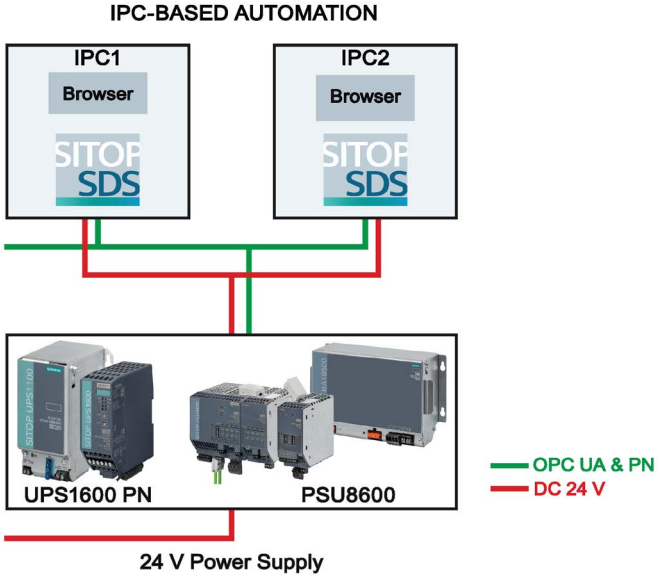


Figure 6-14 Shutdown Service Standalone System Overview Case Using PN Devices: UPS1600 and PSU8600

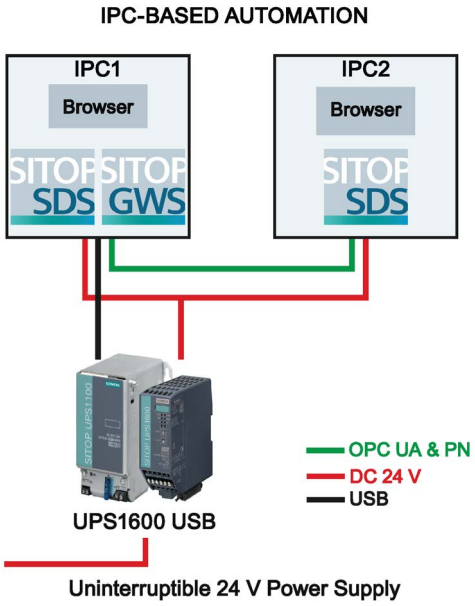


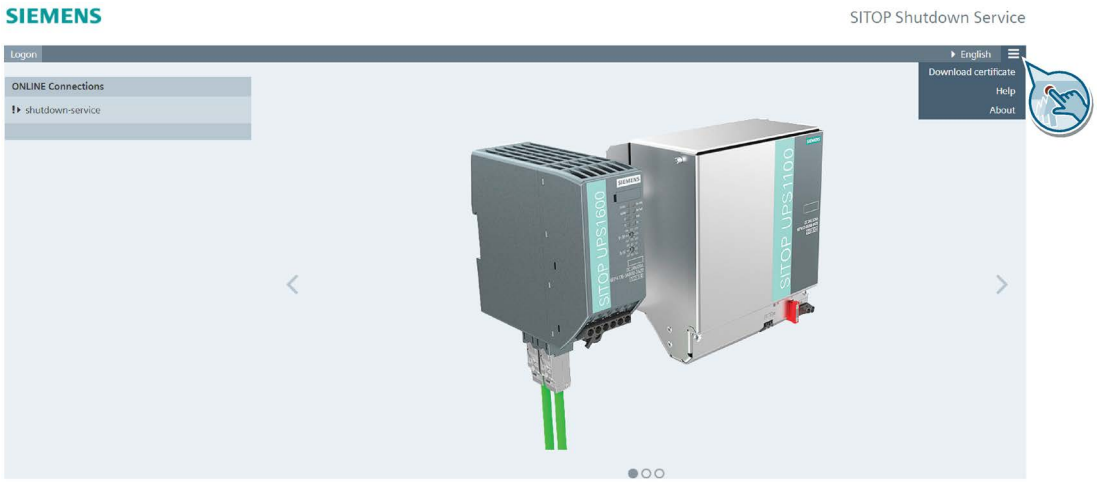
Figure 6-15 Shutdown Service Standalone System Overview Case Using UPS1600 USB

6.3.10.2 Web Access

The Shutdown Service Standalone is available at the following address:

https://<IP address>:5447.

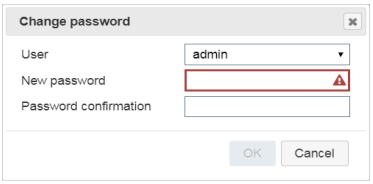
After accessing the SITOP Shutdown Service Standalone, following landing page opens:



The Shutdown Service Standalone landing page functionalities are the same as the landing page functionalities of SITOP Manager. For further detailed information regarding the landing page functionalities of the Shutdown Service Standalone, please refer to subchapter Landing Page (Page 38).

The Shutdown Service Standalone web access is similar to SITOP Manager buildup, providing Top header view, Browser view and Content view. For further detailed information, please refer to subchapter Home Page (Page 42).

Unlike SITOP Manager, for the Shutdown Service Standalone, in the Top header view, the "Change password" menu item provides a slightly different dialog for changing the password:



NOTICE
The functionality is the same except for the "Old password" field which is missing in this case.

In order to have access to this functionality, you have to log in to the service. The first login to this service is the same as the first login to SITOP Manager. For further detailed information regarding the first login, please refer to subchapter First Logon (Page 39).

When you are logged in as "admin", you have on the home page full access to the Diagnostics and Object configuration pages. There is no Commissioning functionality in Shutdown Service Standalone. For further detailed information regarding these functionalities, please refer to subchapter SITOP Shutdown Service (Page 122).

6.3.10.3 Shutdown Management Directly

Note

In order to benefit from the full functionality of SITOP Manager, we recommend you use the SITOP Shutdown Service via SITOP Manager.

NOTICE
The functionality “Shut down PC on power failure” is only available if a UPS8600 or a BUF8600 4s/10s is part of the PSU8600 system configuration. The functionality is not available for BUF8600 100ms/300ms modules.

The shutdown management offered by the Shutdown Service Standalone takes place as follows over the two steps described below.

Note

The "directly" option on this page is enabled by default.

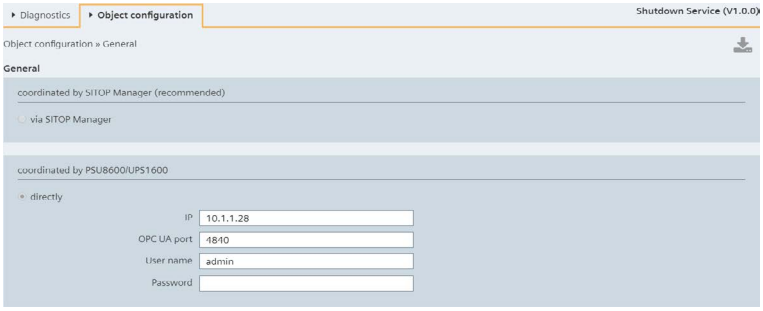
If this is not the case, then the Standalone Service is already connected/assigned via SITOP Manager to a buffer component.

NOTICE
Disconnecting SITOP Manager (the "via SITOP Manager" option) and routing the Shutdown Service Standalone directly (the "directly" option) to the buffer component is only possible over the SITOP Manager interface.

1. **Buffer component assignment (the "directly" option)**

NOTICE
Please be aware that this assignment method only works with a device administrator user!

Start in Object configuration > General page. In this step, you can assign the buffer component to the Standalone Service by entering the corresponding buffer component connection parameters:



– Enter the required buffer component connection parameters: "IP", "OPC UA port" (default device port: 4840), "User name" (default "admin"), "Password" (device password).

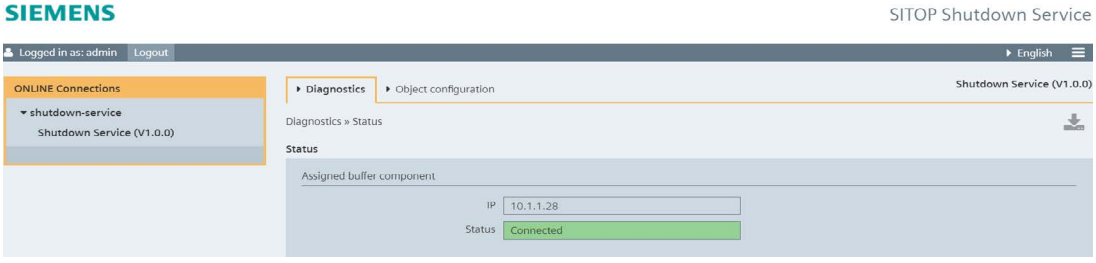
NOTICE
In case of the UPS1600 USB, you have to enter the corresponding local network IP address (e.g. 192.168...) of the PC where the GWS is running and the OPC UA port: 4843.

– Then confirm the direct assignment by clicking the now active and orange blinking download ( ) button in the upper right corner of the Content view to accept the changes.

On successful assignment, an OPC UA connection to the buffer component is established.

NOTICE
In the "directly" operation mode, the OPC UA communication to the UPS1600 buffer component is restricted to a maximum of 4 Standalone Shutdown Services.

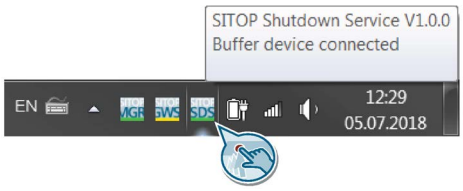
On successful assignment, the status on Diagnostics > Status page is set to "Connected":



NOTICE
Please be aware that after a successful SDS assignment, you have just read-only access over the device web interface!

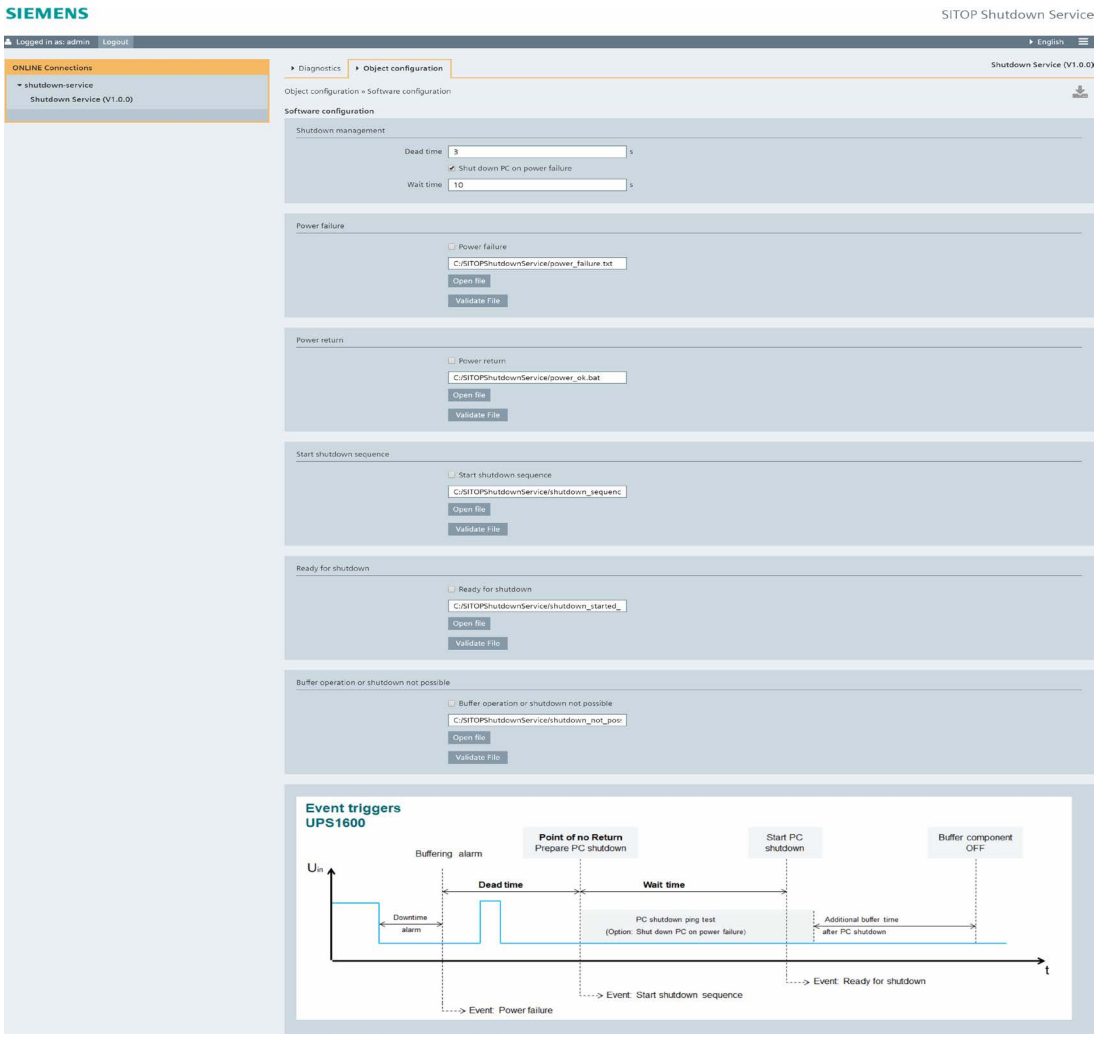
Note

The SDS tray icon also changes to green and the message "Buffer device connected" appears at mouse over as evidenced in the picture below:



2. **Software configuration**

   Please switch now to the Object configuration > Software configuration page to configure the controlled shutdown when a certain event occurs:



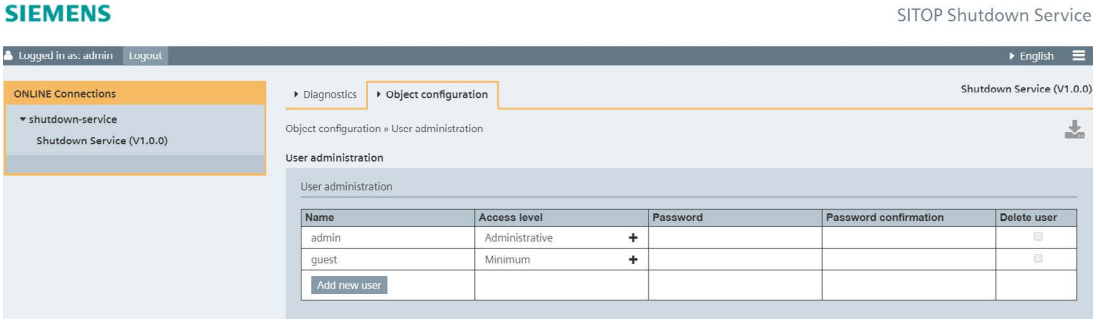
Note

To remove the buffer component assignment, just remove the existing IP entry by writing in 0.0.0.0.

For further detailed information regarding SDS event triggers, please refer to subchapter Shutdown Management via SITOP Manager (Page 134).

6.3.10.4 User Administration

As a standalone application, the service also provides User administration functionality:



NOTICE
In order for a user to be able to assign a buffer component to SDS and perform a secure IPC shutdown via Shutdown Service Standalone, the user must be granted at least administrative rights.

For further detailed information regarding the "User administration" functionality, please refer to subchapter Object Configuration (Page 87).

6.4 Offline-to-Online

Offline engineering offers the possibility to configure an object without it being physically connected to SITOP Manager. An offline configured object can then be loaded into the corresponding online object by using the offline-to-online drag and drop functionality. This functionality can also be used to drag and drop an online configured object into the OFFLINE Project view. For further detailed information regarding the online-to-offline drag and drop functionality, please refer to subchapter Online-to-Offline (Page 151).

Preconditions:

- A corresponding offline object in the desired saved configuration is available in the OFFLINE Project view.
- A corresponding successfully connected online object is available in the ONLINE Connections view.

CAUTION

Only online objects that indicate no issues are available for drag and drop!

In general, all exclamation mark objects in ONLINE Connections are drag and drop excluded. The user has to fix first the corresponding issues.

Following configuration parameters are considered for the download with drag and drop functionality regarding the UPS1600 devices both PROFINET and USB:

	UPS1600 PN	UPS1600 USB
Web	Activate web server on this module	-
	Permit access only with HTTPS	-
	Log off automatically after 15 minutes	-
	Update interval	-
OPC UA	OPC UA activated	-
	Unencrypted access activated	Unencrypted access activated
	OPC UA port	OPC UA port
	NTP client activated	-
	NTP server address 1 ... 4	-
PROFINET	AR configuration locked	-
	Activate DCP write protection	-
Base Unit	Connection threshold	Connection threshold
	Buffer time	Buffer time
	Additional buffer time after PC shutdown	Additional buffer time after PC shutdown
	Expected buffer current	Expected buffer current
	Reset time	Reset time
	Enable reset after buffering	Enable reset after buffering
	Downtime alarm	Downtime alarm
	Wait time for stable input voltage	Wait time for stable input voltage

	UPS1600 PN	UPS1600 USB
Energy storage	UPS1100/Use third-party battery (Ignore battery coding)	UPS1100/Use third-party battery (Ignore battery coding)
	Battery capacity	Battery capacity
	End-of-charge voltage	End-of-charge voltage
	Charge current	Charge current
	Stop buffering voltage	Stop buffering voltage
	Faulty battery voltage	Faulty battery voltage

Following configuration parameters are considered for the download with drag and drop functionality regarding the PSU8600 system:

	Main Unit
Web	Activate web server on this module
	Permit access only with HTTPS
	Log off automatically after 15 minutes
	Update interval
OPC UA	OPC UA server activated
	Unencrypted access activated
	OPC UA port
NTP client	NTP client activated
	NTP server address 1 ... 4
PROFINET	AR configuration locked
	Activate DCP write protection
Base Unit	Prioritized buffering of output 1 enabled
	Parallel switch-on output 1 and output 2 (in case of SP this is obsolete)
	Parallel switch-on output 3 and output 4 (in case of SP this is obsolete)
	System start characteristics
	Threshold for system output current prewarning [%]
	Dead time for system output current prewarning
	General threshold for single output current prewarning in MANUAL mode
	Dead time for alarm message 'Input voltage outside permitted range'
Buffering	Buffer component disabled via control command
	LONGLIFE operating mode enabled
	Threshold value for sufficient buffer readiness
	Short-time interruption at output 1 is enabled
	Dead time until start of short-time interruption sequence
	Waiting time until short-time interruption
	Duration of short-time interruption
	Waiting time after client shutdown completed
	Preferred buffer component on power failure
	Charging buffer components before activation of outputs
	Activate only one output after start from the battery

	Main Unit
Output 1 ... 4	Switch on output
	Setpoint output voltage
	Response threshold of the output current
	Prewarning threshold output current
	On delay
	Operating mode

	CNX (CNX 4ch and CNX 8ch)
Output 1 ... 8	Switch on output
	Setpoint output voltage
	Response threshold of the output current
	Prewarning threshold output current
	On delay
	Operating mode

	UPS8600
Base Unit	Maximum charging power
	Battery test interval
	Buffer timer enabled
	Maximum buffer time

	3rd party battery
Base Unit	Battery type
	Typical ambient temperature
	Capacity
	End-of-charge voltage
	Maximum charge current
	Temperature coefficient
	Start preserve charge voltage
	End of discharge voltage
	Deep discharge threshold

Following configuration parameters are considered for the download with drag and drop functionality regarding the SDS:

	SDS
Software configuration	Dead time
	Shut down PC on power failure
	Wait time
Events	Power failure
	Power return

	SDS
	Start shutdown sequence
	Ready for shutdown

Following criteria must be met to ensure safe and regular configuration download:

1. The objects are in a 1:1 relationship, guaranteed by the article number identification.
2. The system must be offline and online identical related to the article number and slot position.
3. The firmware version for the offline and the online device is identical or the offline version is older than the online version.

Note

Only offline configuration parameters that match the online parameters are considered.

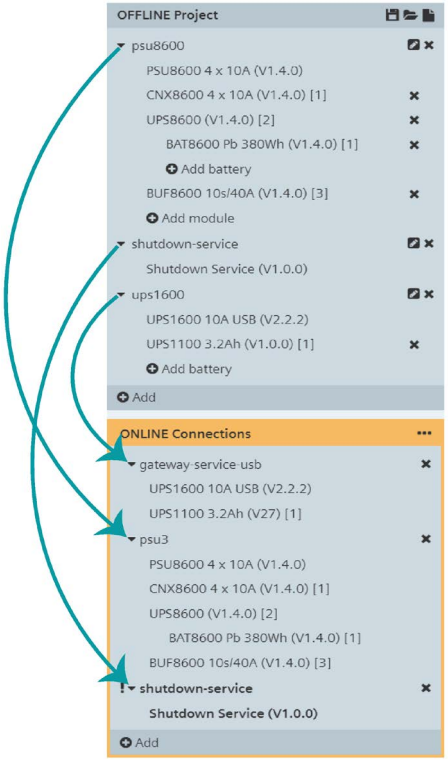
Offline-to-Online Drag and Drop Functionality

Offline-to-online functionality offers the possibility to configure offline one or multiple online objects.

Offline-to-Online Drag and Drop Sequence

In order to make use of this special functionality offered by SITOP Manager, please follow the steps below:

1. Drag & drop on object name level the corresponding offline object to the corresponding online object:



Article number, slot check and firmware version verification is performed before the download process starts.

This verification is performed on the complete system, main unit and all modules.

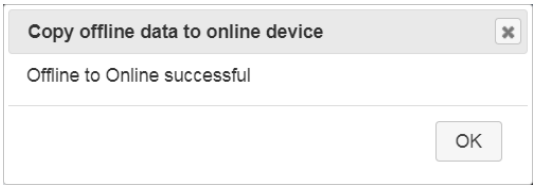
2. On successful verification, a confirmation pop-up comes forth. Please confirm the dialog:

3. Download to online object starts. Please be aware that the process can last for several seconds!

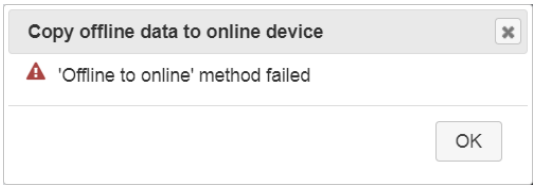
NOTICE
Displayed object names in ONLINE Connections are not overwritten!

NOTICE
There is no possibility to drag and drop a complete project (which consists of many devices and/or modules) to ONLINE Connections.

If the method is successful, the following pop-up message appears:



If the method is not successful, then a pop-up message comes into view:



In case the issue still persists, please refer to subchapter Offline-to-Online/Online-to-Offline (Page 172).

6.5 Online-to-Offline

Online engineering offers the possibility to drag and drop an online connected object into the OFFLINE Project view where a different configuration of the device can be performed and saved. This configuration can then be once again dragged and dropped into the ONLINE Configuration view. For further detailed information regarding this possibility, please refer to subchapter Configuring online objects using offline engineering and reference object (Page 157).

Precondition:

- A corresponding successfully connected online object is available in the ONLINE Connections view.

Note

There is no need to have another offline object available in the OFFLINE Project view because the online-to-offline functionality will duplicate the dragged and dropped online object in the OFFLINE Project view.

CAUTION

Only online objects that indicate no issues are available for drag and drop!

In general, all exclamation mark objects in ONLINE Connections are drag and drop excluded. The user has to fix first the corresponding issues.

The same configuration parameters as for the offline-to-online drag and drop functionality are considered for the download with online-to-offline drag and drop functionality. For further detailed information regarding the online-to-offline configuration parameters, please refer to subchapter Offline-to-Online (Page 146).

Note

For online-to-offline functionality, the Shutdown Service assignment is not considered.

Online-to-Offline Drag and Drop Functionality

Online-to-offline functionality offers the possibility to configure one or multiple online objects.

Online-to-Offline Drag and Drop Sequence

In order to make use of this special functionality offered by SITOP Manager, please follow the steps below:

1. Drag and drop on object name level the corresponding online object to the OFFLINE Project view:

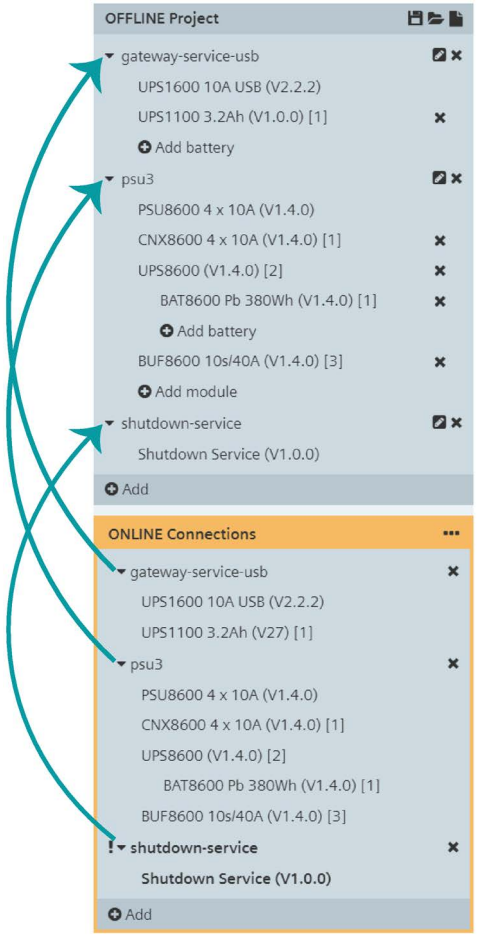
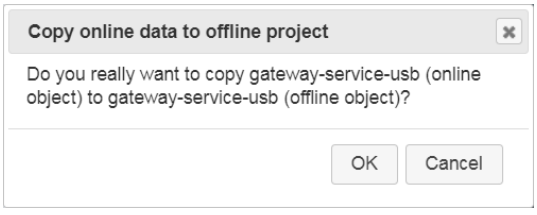


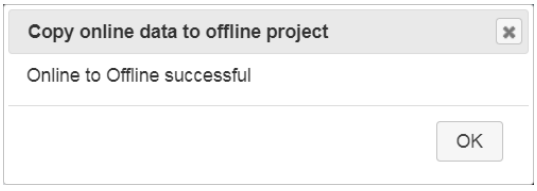
Figure 6-16 Online-to-offline

2. After starting the process, a confirmation pop-up comes forth. Please confirm the dialog:

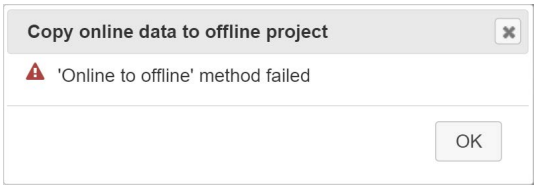


3. The duplication process takes place instantly.

If the method is successful, the following pop-up message appears:



If the method is not successful, then a pop-up message comes into view:



In case the issue still persists, please repeat the process or choose another online object to drag and drop to the OFFLINE Project view!

In case the issue still persists, please refer to subchapter Offline-to-Online/Online-to-Offline (Page 172).

Use Cases

7

7.1 Commissioning - Out of the Box (UPS1600 / PSU8600 PN)

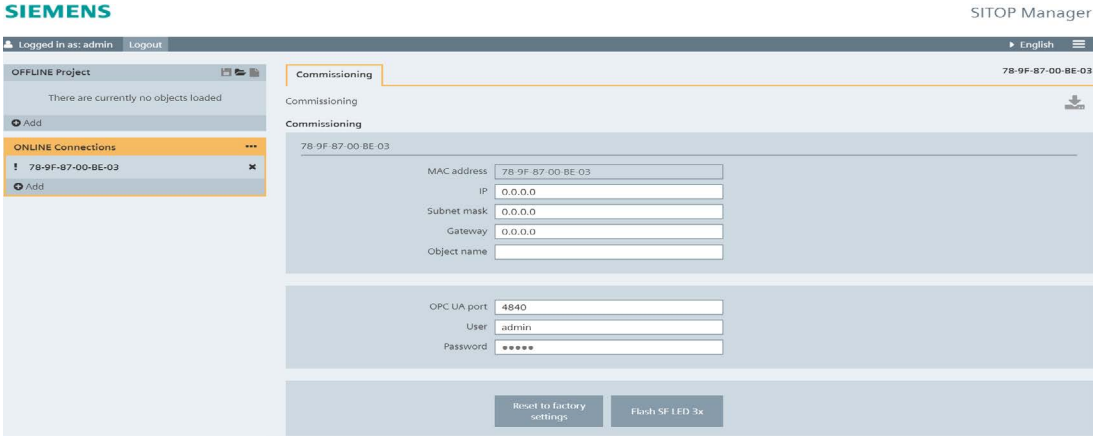
Preconditions:

- The device is correctly connected and linked with the network
- The device has firmware release for UPS1600 V2.2.2 and respectively for PSU8600 V1.4.0 or higher
- The device is already loaded into the SITOP Manager ONLINE Connections using the default user "admin" and password "admin" registration. For further detailed information regarding the loading of an object into the ONLINE Connections, please refer to subchapter Add Object to ONLINE Connections (Page 73).

Procedure

The online device is displayed only by the MAC address in ONLINE Connections.

1. Select the object in the ONLINE Connections marked by an exclamation mark black highlighted (❗) symbol and the Commissioning page is displayed in the Content view:



2. Enter "IP" address, "Subnet mask" and "Gateway" (if applicable) parameters for network connectivity.

CAUTION

An IP changeover of the UPS1600 and PSU8600 can result in a waiting time of up to 4 minutes!

After changing the IP, the device certificate is generated once again, as long as there is no OPC UA connection possible with the device.

Any modification of the IP address during communication would cause the restoring of the communication channel, including the transfer of all device configuration parameters together with the IP address!

3. Enter "Object name" (Optional).

NOTICE
Object name is not mandatory for connection buildup. However, it is recommended because it is the PROFINET name of the respective object.

For further detailed information regarding the object name validation criteria, please refer to subchapter First Logon (Page 39).

4. Enter "OPC UA port" if not already available.

NOTICE
OPC UA port is by default set to 4840: the default OPC UA port for SITOP devices.

5. Enter "User" name and the "Password" for the device. This step is also optional, but highly recommended.

NOTICE
The "User" name and the "Password" are not the same as for the access to SITOP Manager! These are device specific parameters.

⚠ CAUTION
For a successful connection, the "Password" field in Commissioning needs to be filled with the device specific password! Please make sure that the browser has not already entered a password by default as this password may be the SITOP Manager login password and not the device specific password!

6. Click the now active and orange blinking download () button in the upper right corner of the Content view section to accept the changes.
7. If the new entries are valid and correct, the data connection gets established. If the data connection cannot be established, the device stays marked by the exclamation mark black highlighted () symbol providing further tooltip based status message notification. In case the issue still persists, please refer to subchapter Status Messages (Page 170).

Note

Please be aware that the connection can take several minutes to establish!

7.2 Configuring online objects using offline engineering and reference object

This use case guides you through using both the offline and online engineering functionality of SITOP Manager in order to configure online devices simply per drag and drop.

Preconditions:

- the online and the offline objects have to be in a 1:1 relationship, guaranteed by the article number.
- the firmware version for both the online and the offline object has to be identical or the offline version can be older than the online version.

In order to make use of this special functionality offered by SITOP Manager, please follow the steps below:

1. Connect successfully the online object in the ONLINE Connections view.
2. Drag and drop the connected online object to the OFFLINE Project view. For further detailed information regarding the online-to-offline drag and drop functionality, please refer to subchapter Online-to-Offline (Page 151).
3. In the OFFLINE Project view, you can now save the configuration as a project in order to use it when needed or as soon as a new online object (Shutdown Service or a SITOP device) is available in the network. For further detailed information regarding the save project functionality, please refer to subchapter Administration of an OFFLINE Project (Page 55). Of course, the reference configuration can be adapted as well using offline engineering. Then make the desired configuration of the selected object and save it.
4. On the assumption that a new default factory set object is available and connected in ONLINE Connections, drag and drop the newly configured offline object to the corresponding online object in the ONLINE Connections view. Repeat this step in case of new multiple online objects. For further detailed information regarding the offline-to-online drag and drop functionality, please refer to subchapter Offline-to-Online (Page 146).
5. Please wait till the online object restarts (or the configuration loading takes place) (if applicable).

   You have successfully managed to configure new online objects using a reference custom object configuration.

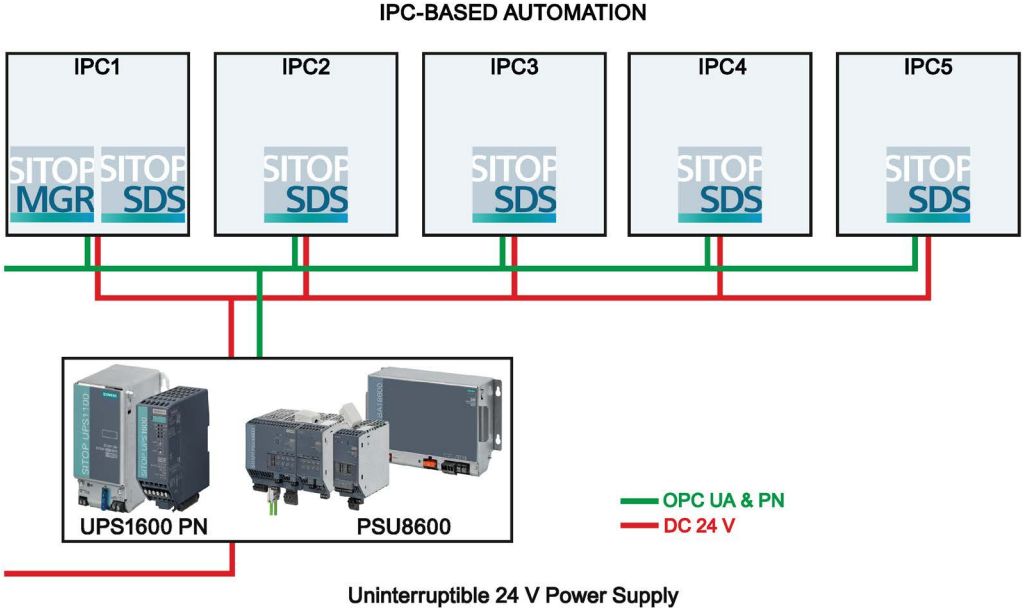
7.3 Buffer several IPCs via SITOP Manager (recommended)

This use case describes the controlled shutdown configuration of multiple (e.g. 5 or more, but maximum 8) buffered systems (IPC 24 Volt) connected to a buffer component in the common network using SITOP Manager.

Preconditions

- SITOP Manager is installed on the local IPC1 ... IPC5.
- The SITOP Shutdown Service is installed on each buffered IPC.
- Manager IPC, Shutdown Service IPC and PSU8600/UPS1600 are all in the same physical network.
- The current firmware (PSU8600 as a minimum release V1.4.0 and UPS1600 as a minimum release V2.2.2) has been downloaded to the corresponding buffer component.

NOTICE
The functionality “Shut down PC on power failure” is only available if a UPS8600 or a BUF8600 4s/10s is part of the PSU8600 system configuration. The functionality is not available for BUF8600 100ms/300ms modules.



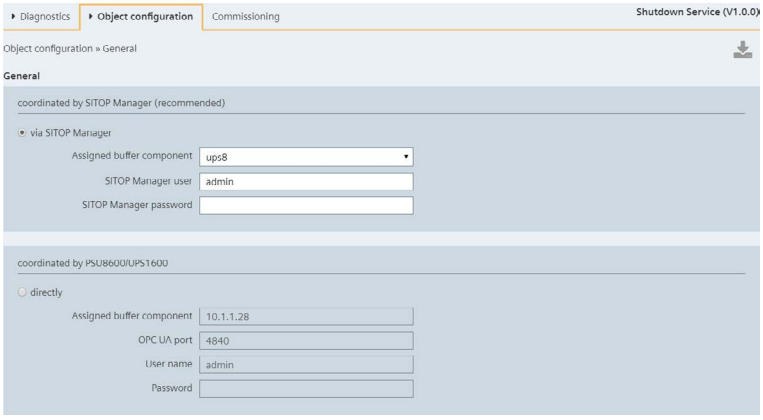
Procedure

1. Connect your client browser to the SITOP Manager IPC1 and log in as "admin".
2. Select the corresponding network adapter in the ONLINE Connections view.
3. Add to ONLINE Connections the buffer component required for buffering as administrator.
4. Add to ONLINE Connections the Shutdown Service running on the buffered IPCs as administrator.
5. SITOP Manager starts connecting (highlighted by the exclamation mark orange blinking (!) symbol) the objects. After a successfully established connection, the objects data can be accessed (arrow (▶) symbol is displayed).

NOTICE
Missing or incorrect assignment is displayed by the exclamation mark black highlighted (!) symbol near the arrow (▶) symbol.

NOTICE
The following step must be carried out for each Shutdown Service object.

6. Click the Shutdown Service object to create the buffer component assignment. On clicking, you are automatically routed to the buffer assignment data page (Object configuration > General):

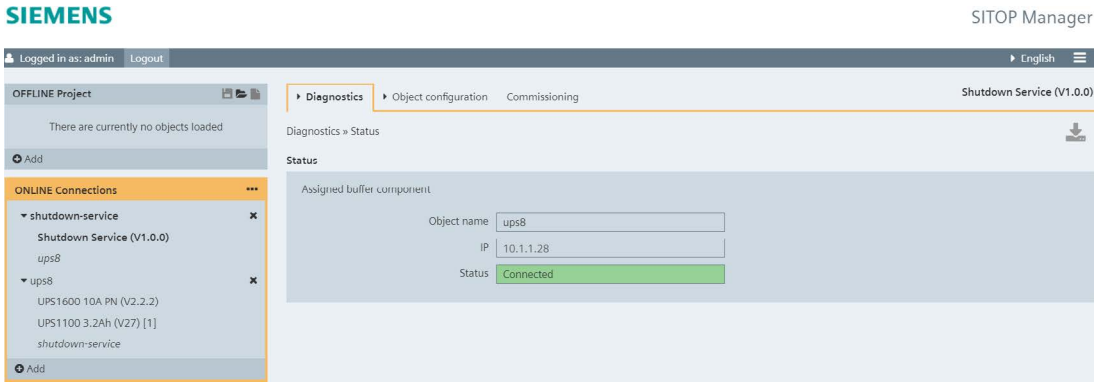


   - Please select first the assignment option "via SITOP Manager" using the corresponding radio button.
   - Select the buffer component out of the drop-down list.
   - For security reasons, please enter "SITOP Manager user" and "SITOP Manager password" to connect the Shutdown Service to the Manager.
   - Click the now active and orange blinking download () button in the upper right corner of the Content view to accept the changes.

Note

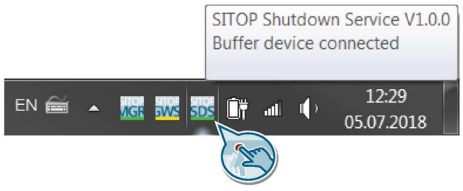
After successful buffer component assignment, the exclamation mark symbol disappears and the respective object references are now visible when unfolding the object in the ONLINE Connections view!

7. On successful assignment, the status on Diagnostics > Status page is set to "Connected":



Note

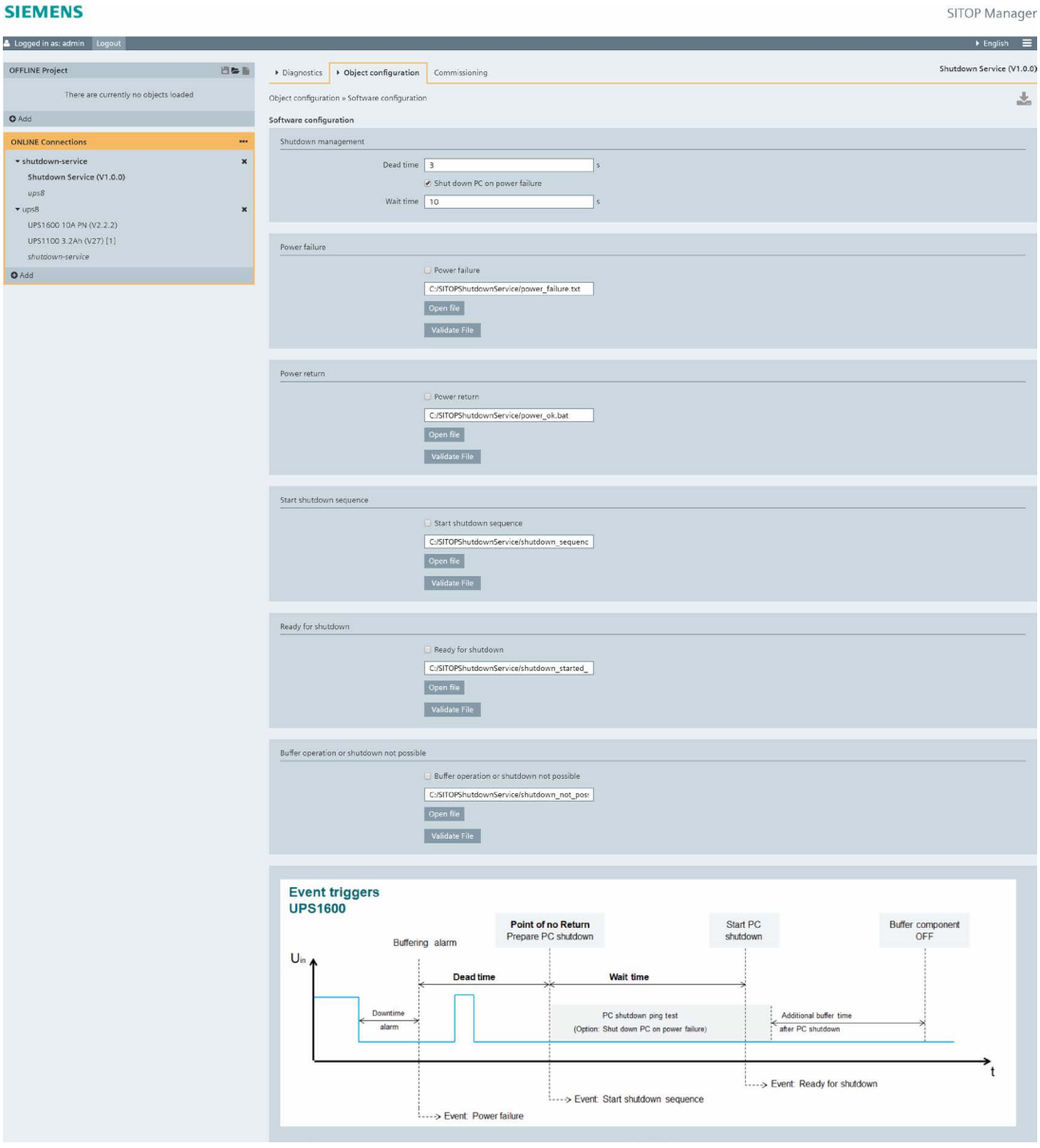
The SDS tray icon also changes to green and the message "Buffer device connected" appears at mouse over as evidenced in the picture below:



CAUTION

The following step must be carried out for each Shutdown Service object.

8. Please switch now to the Object configuration > Software configuration page to configure the controlled shutdown when a certain event occurs:



– To set the time in which no shutdown is triggered by the service IPC although it is buffered, enter in seconds the respective value corresponding to the Dead time field (for UPS1600 buffer component only).

NOTICE
For UPS1600, it is recommended to set for all Shutdown Services the identical Dead time in order to avoid uncontrolled shutdown caused by power recovery conflicts or overrun of the SITOP Manager shutdown management time (Dead time + Wait time).

– To execute the controlled shutdown of the respective IPC, enable the checkbox "Shut down PC on power failure". To not shut the IPC down or to run your own shutdown commands, please disable this option.

⚠ CAUTION
For PSU8600, please be aware that the enabled "Shut down PC on power failure" action is only performed in relation to enabled PSU8600 Object configuration > Device configuration > Base Unit > "Short-time interruption at output 1 is enabled".

– To set the time the IPC needs to shut down safely or to prepare for shutdown, enter in seconds the respective value corresponding to the Wait time field.

NOTICE
The Shutdown Service of the Manager IPC, in our case IPC1, does not trigger the "Shutdown ready" event or the shutdown; the Wait time of IPC1 is delayed until all other Shutdown Service IPCs (IPC2 - IPC5) have performed their shutdown!

NOTICE
Select the Dead time and Wait time so that the IPC can completely shut down safely before the buffer component buffer time has expired!

– To execute a task on the IPC before shutting down (data backup etc.), enable the checkbox in front of the respective event and select the batch file with your commands to be executed.

7.4 Buffer several IPCs with UPS1600 or PSU8600 directly

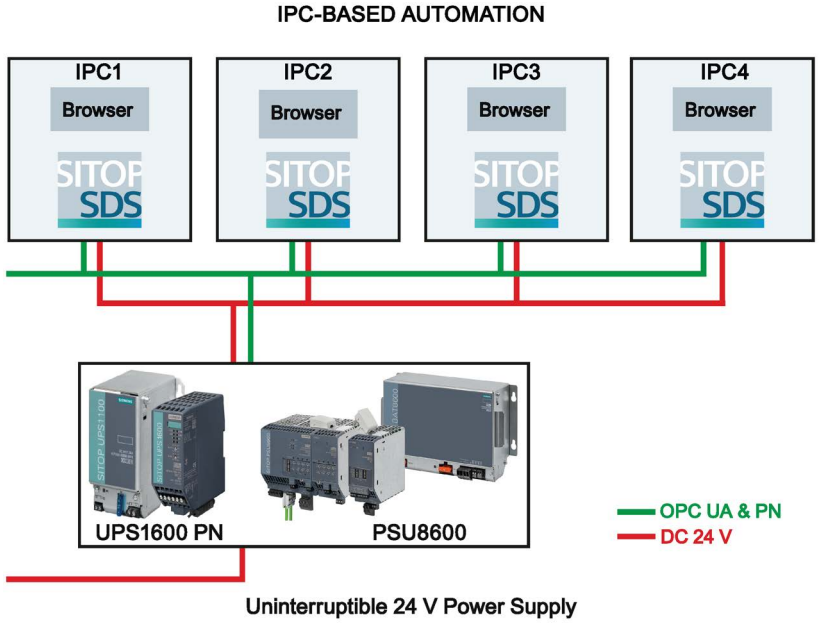
This use case describes the controlled shutdown configuration of multiple (maximum 4) buffered systems (IPC 24 Volt) connected to a buffer component in the common network using the respective buffer component directly.

NOTICE
In the "directly" operation mode, the OPC UA communication to the buffer component is restricted to a maximum of 4 Standalone Shutdown Services.

NOTICE
The functionality “Shut down PC on power failure” is only available if a UPS8600 or a BUF8600 4s/10s is part of the PSU8600 system configuration. The functionality is not available for BUF8600 100ms/300ms modules.

Preconditions

- The SITOP Shutdown Service is installed on each buffered IPC.
- Shutdown Service IPC and PSU8600/UPS1600 are all in the same physical Ethernet.
- The current firmware (PSU8600 as a minimum release V1.4.0 and UPS1600 as a minimum release V2.2.2) has been downloaded to the corresponding buffer component.

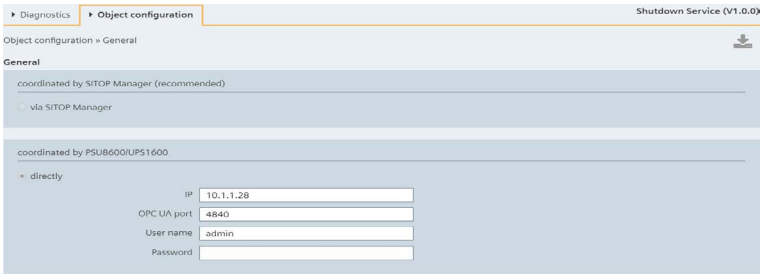


Procedure

The following steps must be carried out for each Shutdown Service that is to be reliably shut down during buffering:

1. Connect your client browser to the Shutdown Service Standalone and log in as "admin" at the following address: https://<IP address>:5447.

2. Click the ONLINE Connections Shutdown Service object to create the buffer component assignment. On clicking, you are automatically routed to the buffer assignment data page (Object configuration > General):



Note

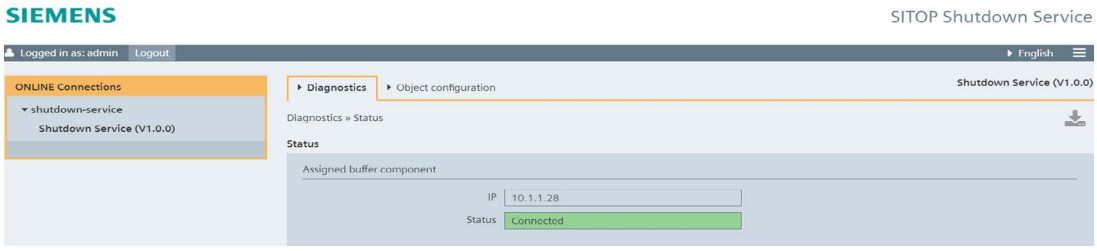
If the "via SITOP Manager" option is enabled, you have to select or switch to the "directly" option, which can only be achieved via the SITOP Manager interface.

– Enter the required buffer component connection parameters: "IP", "OPC UA port" (default device port: 4840), "User name" (default "admin"), "Password" (device password).

– Then confirm the direct assignment by clicking the now active and orange blinking download ( ) button in the upper right corner of the Content view to accept the changes.

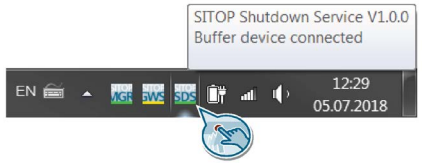
On successful assignment, an OPC UA connection to the buffer component is established and the exclamation mark symbol pointing to a missing buffer component assignment disappears.

3. On successful assignment, the status on Diagnostics > Status page is set to "Connected":



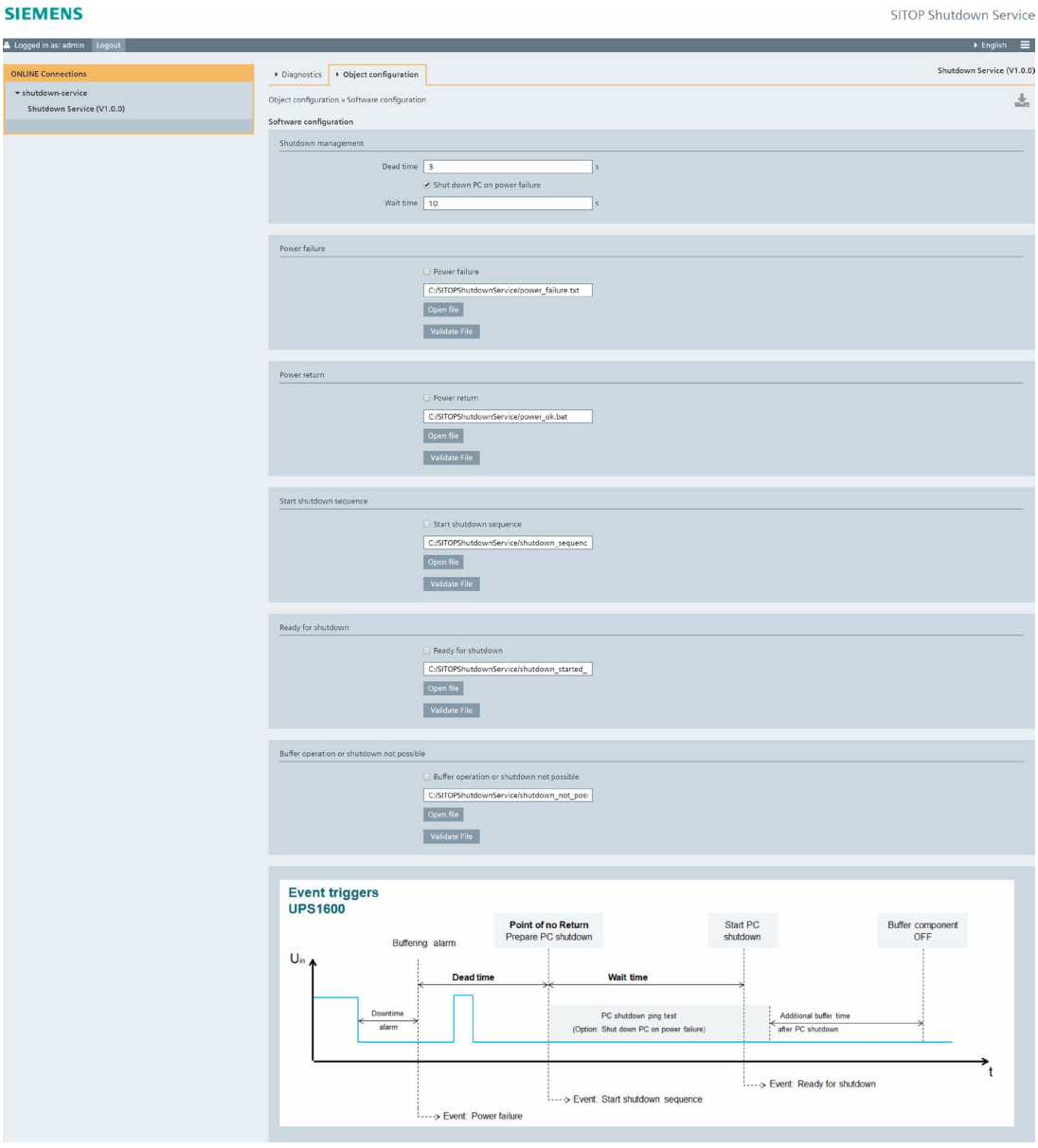
Note

The SDS tray icon also changes to green and the message "Buffer device connected" appears at mouse over as evidenced in the picture below:



NOTICE
The following step must be carried out for each Shutdown Service object.

4. Please switch now to the Object configuration > Software configuration page to configure the controlled shutdown when a certain event occurs:



– To set the time in which no shutdown is triggered by the service IPC although it is buffered, enter in seconds the respective value corresponding to the Dead time field (for UPS1600 buffer component only).

NOTICE
For UPS1600, it is recommended to set for all Shutdown Services the identical Dead time in order to avoid uncontrolled shutdown caused by power recovery conflicts or overrun of the SITOP Manager shutdown management time (Dead time + Wait time).

– To execute the controlled shutdown of the respective IPC, enable the checkbox "Shut down PC on power failure". To not shut the IPC down or to run your own shutdown commands, please disable this option.

⚠ CAUTION
For PSU8600, please be aware that the enabled "Shut down PC on power failure" action is only performed in relation to enabled PSU8600 Object configuration > Device configuration > Base Unit > "Short-time interruption at output 1 is enabled".

– To set the time the IPC needs to shut down safely or to prepare for shutdown, enter in seconds the respective value corresponding to the Wait time field.

NOTICE
The Shutdown Service of the Manager IPC, in our case IPC1, does not trigger the "Shutdown ready" event or the shutdown; the Wait time of IPC1 is delayed until all other Shutdown Service IPCs (IPC2 - IPC5) have performed their shutdown!

NOTICE
Select the Dead time and Wait time so that the IPC can completely shut down safely before the buffer component buffer time has expired!

– To execute a task on the IPC before shutting down (data backup etc.), enable the checkbox in front of the respective event and select the batch file with your commands to be executed.

Troubleshooting

8

8.1 Web Access

Issue	Possible Solution
Application Web GUI cannot be reached.	• Make sure the services are running. Check Windows task bar notification. • Make sure the URL address is correct • Make sure your firewall is set correctly It is necessary to allow incoming connections for the following TCP ports: 5445 (MGR) and 5447 (SDS).
Application Web GUI not responding.	• Refresh the browser • If refreshing the browser even on multiple times is not successful, restart the service using the Windows task bar icons.
Landing page is not displayed at all in Internet Explorer 11 (blank screen)	Verify browser security settings Security > Custom level (Button), if Miscellaneous > "Allow META REFRESH" option is enabled.
Landing page is only partly loaded in Internet Explorer 11	• Verify browser security settings Security > Custom level (Button), if Scripting > "Active scripting" option is enabled. • Verify browser advanced settings Advanced > Settings if "Use TLS 1.2" option is enabled. • From the "Tools" menu, select the "Compatibility View Settings" and disable the setting "Display intranet sites in Compatibility View" if enabled. Afterwards, select the "Close" button and restart the browser.
Landing page is not fully displayed or loaded in Google Chrome Browser using URL **localhost** address	Use the Chrome Settings option and clear browsing data: "Cached images and files". Afterwards, restart the browser.

8.2 Task Bar Notifications

Issue	Possible Solution
Services do not start. Task bar icons remain red.	Check if the corresponding ports: 4841, 4842, 4843, 5445, 5447 are not already in use by another application.
FW-Version not supported (GWS)	Update your device (minimum version for UPS1600 V2.2.2 and for PSU8600 V1.4.0).

8.3 ONLINE Connections

Issue	Possible Solution
"Add to the ONLINE Connections" Wizard cannot find online SITOP objects	• Use the "Refresh" (Refresh) button for a new search • Check if the correct network adapter is selected (the same subnet as the object) • Check your server firewall settings It is necessary to allow incoming connections for the following TCP ports: 4840, 4842, 4843.
Wrong Commissioning password autofill	Deactivate the browser specific "Auto Fill" option for SITOP Manager. Keep in mind that if you deactivate this option, then you need to enter the login credentials every time you access SITOP Manager.
Exclamation mark black highlighted ( ) symbol	The exclamation mark black highlighted ( ) symbol indicates a case dependent status (e.g. locked due to another active PN/OPC UA connection), a missing or a wrong object configuration or commissioning.
GWS does not connect to the plugged UPS1600 USB	• Check the physical USB device connection • Check if the USB device is not already connected to another installed software, e.g. UPS Manager.
IP address conflict detected	A device is already aggregated and a second device with the same IP address is turned on. • Keep only one device aggregated with the same IP address.
On SDS assignment switch from "via SITOP Manager" to "directly" in case of local MGR, GWS (e.g. PC1) and remote SDS (e.g. PC2) (Status message: "Client cannot be reached. Check the IP settings")	Enter for the "Assigned buffer component" the corresponding local network IP address (e.g. 192.168...) of the PC1 where the GWS is running (instead of the loopback adapter IP) and the OPC UA port: 4843.

8.4 Status Messages

Issue	Possible Solution
The logon information is incorrect.	• Check entered user name and password parameters • Check also the browser's password autofill
Configuration file could not be loaded.	Ensure that the used .zip configuration file is valid.
Data transfer failed! Cannot read the OPC UA data.	• Check the connection to the network • Check the physical USB connection in case a USB device is used • For SDS: Lost buffer component connection. Check ONLINE Connections
Data transfer failed! Unknown or incompatible device found.	Check your ODC catalog if your online object/device is supported. Update your ODC catalog.
Data transfer in progress	The data transfer is in progress. Wait until the data transfer is finished.
Not connected	Check the physical connection to the device or to the Shutdown Service.
IP conflict detected	The IP address is already in use on the network. Reconfigure a different IP address.
Maximum number of OPC UA connections reached.	The device has reached the maximum supported number of 4 simultaneous and active OPC UA connections.
No buffer component assigned	No buffer component is assigned to the Shutdown Service. Assign a buffer component to the Shutdown Service by observing the steps described in subchapter Shutdown Management via SITOP Manager (Page 134).
Data transfer failed! Device is already connected to another SITOP Manager.	The object is already in use or connected to another running SITOP Manager instance in the network.
Device locked	• Check if an existing PROFINET connection to the device is not already established. • After Offline-to-online procedure for a UPS1600 device, delete the UPS1600 object from the ONLINE Connections and add it again to the ONLINE Connections view by observing the steps described in subchapter Add Object to ONLINE Connections (Page 73).
ODC version could not be changed successfully.	"Import ODC" function failed. Try once again to import the ODC.
OPC UA server cannot be reached. Please check the OPC UA port. Note that the OPC UA server cannot be immediately reached after an IP change.	• Check the OPC UA port parameter entered • On IP change, wait for the device certificate to be generated • Check the firmware version if supported. If not, update your device.

Issue	Possible Solution
The OPC UA server cannot be reached (timeout, attempt to make a new connection failed, etc.).	The SITOP Manager server is trying to connect to the device or service: • Check the device or if the service is up and running • Wait for the server to reestablish a new connection
Passwords do not match	The passwords used in the "Change default password" or "Change password" dialog do not match. Make sure that the password is valid by observing the rules for a valid password in the pop-up that comes forth when writing in the password and that the password written in the "New password" textbox and the password written in the "Password confirmation" text-box are the same.
Project not valid. Please select a valid project.	The project selected to be used in the OFFLINE Project view is not valid. Select a project that is valid. • Check if the right project file (.smp) is selected • Project file is corrupt
Reset to factory settings not successful	"Reset to factory settings" function was not successful. If you still want to reset the device to the factory settings, then redo this process.
The logon information is incomplete	Check the registration information or log in again using valid user name and password parameters.
The object cannot be removed while the connection is being established.	Wait until the connection process has finished (successfully or not), before deleting an object.
Client cannot be reached. Check the IP settings	• The object or an assigned buffer component cannot be reached. Check the connection setting (IP / OPC UA port). • Check on existing IP conflict in the network
Restart PROFINET/Web/OPC UA component in device.	• Click the Commissioning button "Restart PROFINET/Web/OPC UA component in device" to reestablish the connection. • If restart is not successful, switch the device OFF/ON.
Firmware version not supported. Please update your device.	The firmware version of the device is lower than the firmware supported versions of SITOP Manager. Update the firmware device version to a supported one.
At least one extension module firmware version is not supported. Please update your modules.	Not all modules have supported firmware versions. Update the firmware module version to a supported one.
No read access	• The user has no rights to access the object data • The user has no administrative rights: connect with an administrator user
Synchronize configuration	The system configuration is not synchronized. Navigate to Object configuration > General > System configuration and synchronize the configuration.
The application is using WinPcap 4.1.3 and is not compatible with Win10Pcap. Please uninstall Win10Pcap before installing the SITOP Manager.	SITOP Manager is not compatible with Win10Pcap. Uninstall Win10Pcap before installing SITOP Manager.

8.5 Offline-to-Online/Online-to-Offline

Issue	Possible Solution
Offline and online configurations have to be the same	The structure of the two configurations must be the same. Make sure that the article number and the slot number of the system (main unit and/or modules) are offline and online identical. For more detailed information regarding this issue, please refer to subchapter Offline-to-Online (Page 146).
Please update your firmware to V<...>	Your online object software revision is lower than the offline object software revision. Update your online object software.
Device is not connected	The online object is disconnected. Make sure SITOP Manager has established a connection to the desired online object.
Offline to online not successful	Repeat the offline to online process once again.
Online to offline not successful	Repeat the online to offline process once again.

8.6 Alarms

The SITOP Manager alarm list can be accessed with the function View alarms in the menu icon in the Top header view, while the SITOP Shutdown Service alarms can be accessed with the function Pending alarms in the Diagnostics tab.

There are 13 SITOP Manager alarms and 8 SITOP Shutdown Service alarms.

Each alarm has a certain ID number attributed, for instance, the alarm "Device connected" has always ID number 3. For further detailed information, please refer to the corresponding lists below.

The Incoming/outgoing message in the third column marks the occurrence or the rectification of the alarm event.

In the case of UPS1600 devices there are two types of alarms:

- static (the alarm is both Incoming and Outgoing), for instance: the "Buffering" alarm is "Incoming" when the device goes into buffer mode and "Outgoing" when the device returns to normal mode (the time difference between outgoing and incoming is the time that the device was buffering).
- dynamic (the alarm is only Incoming), for instance: the alarm "SW Update OK" is displayed only in the "History Alarms" list.

  For further detailed information regarding the character of the alarms, please refer to subchapters SITOP Manager Alarms (Page 174) and SITOP Shutdown Service Alarms (Page 174).

The severity indicates the severity of the alarm. There are four severity levels: the same severity levels already defined for each of the SITOP devices. The severity is additional signalized by the corresponding icons used also for the device alarms.

For the PSU8600, we have the following list of alarms severity:

Severity level	Severity text	Corresponding icon
0	Normal/Info	
1	Maintenance Required	
2	Maintenance Demanded	
3	Diagnosis	

You can save the list of alarms into your computer by clicking the "Save as..." button in the upper right corner of the Content view.

For a complete list of alarms for the UPS1600 devices and/or their battery module/modules, please refer to the list of alarms in the SITOP UPS1600/UPS1100 User Manual here (https://support.industry.siemens.com/cs/ww/en/view/84977415).

For a complete list of alarms for the PSU8600 devices and/or their expansion and buffering modules, please refer to the list of alarms in the SITOP PSU8600 power supply systems user manuals SITOP PSU8600 MP (https://support.industry.siemens.com/cs/ww/en/view/105867947) and SITOP PSU8600 SP (https://support.industry.siemens.com/cs/ww/en/view/109482936).

8.6.1 SITOP Manager Alarms

Here is the list of all SITOP Manager alarms:

ID	Event	Severity	Character
1	Service running	0	dynamic
2	Data transfer in progress	0	static
3	Device connected	0	static
4	Device locked	0	static
5	Offline to Online method failed	3	dynamic
6	Device lock failed	0	dynamic
7	Data transfer failed! Device is already connected to another SITOP Manager!	3	dynamic
8	Data transfer failed! Unknown or incompatible device found.	3	dynamic
9	Online to Offline method failed	3	dynamic
10	Extension Module added / removed	0	dynamic
11	Data transfer failed. Cannot read the OPC UA data.	3	dynamic
12	Firmware version not supported. Please update your device.	3	dynamic
13	At least one extension module firmware version is not supported. Please update your modules.	3	dynamic
14	Access denied. The user has no right to read the data of the device.	3	dynamic

For further detailed information about the alarms, please refer to chapter Troubleshooting (Page 167).

8.6.2 SITOP Shutdown Service Alarms

Here is the list of all Shutdown Service alarms:

ID	Event	Severity	Character
1	Service running	0	dynamic
2	Buffer component connected directly	0	dynamic
3	Buffer component connected via SITOP Manager	0	dynamic
4	Application started at power failure	0	static
5	Application started after "Buffer mode" dead time	0	static
6	Application started after "Buffer mode" wait time	0	static
7	Application started at power recovery	0	static
8	Shutting down system	0	dynamic

For further detailed information about the alarms, please refer to chapter Troubleshooting (Page 167).

Technical Support

9

Technical support for all DF/PD products can be accessed through the following communication channels:

- Phone: + 49 (0) 911 895 7222
- Internet: Online support request form (http://www.siemens.de/automation/support-request)

Technical documentation on the Internet

Operating instructions and manuals for SITOP are available on the Internet:

Operating instructions/manuals (http://www.siemens.com/sitop/manuals)

SITOP power supply homepage

General news about our power supplies is available on the Internet at the SITOP home page (http://www.siemens.com/sitop).

Information material

SITOP information can be downloaded from the Internet: Information and download center (http://www.siemens.com/sitop-infomaterial)

Online catalog and ordering system

The online catalog and the online ordering system are available through the Industry Mall homepage: Industry Mall (http://www.siemens.com/industrymall/de)

Contact persons

If you have any questions regarding the use of our products, then contact the Siemens contact person in your regional Siemens sales office.

You can find these addresses as follows:

- On the Internet (http://www.automation.siemens.com/partner)
- In Catalog CA 01

Terms and Abbreviations

A

Table A- 1 Table of Terms

Term	Meaning
Device	Main unit (i.e. SITOP PSU8600/UPS1600), module
Main unit	Main unit is the header module of a system.
Module	Extension module (i.e. SITOP CNX8600 or SITOP UPS8600)
Object	Device, service
System	Main unit + Module
Firmware version	Firmware version of the device or software version of the service.
Object Description Catalog (ODC)	Includes supported firmware versions of the corresponding objects.
OFFLINE Project	OFFLINE Project is a view in SITOP Manager serving as workspace for offline object configuration.
ONLINE Connections	ONLINE Connections is a view in SITOP Manager displaying the connected objects.
PROFINET	Process Field Net: an industry technical standard for data communication over Industrial Ethernet
SITOP Manager	SITOP Manager is the whole software solution consisting of the three modular services: the SITOP Manager itself, the SITOP Gateway Service and the SITOP Shutdown Service.
SITOP Manager Service	The SITOP Manager Service is the main service provided by SITOP Manager.
SITOP Gateway Service	The SITOP Gateway Service serves as a connector between a UPS1600 with USB and MGR and SDS.
SITOP Shutdown Service	The SITOP Shutdown Service is running on an IPC and reacts on alarm events of the associated buffer component (including shutdown of the IPC).

Table A- 2 Table of Abbreviations

Abbreviation	Meaning
AR	Application relationship
DCP	Discovery and Basic Configuration Protocol
DHCP	Dynamic Host Configuration Protocol
GUI	Graphic User Interface
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
HW	Hardware
ID	Identification
IP	Internet Provider
MAC (MAC address)	Media Access Control
ODC	Object Description Catalog
SMP	SITOP Manager Project

Abbreviation	Meaning
OPC	Open Platform Communications
OPC UA	OPC Unified Architecture
PLC	Programmable Logic Controller
PN	PROFINET
PSU	Power Supply Unit
UPS	Uninterruptable Power Supply
SF	System fault
SW	Software
SVG	Scalable Vector Graphics
USB	Universal Serial Bus
UTC	Coordinated Universal Time
TLS	Transport Layer Security
MGR	SITOP Manager
GWS	SITOP Gateway Service
SDS	SITOP Shutdown Service