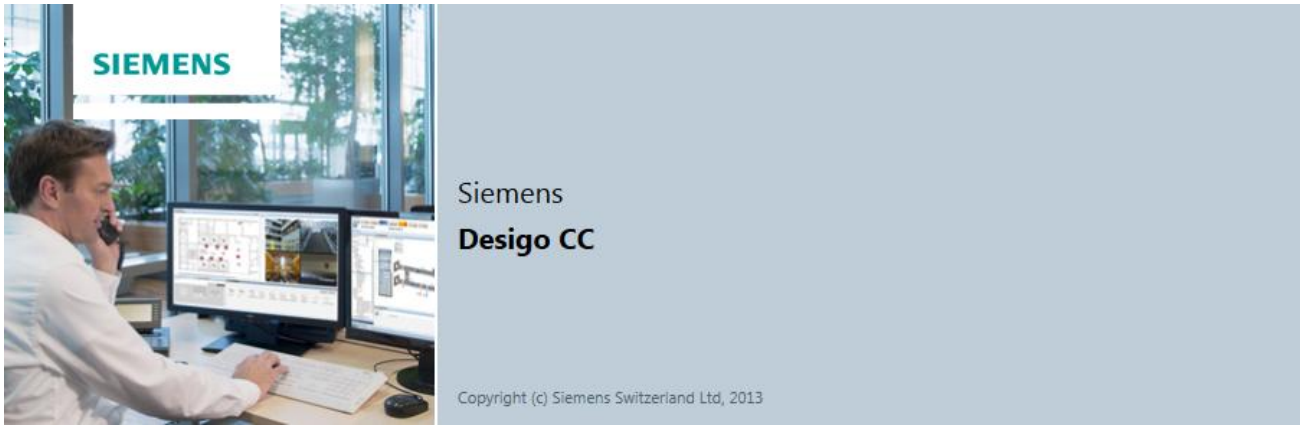
SIEMENS

DELTA TRAINING MODULE

Desigo™ CC Market Package 3.0
for Siemens Field Personnel Familiar with MP2.1

Focused on APOGEE Building Automation



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(Oct, 2017)

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Printed in the USA

Table of Contents

Desigo CC System Enhancements and Changes

The information in this section has been pulled from the “Desigo CC MP3.0 System Description” document. This document is available on InfoLink. Make it a point to download and read it.

Operating System Support

The Desigo CC Server, FEP, and Installed Clients run on the following Microsoft operating systems:

- Windows 7, Pro 64-bit
- Windows 8.1, Pro 64-bit
- Windows 10 Pro & Enterprise
- Windows Server 2012 R2
- Windows Server 2016

Web and Windows App Clients (previously known as Remote Client or ‘Click Once’) run on Windows 7 or Windows 8.1 operating systems. Web Clients work best when run on Microsoft Internet Explorer 11.

NOTE: Microsoft recommends upgrading and staying up-to-date on the latest Internet Explorer browser version. As of January 2016, only the most current version of Internet Explorer available for a supported operating system will receive technical support and security updates from Microsoft.

Not Supported

- Microsoft Windows XP is no longer supported. At all.
- Any 32-bit operating system
- Microsoft Windows 8
- Windows Server 2008 R2

Microsoft SQL Server

By default, Desigo CC installation will install Microsoft SQL Express 2014.

Full SQL Server versions supported are:

- SQL Server 2012 Standard & Enterprise
- SQL Server 2014 Standard & Enterprise
- SQL Server 2016 Standard & Enterprise

Cybersecurity

Desigo CC MP3.0 complies with the ISA-99/IEC 62443 Security Level SL1.

Protection

- All communication paths between clients and the server provide the possibility of encryption and protect against replay attacks as well as data manipulation. The communication between the Web server (IIS) and the Web Clients is always encrypted.
- The communication between the system server and a FEP is intrinsically encrypted by Desigo CC.
- The runtime data transfer between the system server and IIS is inherently encrypted by Desigo CC.
- Passwords are handled securely via encrypted storage and transmission
- Use of public domain algorithms for cryptographic functions, such as:
  - AES, DiffieHellmann, RSA, SHA-2, etc.
  - No use of self-coded algorithms
- Key strengths are defined as general security baselines, for example:
  - Symmetrical encryption uses 256 bit AES or stronger
  - Asymmetrical encryption uses 2048 bit or stronger

Authorization

- Access to the system is treated intuitively – the UI displays only elements such as menus, buttons, list items, tree nodes, and so on where the user has at least read access.
- The Authorization Model provides a fine-grained detail level as well as useful grouping of secured elements, so that access privileges can be assigned to secured resources/groups. These resources/groups can be workstations, features, applications, system objects, system object properties and logical groups of all kind of these resources.

Supported Subsystems

For projects containing APOGEE field panels, the following firmware revisions are supported:

- APOGEE BACnet firmware revision 3.2.4 - 3.5
- APOGEE P2 firmware revision 2.8 and above
  - PXC, MBC, and MEC controllers

Legacy APOGEE field panels (MBC and MEC) are now supported on firmware revisions 2.8. Support was previously limited to controllers with more than 4MB of memory. That restriction has now been removed to support all versions of MBC and MEC controllers running firmware 2.8.

Job Size: Single Server

Desigo CC MP3.0 – just like MP2.1 – can support up to 150,000 objects on a single server. It is important to keep in mind that this restriction is limited more by the capabilities of the server PC and not on the Desigo CC software.

Job Size: Multiple Servers

For jobs requiring more than 150,000 objects, MP3.0 introduces the ability to connect multiple servers together, up to 15 servers. Each server can have up to 150,000 objects.

However, the total number of objects for the entire job cannot exceed 400,000 objects. If more than 3 servers are used, they cannot all have 150,000 objects because that would exceed the 400,000 object limit. As more servers are added, the individual “objects-per-system” diminishes.

Sizing Calculator

Find the latest version off the System Dimensioning Guide Calculator here:

https://iknow.ww004.siemens.net/infolink/automation/DesigoCC/DesigoCC%20MP30.htm

Upgrade Process

Upgrading

Before upgrading to Market Package 3.0, complete the following steps:

1. Perform a project backup.
2. Stop the project in System Management Console.
3. If upgrading from MP2.x, it is not necessary to uninstall the existing version.
4. Install Desigo CC MP3.0.
5. Reboot the Computer.

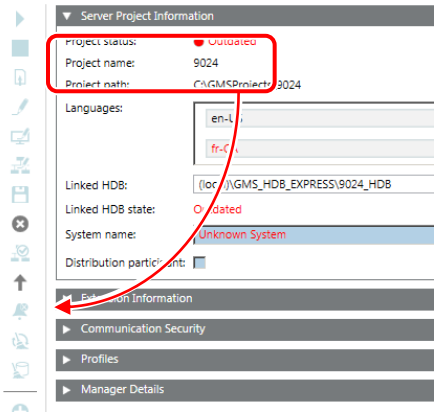
Once Desigo CC MP3.0 has been installed, open the System Management Console.

Outdated Project

When the project is selected in SMC, the “Project Status” will show “Outdated” in red.

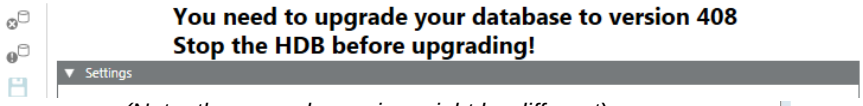
In order to update the project, click the “Update” button on the button bar. It is the upward-facing arrow.

This process will take several minutes. It must be done for all projects in SMC.



Outdated History Database

Like the project, all HDBs in the system must be upgraded. When an HDB is selected, the following message will appear at the top:

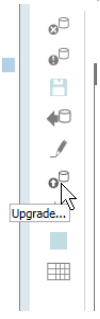


(Note: the upgrade version might be different)

Stopping the HDB will activate the “Upgrade” button.

The “Upgrade” button is the symbol of a database and the upward-facing arrow in a dark circle.

This process will take only a few seconds. It must be done for all HDBs in the SMC.



From MP1.x

If a customer is still running Desigo CC MP1.0 or 1.1, it is advised that you upgrade them in two steps: first to MP2.0 and then to MP3.0.

Import Things to Keep in Mind:

- Licensing and options were different with MP1.x systems. Before initiating the upgrade, please contact Field Support to identify any potential licensing issues.
- MP1.x supported the larger sentinel dongles, which were subsequently discontinued. Please replace any large sentinels with MicroDongles.

From MP2.x

Upgrades from MP2.0 and MP2.1 have been tested thoroughly and should present no issues.

Online Help

The entire process of upgrading existing customers to MP3.0 is documented in Online Help. Either perform a search for “Upgrade” or navigate into the “Step-by-Step” section where you will find Installation and upgrade information.

The Help files can be acquired the following ways:

- On the installation media prior to installation.
- Download from InfoLink

Migration from Apogee Insight

Almost All Insight Projects can Migrate!

With new features and functions introduced in Desigo CC MP3.0, almost all current Insight customers can migrate without loss of functionality. In many cases, the applications built into Desigo CC outperform those available in Insight in terms of functionality and/or flexibility and customization.

The functionality added in MP3.0 to facilitate migration includes the following items. These items are discussed in great detail later in this document.

- Distributed Systems allow for more than the previous 150,000 objects. Distributed Systems link multiple servers together creating a larger system than any of them alone.
- Validation support (validated objects, audit trail, reporting, etc.)
- Cross trunk support to allow sharing of point value information between BACnet and P2 networks.

MP3.0 introduces the same functionality as APOGEE InfoCenter. This includes Long-Term storage of data, archiving, data analysis, and reports. Though Desigo CC now has the same functionality as InfoCenter, it is not being called “InfoCenter for Desigo CC” or any variant of that. It is merely built-in functionality of Desigo CC. A migration strategy to move existing InfoCenter data into Desigo CC’s History Databases will not be provided in MP3.0 but could be provided in a later release. More details about this functionality is provided in later sections of this document.

For additional Insight-to-Desigo CC migration information, visit the Fast Forward website on the BT intranet.

BT University offers DCC 9034, “Insight to Desigo CC Migration”. This 4-day class covers the entire process of migrating an Insight customer to Desigo CC. Check ES Online for course availability.

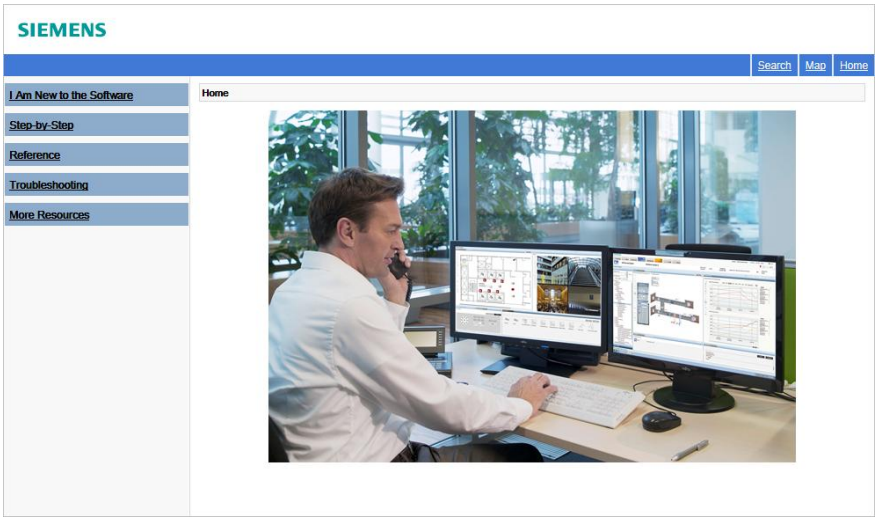
Improved Online Help

Totally Revamped Online Help

The Technical Documentation team has spent considerable time and effort reviewing how Help is made available and meeting with users to understand how to make it better. MP3.0 introduces a totally revamped online Help.

In previous versions of Desigo CC, help was made available electronically and in PDF format. In some cases, a PDF document referred the reader to a different PDF document. This was often inevitable because the documents were created by different groups who were supporting their particular extension module, discipline, functionality, etc.

With the new Help structure, when new functionality is loaded into Desigo CC, the accompanying Help documents are automatically added to the online interface. As a result, there is no more juggling of PDF documents.



Home Page

When Help is launched, the Home Page provides quick links to the most common areas of information:

- **I Am New to the Software**
  Provides access to the basics of the Desigo CC user interface and an overview of how to use the online help.

- **Step-by-Step**
  Only the step-actions for performing workflows in Desigo CC. Steps through all the processes from installing the software to using the system. The Step-by-Step section is great when you just need a refresher of the process.

Home Page, *continued*

- **Reference**
  Overviews and explanations of various topics and concepts. The Reference section provides illustrations, bulleted lists, and detailed explanations of how the system works.

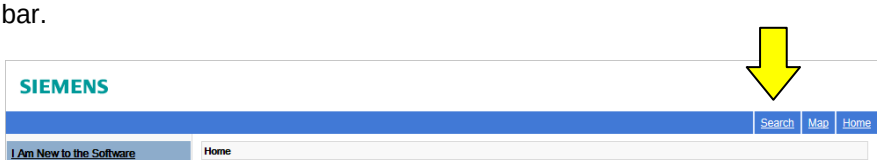
- **Troubleshooting**
  An effort is being made to capture common issues and nuances. This can help reduce the amount of time spent on the phone with Technical Support by providing answers to their most common calls.

- **More Resources**
  Some functionality that is common to Desigo CC is not, actually, Desigo CC functionality. For example, the License Management Utility and the BACnet Object Browser. Information about these items is provided in the More Resources section. Additionally, you can find Siemens Cybersecurity disclaimer. Also available is a list of available extension modules and their respective current version numbers.

Search

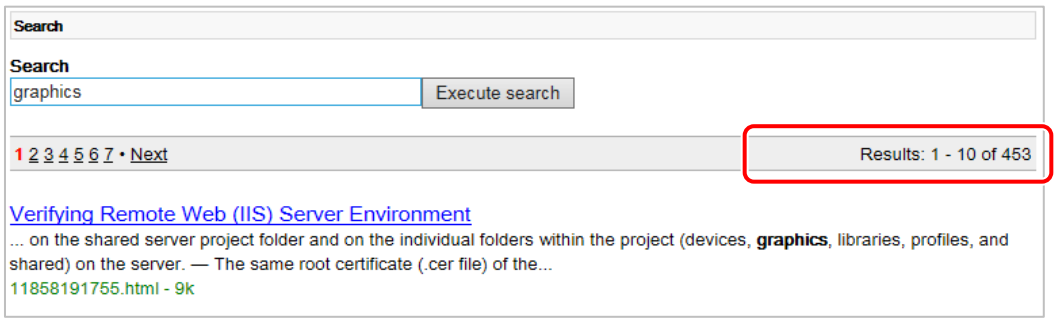
Help is set up into the above-mentioned sections to make it easier for you to find what you are looking for. However, sometimes you know what you want but not where to even begin looking for it. Enter the Search feature.

The Search feature can quickly return Help pages that meet the criteria provided. To open the Search page, click the word “Search” in the blue bar.



Single-Word Search

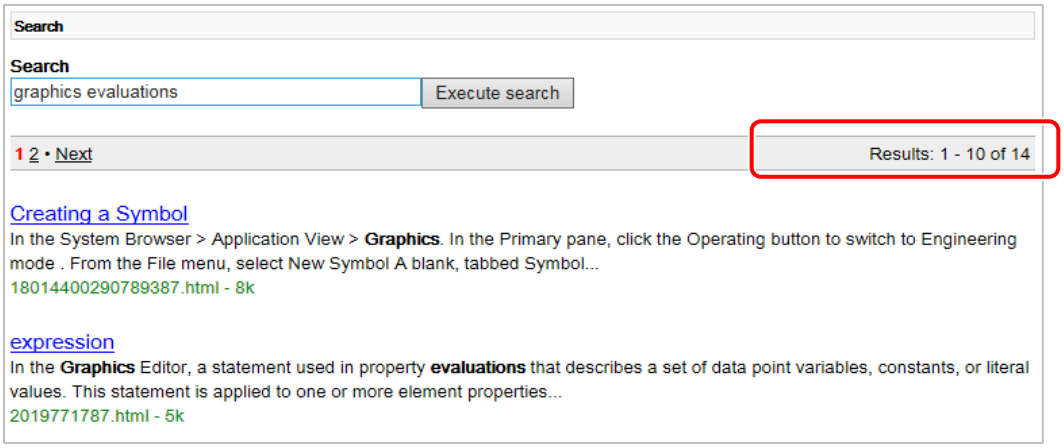
Of course, it is possible to enter a single word. In most cases, this will return hundreds of hits. For example, perhaps you are looking for help with Graphics. At this time, 453 pages were returned.



Search, *continued*

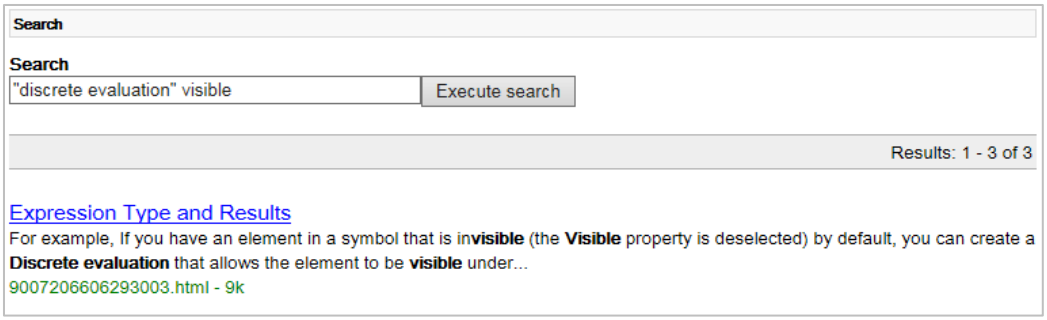
Multiple Word Search

The best bet is to refine the search. Search will only return pages containing all the words entered into the Search bar. What you really want help with is setting up an evaluation in Graphics. Notice that this refines the results to only 14 pages. Also notice that the words are not together; just that they are both on the same page.



Quotes

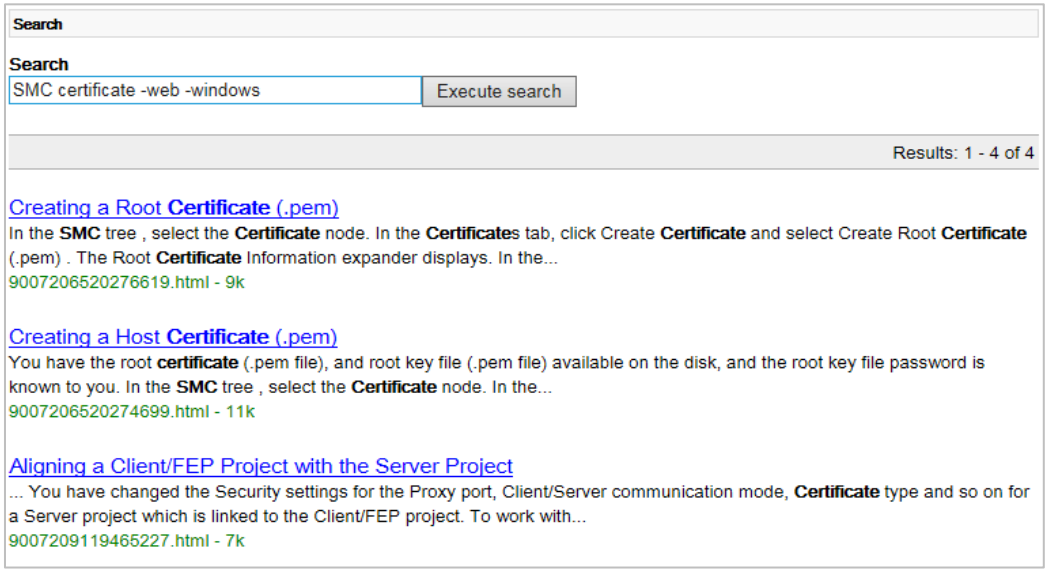
When multiple words are enclosed in double-quotes, Search will only return pages containing those words in that combination. What you are really looking for is how to use a Discrete evaluation to control whether an object on the graphic is visible or invisible. Now there are only 3 results and the first one looks to be exactly what you want.



Search, *continued*

Minuses

Search also allows you to exclude words and/or phrases. For example, if you need help setting up security certificates in SMC but are not interested in web access or using the Windows Trusted Stores, you might use the following search.

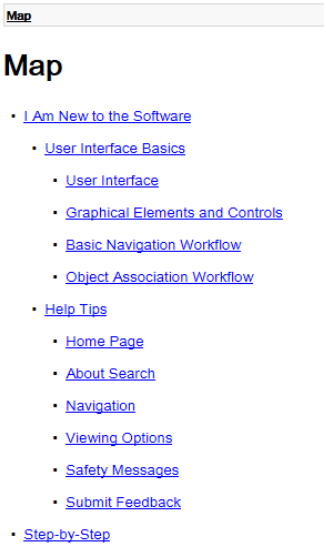


The more you use the Search feature, the more comfortable you will become with it. In time, you will be able to type a quick search criterion and find exactly what you are looking for.

Map

Another way to look through the Help is to display all the contents in a “Map” format. If you’ve ever opened a PDF with Bookmarks, you are familiar with the Bookmarks pane displayed on the left. Clicking one of the bookmarks takes you directly to that page of the file.

The Help Map does not show links to all pages. Only the first three levels are provided. This is designed to get you in the area and from there you can find what you are looking for.

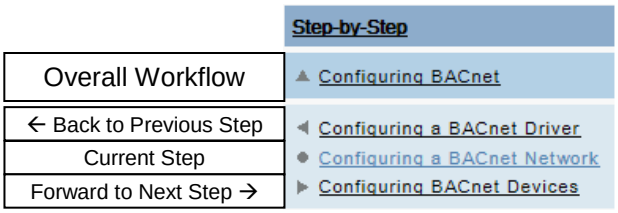


Previous, Current, and Next

Many times, when reading through Help documents, users have the same questions: “what steps were required to get to this point” and “What comes after this step?”

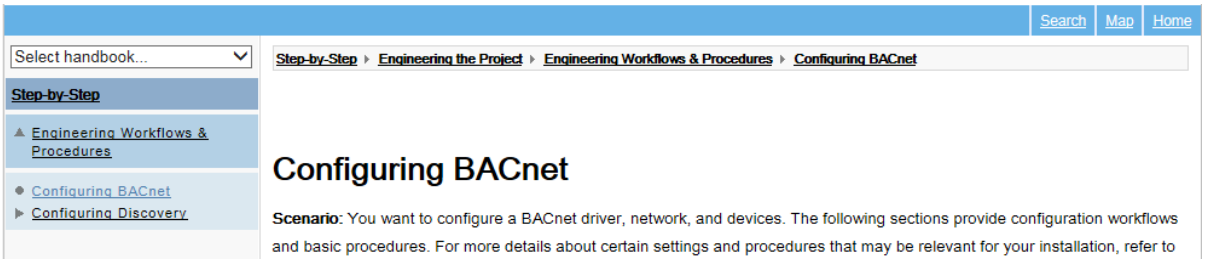
Desigo CC Help serves to answer those questions. On the left of every Help page, there are links that will take you to the previous step and the next step. These are extremely important links when progressing through workflows. Simply continue clicking the bottom-most link and you will be stepped through the process.

Sometimes, when troubleshooting an issue, it is beneficial to locate the troublesome step and work “backwards” by clicking “up” through the workflow. This could reveal the core issue being in one of the previous steps. For example, in the following illustration, problems configuring the BACnet network might be caused by improperly configured driver settings.



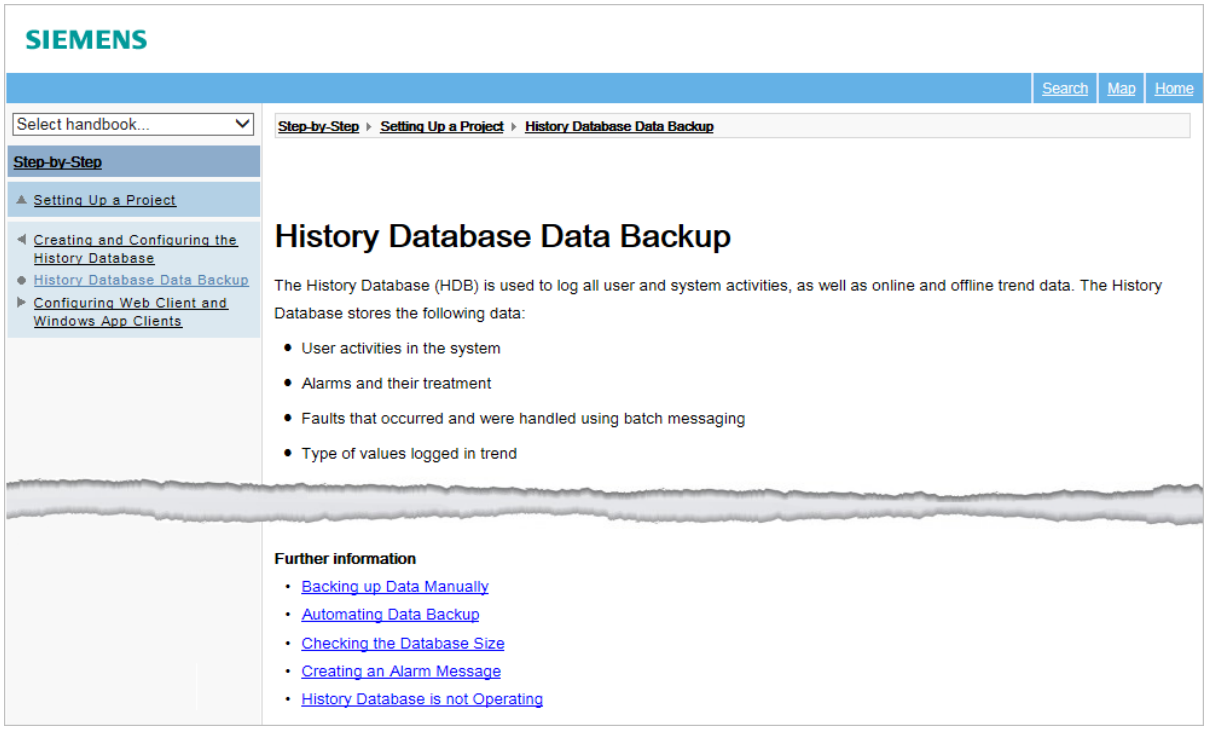
Breadcrumbs

Along the top of every Help page is a listing of the hierarchy structure leading to the current page. If you find that you “took a wrong turn” somewhere and wish to back up, use the breadcrumbs.



Further Information

At the end of major topics, links to related topics are provided. For example, in the following image, information is provided about the HDB and backing it up. Links are provided to step through manually backing up or setting up automatic backups. Perhaps you would like to take this time to also check the database size and/or create a Management Station alarm to monitor it.



Installation

Overview

To help streamline and standardize the installation process, two new options have been introduced: Silent and Semi-Silent. Both of these options use an XML file, which is essentially a set of instructions for the installation file. Launching the installation without the XML file initiates the standard installation process.

WARNING: If the project is going to use web clients or the mobile app, IIS must be configured prior to installation. Use the Microsoft Windows "Turn Windows Features On or Off".

If IIS is not pre-configured,

- System Management Console will not have the "Websites" node and it will not be possible to create websites.
- System Management Console will need to be uninstalled, IIS configured, and the installation performed again. Configuring IIS after installation does not automatically fix it.

Custom Installation

This is the default installation method. If you have installed Desigo CC previously, this was the method. In Custom Installation, you have the opportunity to specify preferences every step of the way.

Silent Installation

In some cases, it is desired to have every Desigo CC installation identical or at least some level of consistency. For example:

- A customer with multiple Desigo CC installations would want them all installed the same way, with the same language packs, extension modules, etc.
- If your branch or zone wishes to standardize installations, Silent Installation might be the way to do that.
- Distributed servers must all be configured identically.

Silent Installation is initiated at the command prompt.

With Silent Installation, an XML file containing installation instructions is provided to the installation file. Installation follows these instructions with no user interaction until installation is completed.

Silent Installation does not have the ability to make decisions or mitigate errors. If the installation encounters any problems, it will fail and quit.

Semi-Automatic Installation

Semi-Automatic Installation provides a mixture of the above two methods. As with Silent Installation, an XML file is provided to the installation.

Semi-Automatic Installation is also initiated at the command prompt. However, the file is provided via the installation wizard. Any configurations provided in the XML file are skipped in the wizard.

If an error is encountered and the installation cannot resolve the pre-defined configuration, the wizard will display for user input and mitigation.

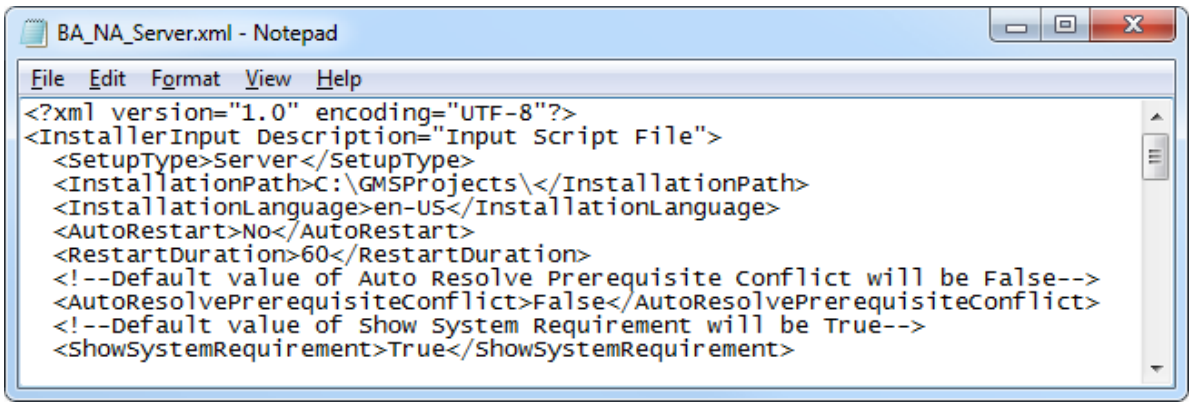
Creating the Installation Configuration File

The following is not intended to be a complete primer of creating the Installation Configuration File. It is presented here only to give an impression of the type of information that might be passed to the installer.

The Installation Configuration File should not be used for "one-off" installations. The amount of time dedicated to creating the file would far exceed that of simply installing the software. Only create and use the file if multiple identical installations are required.

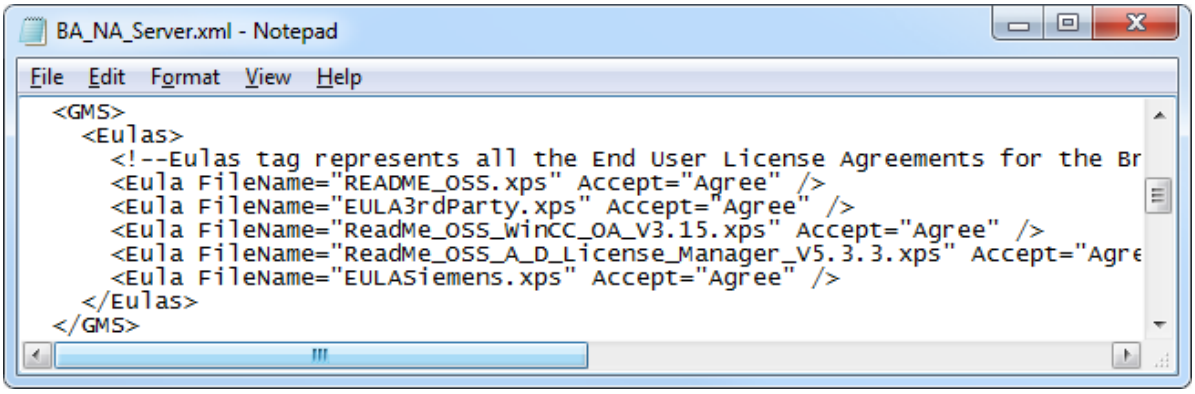
The first part of the configuration file provides initial information about the installation process. In this case:

- Install the Server software
- Install at C:\GMSProjects\
- Installation wizard language is en-US

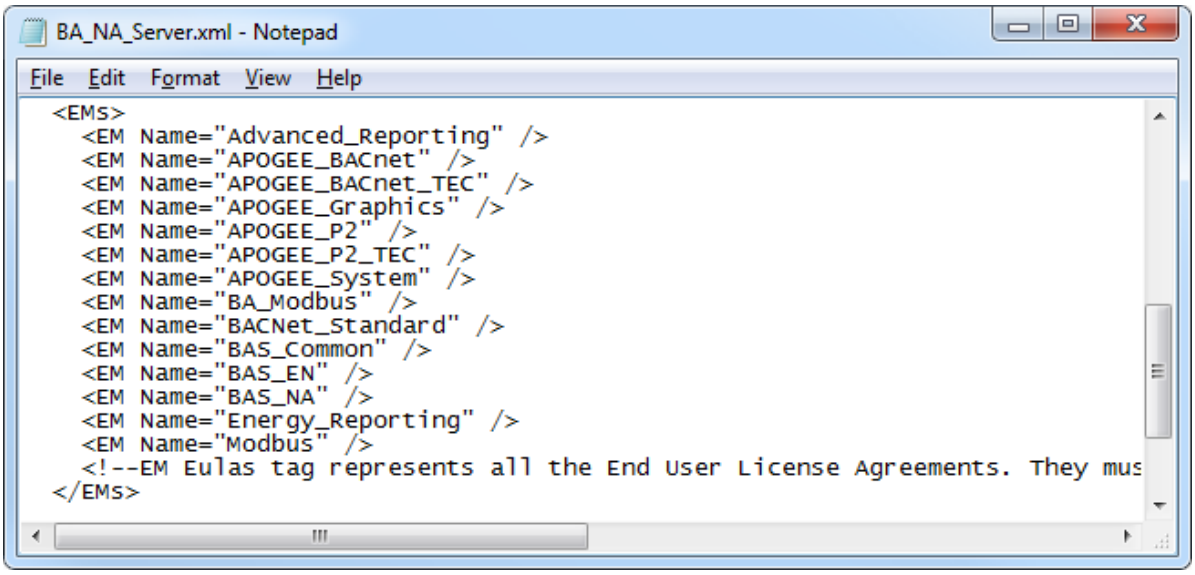


Creating the Installation Configuration File, *continued*

Any End User License Agreements (EULAs) the installer will encounter must be specified and agreed to. This example may contain more EULAs than the typical North American Building Automation installation.

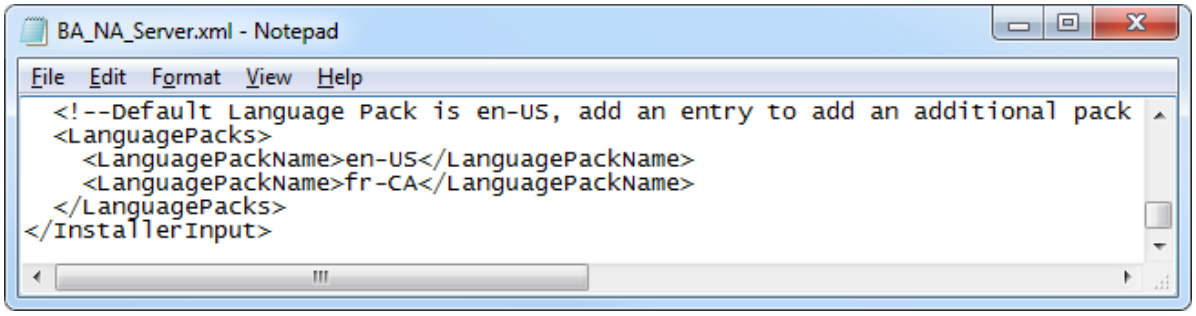


Extension Modules (EMs) to be installed must be listed. Listing them in the configuration file is the equivalent of checking them in the wizard. Be aware that some extension modules require their own EULAs.



Creating the Installation Configuration File, *continued*

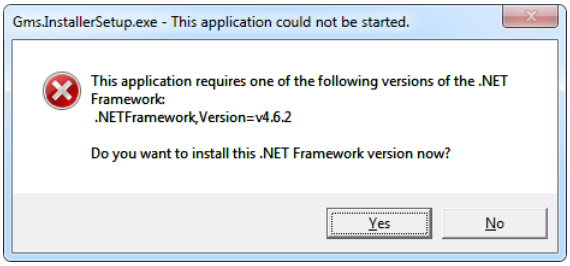
Finally, the languages to be installed into Desigo CC and made available to the projects must be identified.



NOTE: examples of XML configuration files can be found in the installation media.

Microsoft .NET 4.6.2

Desigo CC and the installation wizard require Microsoft .NET version 4.6.2. The computer does not have version 4.6.2 installed when the installation is launched, you will receive the following warning:



Clicking the [Yes] button will automatically open the default web browser and navigate to the .NET website where version 4.6.2 can be downloaded. However, depending on where you got the installation media, version 4.6.2 might be included. If it is, it will be at: <Installation Media Location> \ GMS \ Prerequisites \ Microsoft .net

System Management Console

Overview

Changes have been made to the System Management Console to support Distributed Projects, Long-Term Storage, and other features. Additionally, the user interface has been adjusted to simplify project configuration and maintenance. Some of the items listed here are provided as overviews since they are discussed in greater detail in later sections.

Distributed Projects

New Sections
If the project is designated as a "Distribution participant", two new sections will appear.

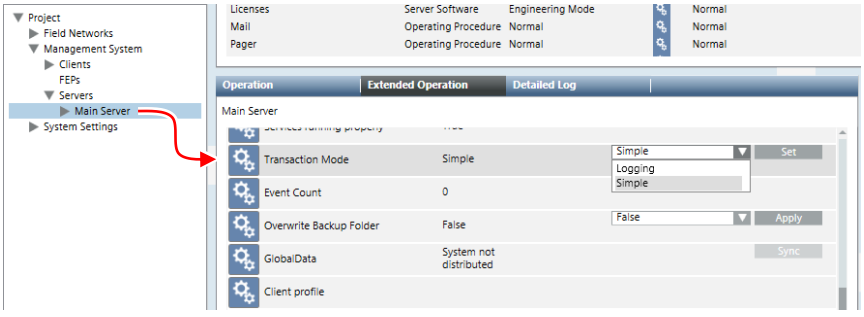
- Distribution Participants shows all projects in the distribution.
- Distribution Connections shows how each participant can or cannot view other participants.

Toggling Transaction Mode

In previous versions, toggling the Transaction Mode from Simple to Logging required using the SMC, stopping and restarting the project. To make this easier, Transaction Mode has been removed from SMC and placed into Desigo CC.

To toggle the Transaction Mode:

1. Select the Main Server in the System Browser.
2. In the Extended Operation tab, locate the "Transaction Mode" property.
3. Adjust accordingly and click [Set].



REMEMBER Never leave a customer's project in "Simple" transaction mode.

History Database

Linking the HDB
Linking the HDB to a project is now done in the "Server Project Information" section; it no longer has its own section.

Encrypting the HDB
After linking the HDB to the project, there is now the ability to encrypt the HDB. Check the box to enable encryption.

No Shared HDBs
In previous versions of the System Management Console, it was possible to have multiple projects share a single History Database. Starting in MP3.0, you will receive a warning when trying to link an HDB to a second project. Currently, you can still click through the warning but it is planned that a future Service Release will remove the ability altogether.

Profiles

Separate disciplines can load different Desigo CC profiles. For example, TBS, TBS_UL, BA_NA, etc. In a distributed system, all projects must be configured identically. The Profiles section of the SMC shows which profiles are loaded on that project. In this way, it is possible to confirm identical configuration.

Button Bar Additions

Change System Info
To facilitate the configuration of distributed systems, it is now possible to change the "System Name" of a project. This is because prior to Distribution large customers installed multiple, separate systems. Each named "System1". After stopping the project, click the "Change System Info" button to edit the "System name" field.

Change Distribution Info
If the project is part of the distributed system, this button makes the distribution information fields editable. This topic is thoroughly covered in a dedicated section.

Check Distribution Consistency
In a distributed system, connected projects must have the same information for communication to occur. This button scans all the connected projects for consistency. This topic is thoroughly covered in a dedicated section.

Clear Name Cache
When making configuration changes in a distributed system, it is sometimes necessary to purge the cache of names and start over. This button allows this. This topic is thoroughly covered in a dedicated section.

Button Bar Additions, *continued*

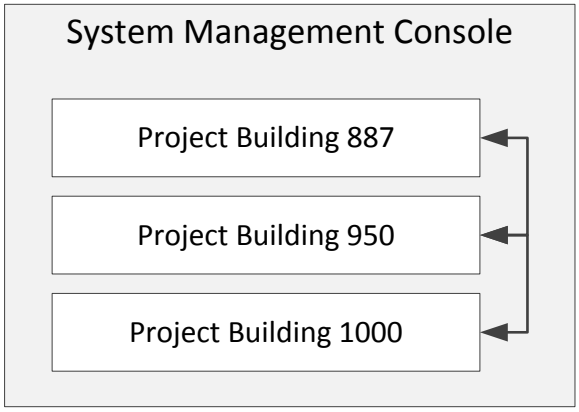
Clear HD2 Files

If Desigo CC cannot write to the HDB for any reason, it will generate HD2 files. These files hold the historical information until the HDB can be accessed. At that time, Desigo CC moves the data from the HD2 files to the HDB. However, situations have been reported when HD2 files were not automatically deleted. It is not advised to manually delete HD2 files. If the system has a backlog of HD2 files after access to the HDB has been restored, use this button to cleanly remove the files.

Distributed Systems

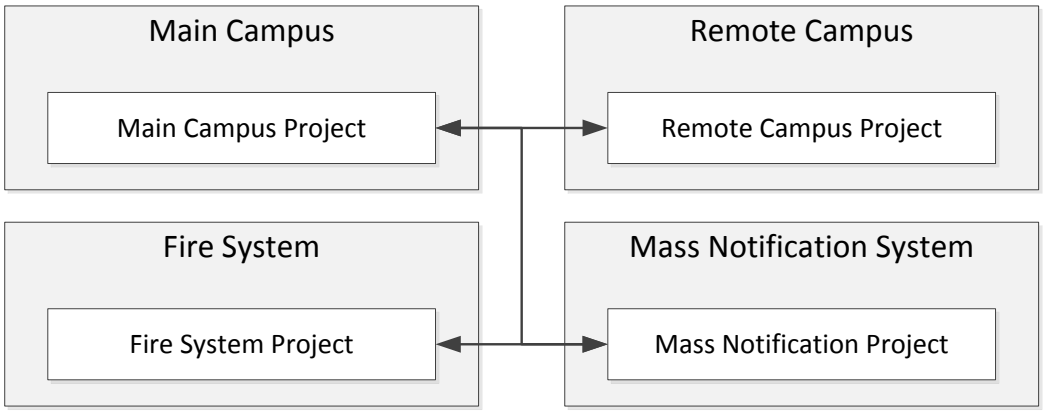
Overview

Functionality has been added to System Management Console allowing multiple projects to be networked together. Projects can be all housed within the same SMC, on multiple physical servers, or each in a separate virtual machine. One key concept to keep in mind is that you are connecting projects, not servers. It is possible that a server houses multiple projects but not all of them participate in a distributed system.



A collection of projects all contained within the same SMC and running on the same PC.

Of course, projects could each be housed on their own, individual, servers and connected together. Servers could be located in remote geographical locations or virtual machines running in the same server farm. An example of this layout is shown in the following image.



A fully meshed system connecting projects housed on individual servers.

Overview, *continued*

Because projects could be in the same Server or on different servers, unless the specific layout is vital to the example, illustrations of distributed systems will not indicate whether the projects are in the same SMC or in different servers.

There are multiple reasons to connect multiple projects:

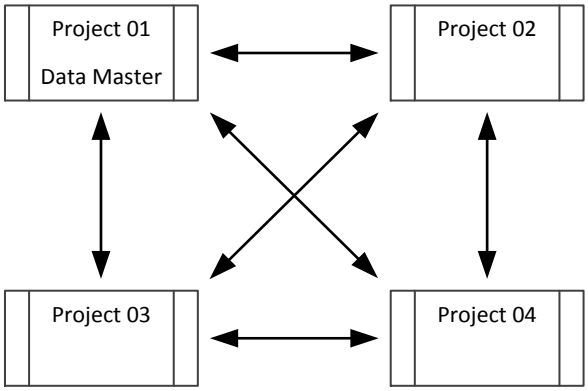
- Increased overall project size.
  - The primary limit to project size is based on the processing capabilities of the server housing the project.
  - By networking the projects from multiple servers, processing requirements are distributed.
- System robustness in the event of catastrophe.
  - If the entire system were housed on a single server, a single power outage or crashed hard drive could cripple the entire system.
  - By distributing the entire system across multiple servers, a system crash only affects that part of the system without affecting the others.
- Separate functionality.
  - Rather than working to integrate all subsystems into a single project, they can each be house in different projects.
  - By housing disciplines in separate projects, there is less concern of integrating them all together into the same project and system-specific users ensure they only interact with their subsystem.
- Geography.
  - Customers with multiple locations will want local servers to monitor and control their facilities.
  - By networking them all together, each facility has the processing power of a dedicated server and Headquarters can oversee all facilities from a single view.
- Enforced separation of users.
  - Some facilities are comprised of multiple businesses or tenants. For example, in a strip mall. Currently, scopes are used to restrict users to their respective systems.
  - By creating a separate project for each business, it is possible to create users that can only view their own project. Meanwhile, the facility owner can monitor all projects.

NOTE: Even if all the projects are housed on the same server, each project must have their own HDB. SMC will warn you if you attempt to share a HDB between projects.

Fully Meshed Distribution, Introduction

In fully meshed distribution, all the projects are essentially peers with the ability to fully see each other. Unless scopes are applied, all users can monitor all projects.

In the following illustration, it is important to keep in mind that the arrows represent the ability to "see" the other projects. For example, Project 02 will have all the data from Projects 01, 03, and 04 in its System Browser.



Fully meshed distribution break up the system into multiple projects. The entire system can be viewed by all users. Advantages of fully meshed systems:

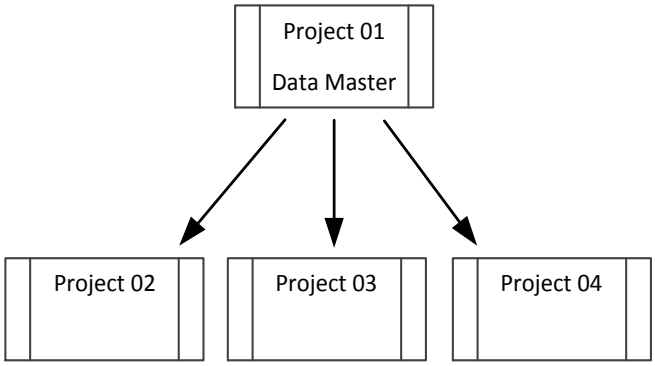
- Separating subsystems or geographies into different projects. This could be done with multiple projects on the same server.
- Catastrophe avoidance by breaking up a larger system onto multiple servers.
- Creating multi-server systems that would be too large for a single server.

Hierarchical Distributed System, Introduction

In a hierarchical distribution, one project serves as the "head" system, being the only one able to see all others. In this configuration, the "children" projects cannot, in any way, see the other "children" projects. Separation of the projects is inherent and strict.

Hierarchical Distributed System, Introduction, *continued*

In the following illustration, it is important to keep in mind that the arrows represent the ability to "see" the other projects. For example, Project 01 will have all the data from Projects 02, 03, and 04 in its System Browser. However, Projects 02, 03, and 04 will only see their own systems; because of the one-sided arrows, they will not see Project 01.



Hierarchical distribution enforces strict separation of projects. For this reason, it is well suited when:

- Multiple disciplines are used at a facility and it is desired that users of one discipline not mess with other disciplines.
- A facility has multiple tenants, each with control of their system.

NOTE: The "Head" project could be an "empty" project used exclusively as a portal to monitor the other projects. In theory, there is no need for it to have subsystems, graphics, etc.

Distributed System Terms and Definitions

Often, when a new feature or functionality is introduced, there are new terms and phrases to learn. Learning and using these new terms and definitions will ensure everyone is referencing the same concepts when dealing with a complicated scenario.

Data Master

You probably noticed that in each of the above illustrations one of the projects was denoted as the Data Master. The Data Master is the project that houses "Global Users" and other assets shared by other projects. Only one project can be the Data Master. In a Fully Meshed system, any of the projects can be the Data Master. In a Hierarchical system, the Data Master must be the one able to see all other projects.

Global User

When working in a distributed system, it is possible to designate new users as "Global Users". These users can log into any project in the system. Global Users can only be created at the Data Master project. The accounts are then replicated across all other projects.

Distributed System Terms and Definitions, *continued*

Local User

Local Users only have the ability to log into their respective projects. When created at their host project, they are just another account. When created at the Data Master, the user must designate which project the new user belongs to.

On-System and Off-System Objects

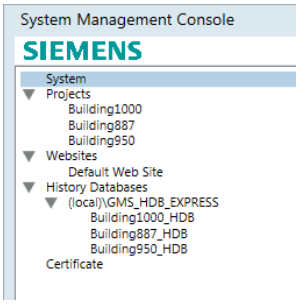
Though not officially sanctioned terms, they make it easier to understand whether an object resides in the project the user is logged into or in a different project. This becomes important when working with Desigo CC applications and building graphics, trends, reports, etc. containing off-system objects. Also, when troubleshooting in a distributed system, it is important to know whether the object is on-system and within the same project or off-system and perhaps indicative of communication issues.

Setting up a Project for Distribution in SMC

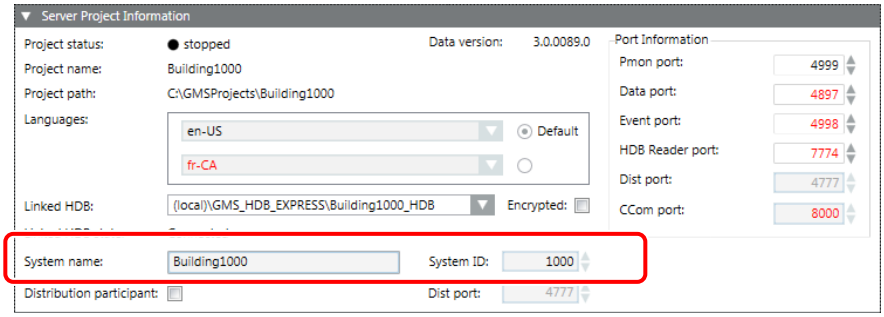
The following example does not replace the Desigo CC Online Help, which is very thorough and complete.

Before setting up the distribution properties of the system, it is necessary to create the individual projects.

Remember that each project must have its own History Database.



Projects that will be connected in a distributed system cannot have the same “System Name” or “System ID”. When setting up the project, make sure they are all unique. In the following image, the System Name and ID are based on the address of the building.

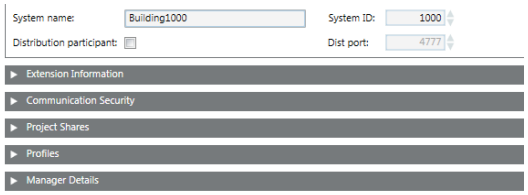


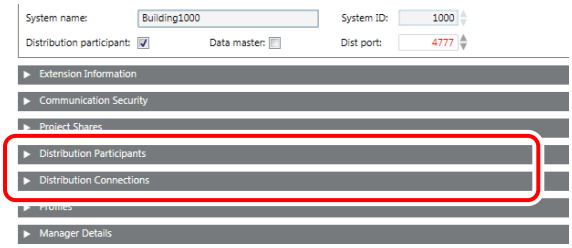
Shown later, once the systems are connected, the System Browser will show the “System Name” of each. Since “System Name” is used to identify the projects, it is best to not use generic names such as “System1” and “System2”.

If setting up distribution with multiple projects on the same server – such as this example – it is important that each project have unique Distribution ports. For distribution to function, all projects must be running; you cannot start a project if another project has the same Distribution port. If you forget, there will be a warning message.

Setting up a Project for Distribution in SMC**,** *continued*

Once all the projects are created, they can be connected. To expose the Distribution properties, check the "Distribution participant" check box. Notice in the following image that checking the box exposes two new sections: "Distribution Participants" and "Distribution Connections".





Share the Projects

Normally, setting up the project share is considered something you do for web access. When setting up distribution, setting up project share makes the process easier. This is because SMC will automatically find shared projects and add them as distribution participants. If the project is not shared, you will need to manually enter the project to the list, with the risk of typos.

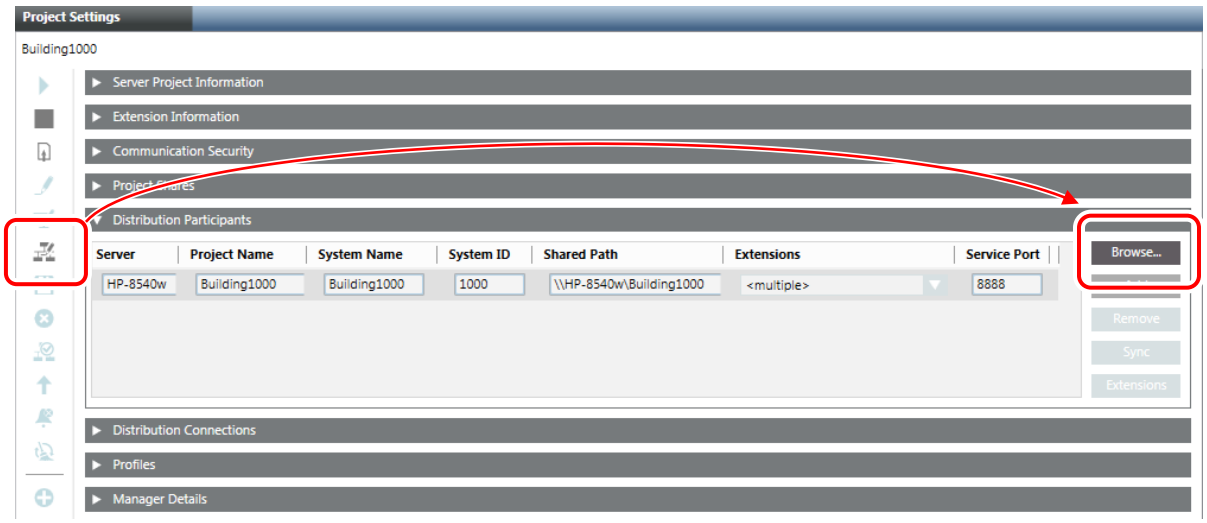
Add the Distribution Participants

Start the Projects

The projects must be running before distribution information can be modified.

Add the Distribution Participants

In the button bar, click the "Change Distribution Info" button. This will activate the "Distribution Partners" section. On the right, click the [Browse…] button.



Clicking the [Browse…] button will open the "Browse for Distribution Partner" window.

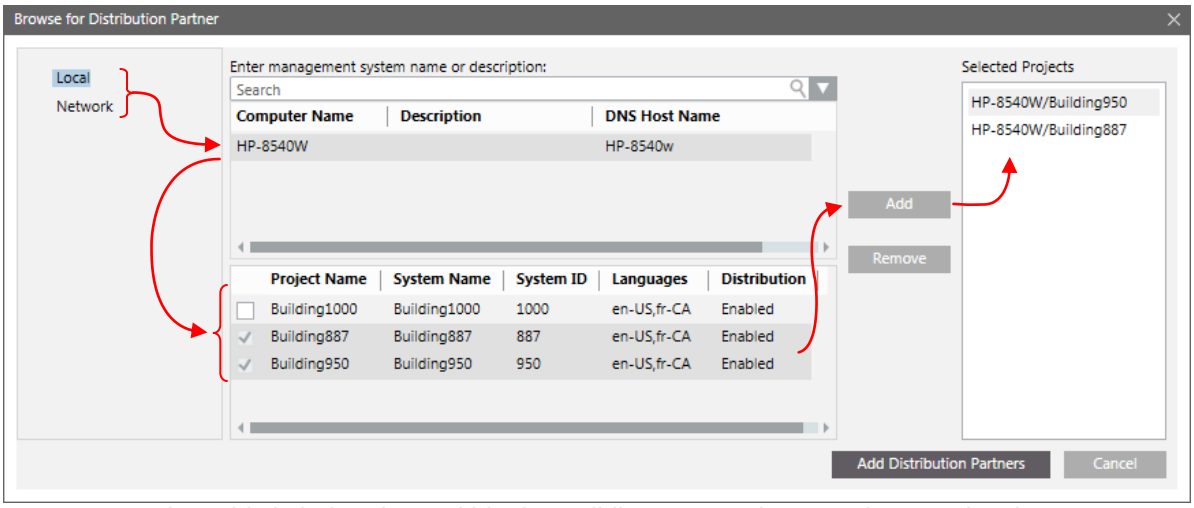
1. If all projects are housed on the same server, select "Local" on the left. If the projects are on separate servers, select "Network".
   If the server is networked to other servers, they will all be displayed in the top window.

2. Select the appropriate server in the "Computer Name" column. In this example, there is only the one. All shared Distribution Partners on the selected server will be listed at the bottom.

3. Check the box for the desired project(s) and click [Add] to add them to the "Selected Projects" window.

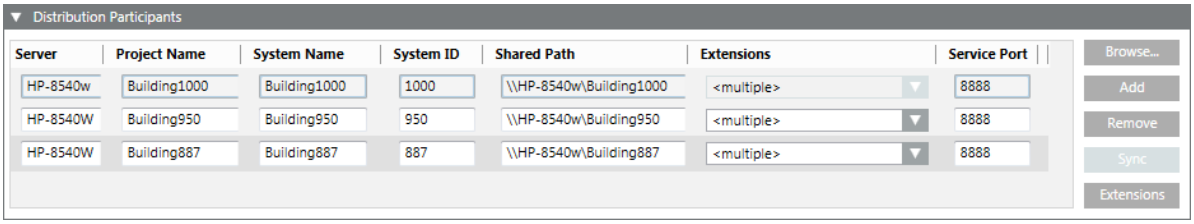
If the projects reside on separate servers, repeat steps 2 and 3 moving from server to server, selecting the desired project(s) from each.

In the following image, it was not necessary to add Building1000 since the work was being done on the Building1000 project.



Since this is being done within the Building1000 project, we do not select it.

Once all the projects have been added to the list of "Selected Projects", click the [Add Distribution Partners] button. This will close the dialog box and place all the distribution partners in SMC, as shown below.



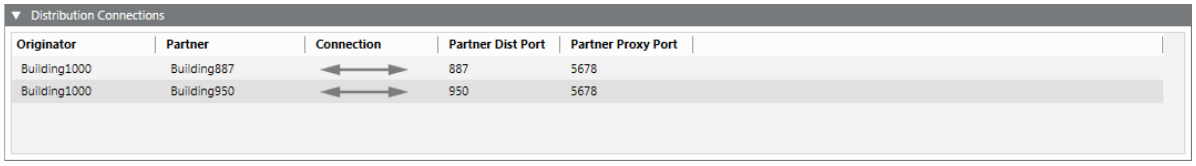
Before progressing any further, save your work. This is necessary. Notice in the above image that the [Sync] button is inactive. The current project must be saved (written to the config file) before its configuration can be synched to the other distribution participants.

Once the settings are saved, click the [Sync] button. This will place entries for all the distribution partners into each project's respective config file.

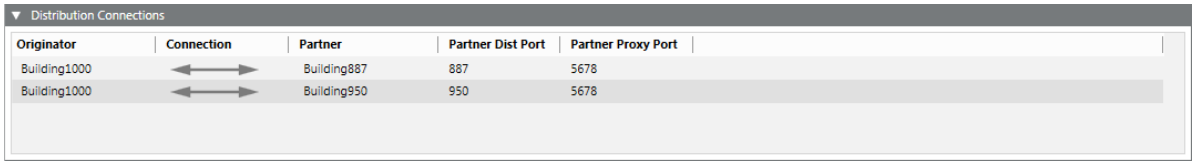
Configure the Distribution Connections

In the fully meshed example, Building887 is going to be the Data Master. In this scenario, there is no particular reason for this; one of them has to be the Data Master.

Expanding the “Distribution Connections” section reveals how the currently selected project will see (or not) the other projects. Because this is a fully meshed system in which Local Users of every project can see all other projects, there are no changes required. The arrows points both ways by default.



For complicated network structures containing several projects, it might be easier to visualize the relationships between the projects by moving the “Connection” column to between the “Originator” and “Partner” columns. This is down by clicking and dragging the column header and is shown below.



After the Distribution Connections are configured, click the [Sync] button

Security Certificates

This section assumes you are already familiar with creating and installing certificates in System Management Console. If not, please take the time to review the “*SMC Online Help*”, “*MP2.1 Delta Training Module*”, and/or “*Desigo CC Tips & Tricks*”.

All work with certificates is done within System Management Console. It is not necessary to use any of the Windows certificate functions. For example, the Trusted Root Certificate Authority (TRCA).

Note: TRCA is required when using web access or the remote app. This section, however, deals exclusively with project-to-project communication.

Security Certificates, *continued*

Root Certificate

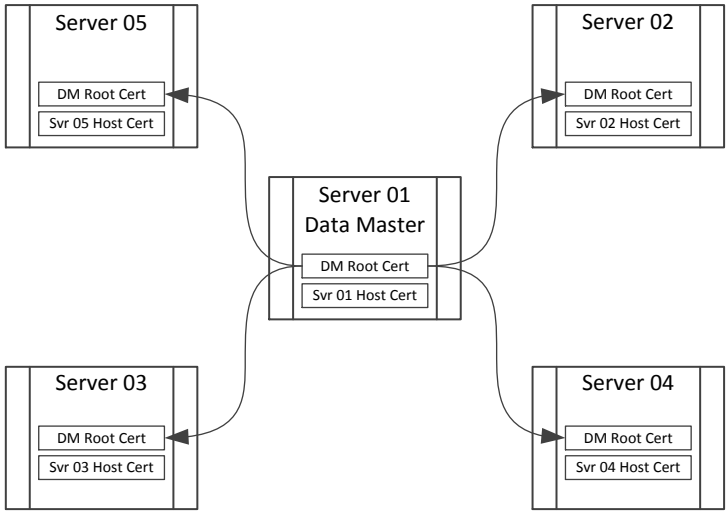
For secured communication, all servers on the network must use the exact same Root Certificate.

- A suggested workflow is to generate the Root Certificate at the Data Master. This is easy to remember since the Data Master is now also the generator of the "Master" Root Certificate.
- Once the Root Certificate is created and imported into the Data Master's SMC, copy it to the other servers. If the projects reside on separate servers, use a thumb drive or the network connection.
- Import the "Master" Root Certificate into all servers' SMC. Notice in the following image that the Root Certification has been named "DM Root Cert" and has been shared with every server.

Host Certificate

Each server must have its own, unique Host certificate. Because the Host Certificate is based on the Root Certificate, it is important that the Root Certificate is imported first.

- First, import the Root Certificate from the Data Master.
- Notice in the following image that every server has its own, unique Host Certificate.



Desigo CC Applications in Distributed Systems

Working in a distributed system opens up questions about how applications work with objects from other projects (off-system objects). The following is an attempt to explain how each Desigo CC application works in the different distribution scenarios. The following list is the result of testing performed by BT University and Technical Support.

Local Users can only ever see and work with their own project. As far as they know, theirs is the only project. For this reason, the following list will only explain how Global Users work in distributed systems.

Address Book (Mesh)

Global Users

- When logged into any project:
  - Can create other Global Users but they must be housed in the Data Master project.
  - Can create local users for specific projects.

Address Book (Hierarchical)

Global Users

- When logged into the Data Master:
  - Can create other Global Users.
  - Can create local users for specific projects.
- When Logged into a non-Data Master project:
  - Cannot create Global Users
  - Can create Local Users only for that project.

Documents (Mesh)

Global Users

- When logged into any project:
  - Can use network to place document files on remote PCs.
  - Can add documents to other projects.

Documents (Hierarchical)

Global Users

- When logged into Data Master:
  - Can use network to place document files on remote PCs.
  - Can add documents to other projects.
- When logged into a non-Data Master project:
  - Cannot see any other project.
  - Can only add documents to project logged into.

Desigo CC Applications in Distributed Systems, *continued*

Graphics (Mesh)

Global Users

- When logged into any project:
  - Can create graphics on other projects. This is good for Centralized Graphics to maintain consistency between the multiple projects.
  - Each graphic should contain only on-system objects. Avoid placing off-system objects on a graphic. This wreaks havoc when the graphic is viewed by Local Users.

Graphics (Hierarchical)

Global Users

- When logged into the Data Master:
  - Can create graphics on other projects. This is good for Centralized Graphics to maintain consistency between the multiple projects.
  - Each graphic should contain only on-system objects. Avoid placing off-system objects on a graphic. This wreaks havoc when the graphic is viewed by Local Users.
  - Possible to have a dashboard graphic on the Data Master with information from other systems.
- When Logged into a non-Data Master project:
  - Can create graphics only for the project they are currently logged into.

Reports (Mesh)

Global Users

- When logged into any project:
  - Can create and execute reports containing data from all projects.

Reports (Hierarchical)

Global Users

- When logged into Data Master:
  - Can create and execute reports containing data from all projects.
- When logged into a non-Data Master project:
  - Can only create and execute reports containing data from that project.
  - If a Global User is logged into a non-Data Master project and executes a multi-system report that was created on the Data Master, the report will only display information pertaining to the local project. Remember that data availability is regulated by the communication arrows and not the user's privileges.

Desigo CC Applications in Distributed Systems, *continued*

Log Viewer (Mesh)

Global Users

- When logged into any project:
  - Can access historical data from all projects.
  - The user must navigate into each project to view its data. It is not possible to intermingle historical data from multiple projects onto the same display.

Log Viewer (Hierarchical)

Global Users

- When logged into Data Master:
  - Can access historical data from all projects.
  - The user must navigate into each project to view its data.
- When logged into a non-Data Master project:
  - Can only access historical data from that project.

Macros (Mesh)

Global Users

- Macros allow you to create output that affects off-system objects. For example, perform database backups in all projects.
- Multi-system macros can only be executed by Global Users and assume, without pre-verification, that there are no communication issues between projects. If there is a communication issue with one of the systems, that command will fail but the Macro will not report as “failed”.
- As long as you understand the risks involved with off-system commanding, have at it.

Macros (Hierarchical)

Global Users

- When logged into Data Master:
  - Same as Mesh, above.
- When logged into a non-Data Master project:
  - Can create macros containing objects only from that project.

Reaction Processor (Mesh)

Global Users

- When logged into any project:
  - Triggers cannot contain off-system objects.
  - Reactions can only be triggered by local objects or scopes.
  - Output can affect off-system objects.
  - Output functions like Macros, above.

Desigo CC Applications in Distributed Systems, *continued*

Reaction Processor (Hierarchical)

Global Users

- When logged into Data Master:
  - Reactions can only be triggered by local objects or scopes.
  - Output can affect off-system objects.
- When logged into a non-Data Master project:
  - Can create Reactions triggered by, and affecting, objects in that project.

Remote Notification (Both Distributed Types)

- Remote Notification is entirely local only.
- It is not possible to trigger a ReNo based on an off-system object.
- Only Address Book entries from the local system can be used in ReNo.

Scopes

Scopes cannot contain off-system objects. There is no exception. This ripples through all the places where Scopes are used.

- ReNo uses Scopes and cannot have off-system objects.
- Security Groups uses Scopes. To apply security to a Global User, create Scopes in each project and apply them all to the security group at the Data Master.
- Reactions can use Scopes and cannot be triggered by off-system objects.

System Browser and Custom Views

- Management View and Application View list all connected systems in the System Browser. There is no way to mix the systems in these views.
- It is not possible to create “Global” views. That is to say you cannot create a custom view that contains objects from all systems.
- If a user requires access to all systems, they must use Management and Application Views.

Disappearing Systems

Start with the scenario that a Global User is logged in and able to see all other systems (Any Meshed project or Data Master in a Hierarchical system). If one of the other systems goes offline for any reason, that system will disappear from the Global User’s view. Literally, *poof*. Once connection is restored, it will return to the view.

Validated Sites

Overview

Validation is most widely known as a feature put in place at pharmaceuticals and other critical environment locations. However, the validation feature could be used in any situation in which an operator is forced to validate their reason for making changes to specific system objects.

Licensing

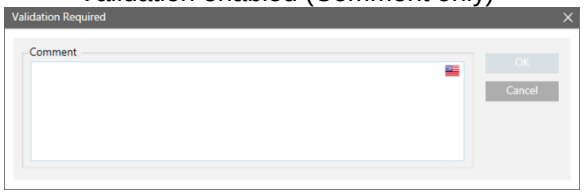
The validation functionality is inherent to Desigo CC. However, each system object that is validated requires a license. In the same way that protocol points require licenses (BA points, Fire points, etc), it is necessary to have point licenses for the number of validated objects.

Operator's Perspective

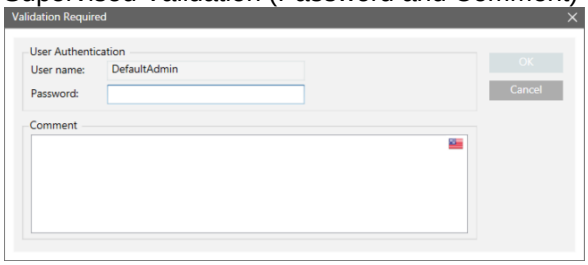
To the operator, validation is straight-forward. When making any changes to a validated object, they are presented with a dialog box. The box asks for a comment and/or their password. The comment is meant to capture their intent for making the change; the password is to ensure they didn't leave Desigo CC open and someone else is attempting to make a change.

Validated objects can be any Desigo CC database object.

Validation enabled (Comment only)

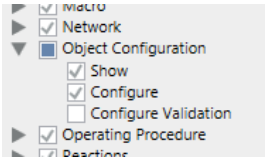


Supervised Validation (Password and Comment)



Validation Application Rights

Providing or denying a Desigo CC user access to configure validation settings is set in the Application Rights section of the Security Group for that user. Expand the "Object Configuration" node and (de)select "Configure Validation". This is shown here.

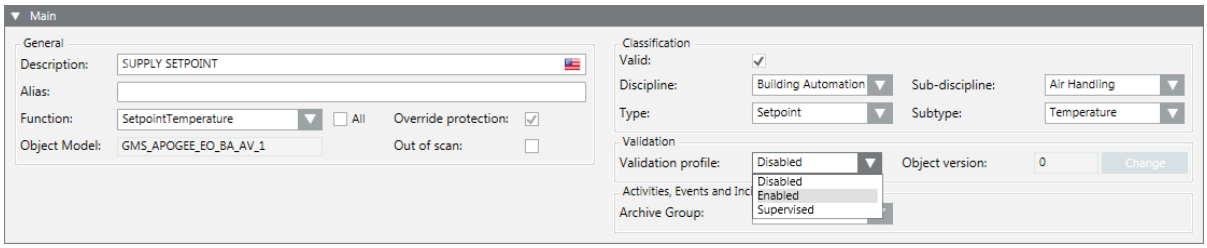


When a group is denied Validation rights, members still see the Validation section in Object Configurator. It is grayed out.

Configuring Objects for Validation

With Desigo CC in Engineering Mode, select the desired object in the System Browser and open the “Object Configurator” tab in the Primary Pane. Under the “Classification” section, the “Validation” section has been added showing the current Validation setting and the Object version.

To set the object as a Validated object, use the drop-down to select either “Enabled” or “Supervised. When you click the “Save” button on the button bar, the Object version will change to “1” unless you manually change the version number prior to saving.

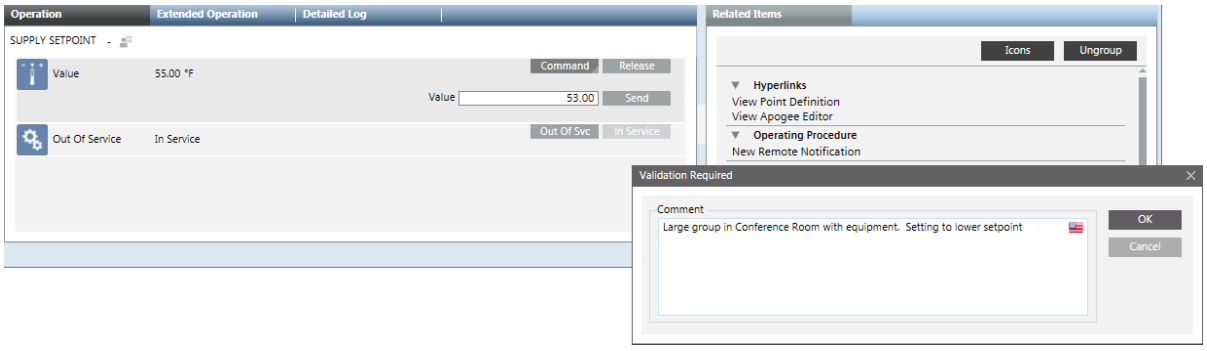


Changing the Validation setting for the Supply Setpoint

Validation in Action

Once the object has Validation settings, every user is required to enter a note and/or their password when making any changes to that object.

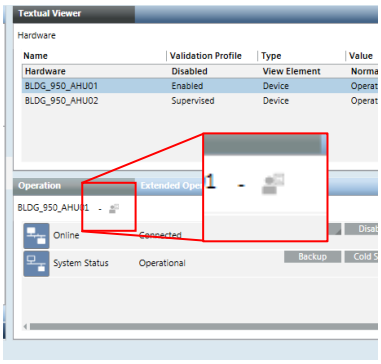
The following image shows the “Supply Setpoint”, which was set to “Enabled” in the previous image. Attempting to command the point’s value requires the entry of a note. The [OK] button in the dialog box activates only when something is typed.

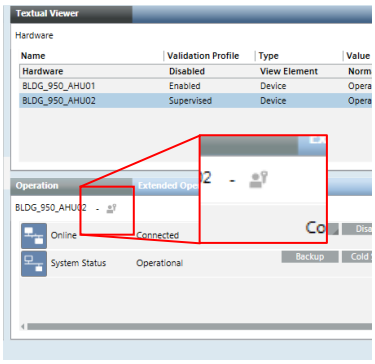


Textual Viewer and Operation Tab

A new column is available for the Textual Viewer: “Validation Profile”. Adding this column provides a means to quickly identify which System objects have which validation profile applied. Additionally, when an object is selected and its properties displayed in the Operation or Extended Operation tab, a Validation icon will appear to indicate if a Validation Profile is applied and which one, if applicable.

The following images show a building with two field panels. Both have Validation Profiles applied: AHU01 is “Enabled” and AHU02 is “Supervised”.





Stringent Validation Requirements

Every consideration has been taken to ensure a user cannot circumvent the validation requirements. Following are examples of how Validation requirements are upheld in various situations.

Multi-Select Commanding
If multiple points are selected (System Browser, Textual View, etc.) and are attempted to be commanded, Desigo CC evaluates the group for validation requirements. If any of the points are validated, the most stringent of any applied requirements will be presented. The credentials are used for all selected validated points.

PPCL
PPCL programs in Apogee P2 field panels can be assigned a Validation Profile. If the program is edited, the user is prompted for credentials when attempting to save it.

Application Objects
Desigo CC database objects can be validated in addition to field panel points. For example, a validation profile can be applied to a graphic. If attempting to edit and save a validated application object, the user will be prompted for appropriate credentials.

Validation in the Log Viewer

New Columns have been added to the Log Viewer. These new columns make it possible to quickly view interactions with validated objects.

Notice in the following image the addition of the “Comment” column, which shows the comment entered as the validation credential. Additionally, the “Action Details” column will show changes to the validation profile itself. The bottom-most line does not have a Comment because Validation had not yet been configured for the point.

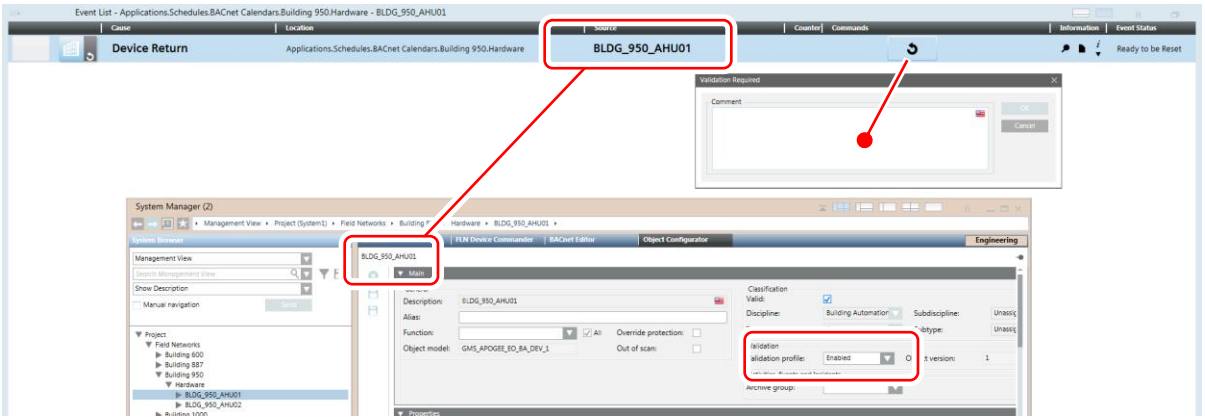
Action	Action Details	Comment	Va	e	Previous Value
Command Initiated	Release Priority : 8	Releasing back to normal.			
Command Initiated	Command Priority : 8	Received a call.	55	0	60.00
Command Initiated	Command Priority : 8	Large group in Conference Room with equipment. Setting to lower setpoint	53	0	55.00
Validation Profile Changed	Validation Profile was changed by User from Disabled to Enabled				
Object Edited	Validation Profile was changed by User from Disabled to Enabled				
Command Initiated	Command Priority : 8		55	0	60.00

Consider adding the “User” column and saving as a Report Definition. This way, the customer will have a Validation Report. If it is added to the Related Items pane, it can be run against selected points as needed.

Validation and Alarms

If an object with a Validation Profile triggers an alarm, acknowledging and resetting the alarm BOTH require validation credentials.

If multiple alarms have been selected in the Event List, the user will be prompted for credentials matching the most stringent validation profile of the group.



Disabling Validation

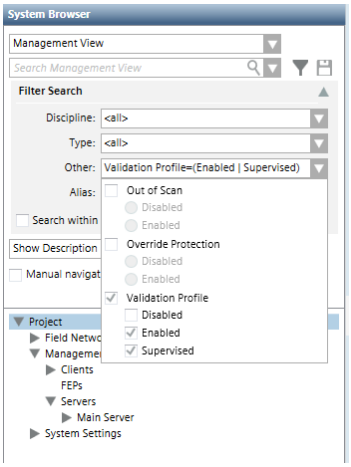
To disable Validation for a Validated object, select the object in the System Browser, toggle Engineering Mode, and select the Object Configurator tab. Use the Validation drop-down to change the "Validation profile" to "Disabled".

NOTE: Disabling Validation is considered a change to the object and therefore requires Validation credentials.

System Browser Filtering

To help locate Validated objects in the System Browser, the Filter function has been enhanced.

The "Other" drop-down selector provides the ability to multi-select Validation types. After making the selection, be sure to click the [Search] button (hidden by the drop-down).



Long Term Storage

Overview and Concept

Previously, the System Manager Console was used to create a single History Database (HDB), which was used for storing historical information for a project. When that HDB would become almost full, the oldest data would be deleted to make room for new data.

Of course, many customers do not want to lose any historical data. To facilitate the archival of older data, Desigo CC has implemented a strategy of Long Term Storage (LTS).

The Desigo CC Long Term Storage solution incorporates the following key components:

Slices
A "slice" is the term used to refer to a chunk of historical data. Slices can be defined by size or time. For example, a slice could be limited to 10GB or one year, whichever comes first. Slices are conceptually drawn as buckets or boxes holding data.

Current LTS Slice
The current LTS slice is the one actively receiving historical data.

Spare LTS Slice
There is always a spare LTS slice waiting for the current LTS slice to reach its limit (size or time).

Final LTS Slice
When the current LTS slice has reached its limit, it is set aside and marked as "final" meaning that it is read only.

Backups
Optionally, Final LTS slices can be backed up. This is desirable for disaster recovery and long-term data retrieval.

Visualizing How Long Term Storage Works

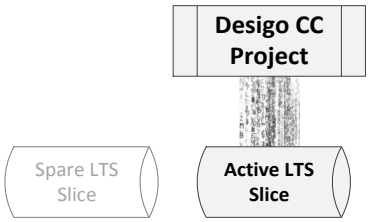
NOTE: The following illustrations are similar to those presented in the Desigo CC Online Help. Use the Online Help; it's really very good.

It is important to keep in mind that the entire process of Long Term Storage and the management of multiple slices all take place within the History Database.

Visualizing How Long Term Storage Works, *continued*

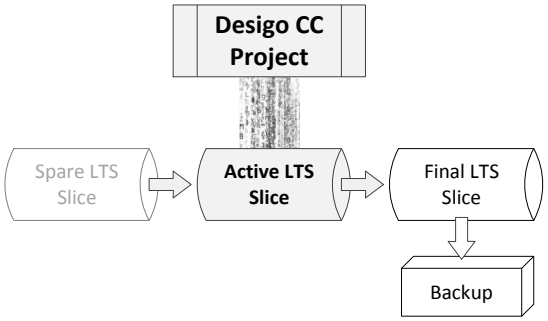
Normal Operation

During normal Desigo CC usage, historical data is stored in the Active LTS slice. This will continue until the slice's limit is reached. Limits can be defined by time duration (month, year, etc) or by file size. A spare LTS slice has been created and is waiting "in the wings".



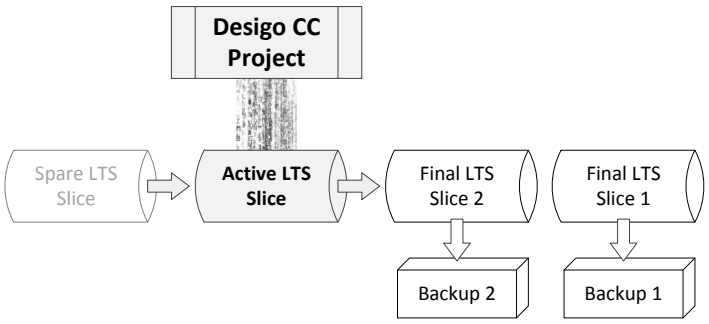
Current LTS Slice Limit Reached

When the Current LTS slice reaches its limit, it is closed for writing but can still be read and used for Log Viewer and Reports, for example. The spare LTS slice becomes the current LTS slice. A new spare is created. In Desigo CC terms, the closed LTS slice is called "Final". Optionally, a backup of the Final LTS can be created.



Multiple Final Slices

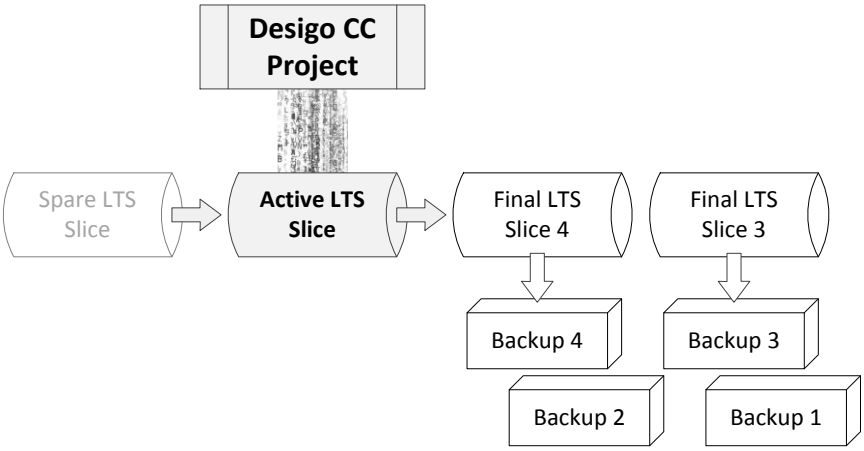
As time goes on, multiple slices will be created and finalized. Optionally, multiple backups are also created.



Visualizing How Long Term Storage Works, *continued*

Oldest Slices Deleted

A configuration setting in Desigo CC establishes how many Final LTS slices to retain. When that limit is reached, the oldest Final LTS slice is deleted. Its backup, if created, remains.

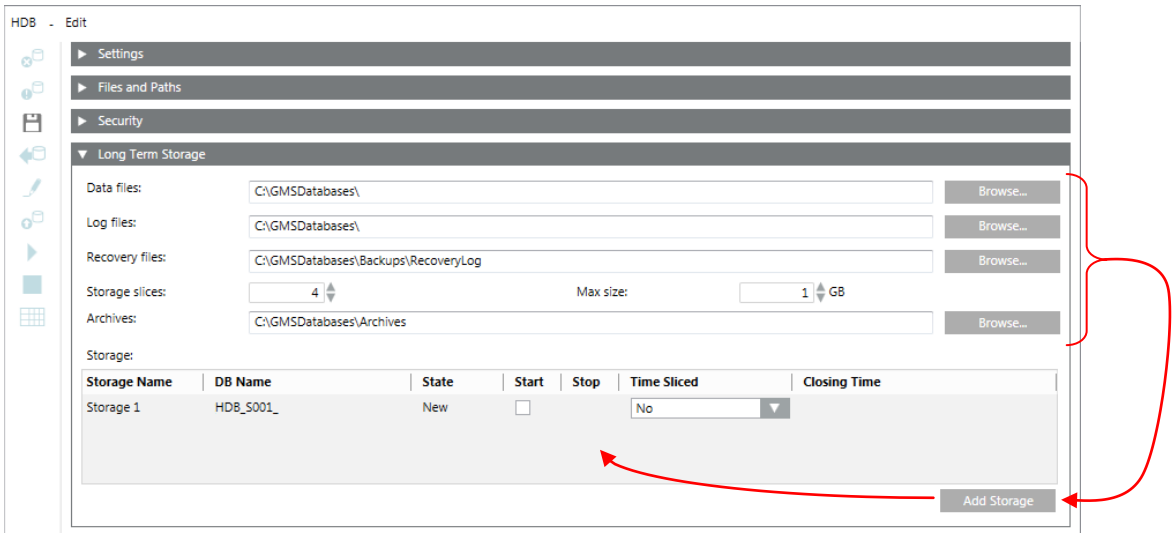


Backups are not readily available for reading. For example, in Log Viewer or Reports. To access them, the backups must be manually restored and "mounted".

Configuring LTS Step 1: SMC

The History Database (HDB) in System Management Console (SMC) must be configured to use Long Term Storage. Configuration can be completed during initial HDB creation or an existing HDB can have LTS added.

With the file location and slice information completed, click the [Add Storage] button to add the defined storage to the HDB.

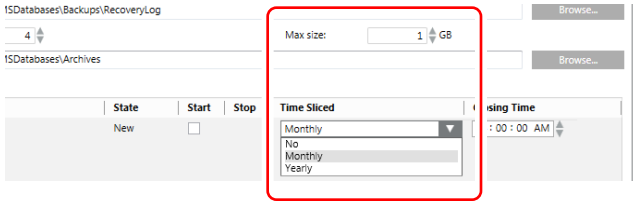


Configuring LTS Step 1: SMC, *continued*

Time Sliced

Once the Storage has been added to the HDB, it can be configured to be time-based. This is optional. Basing a LTS slice on a timeframe is primarily for the organizational grouping of historical data. It makes it easier, for example, to know which slice contains information about a particular month or year.

The following image shows a slice that will be based on monthly time periods. The Maximum size is also set at 1 Gigabytes. So this slice will never be larger than 1GB and not hold more than 1 month's data.

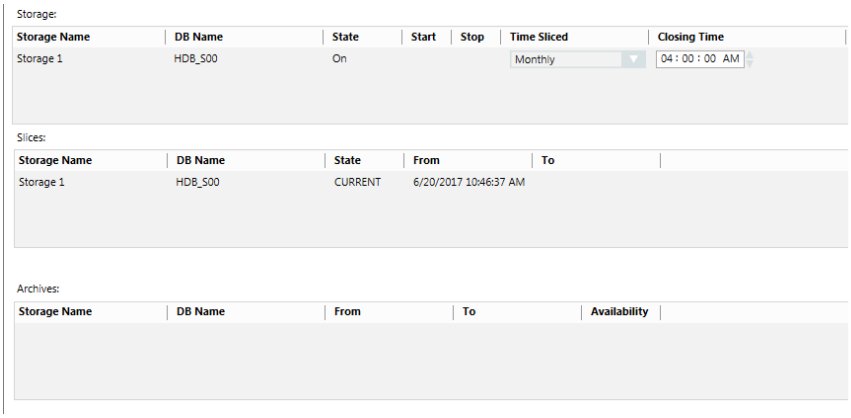


Start the Storage

Once the storage is created and configured, it must be started. This is done by checking the "Start" box and clicking the "Save" button in the button bar. This will initiate the creation of the Current LTS slice.

LTS Created

Once creation is completed, the storage is "On" and the Active LTS slice is ready to receive historical data. This is shown below.



Not Finished Yet

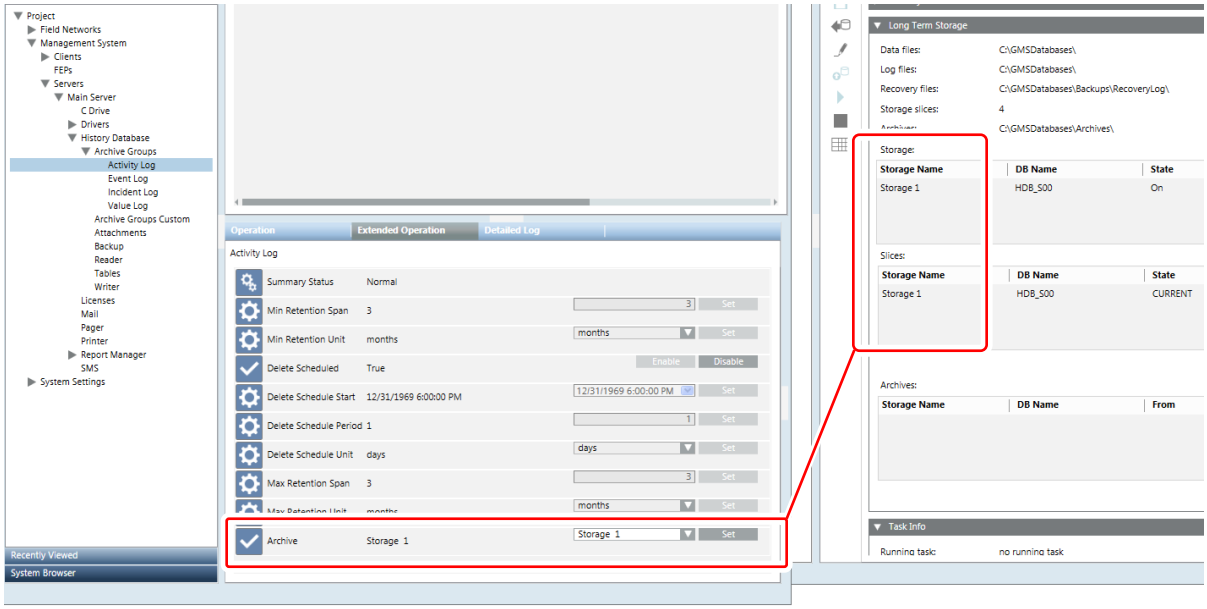
System Management Console is where Long Term Storage slices are created and configured. However, it is in Desigo CC where you set up which historical information is stored in which Storage.

Configuring LTS Step 2: Desigo CC

In Desigo CC, navigate to the “History Database” node of the Main Server. Expand the new “Archive Groups” node to expose the four historical data logs.

In the Extended Operation tab, set the “Archive” property to point to the Storage in the HDB. This is shown below. Note that all four Desigo CC Logs must be associated to the Storage in order for all of them to be retained in Long Term Storage.

It is possible to separate the four Desigo CC logs into four separate HDB Storages. If that is the case, create four Storages in SMC and associate each Desigo CC log to the appropriate Storage.



Customized Archiving

By default, Desigo CC provides four (4) Archive Group Logs. Each can be associated to a Storage in the System Management Console, as is shown above.

These default Logs are good for archiving general records such as activities, events, incidents, and value changes. However, there might be a situation in which it is desirable to have a Storage containing historical information about specific Desigo CC objects.

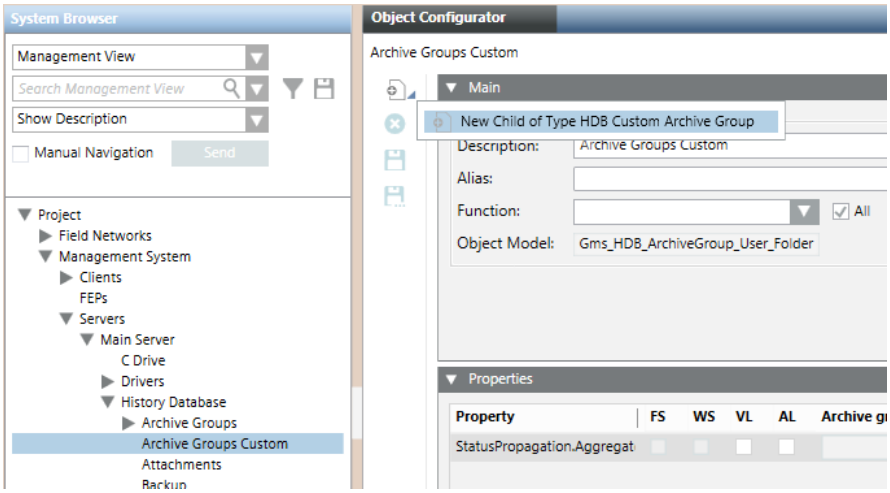
To do this:

1. Create a new Storage in SMC (shown above)
2. Create a Custom Archive Group in Desigo CC
3. Associate the Archive Group to the Storage (shown above)
4. Associate Desigo CC objects to the custom Archive Group

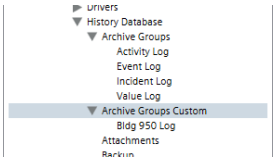
Creating Custom Archive Groups

In the System Browser, under the “Archive Groups” node is the “Archive Groups Custom” node. It is in this node that the custom Logs will be housed.

To create a new Archive Group, select the “Archive Group Custom” folder. In the Primary Pane, click the “New” button and select “New Child of Type HDB Custom Archive Group”. Desigo CC must be in Engineering Mode.



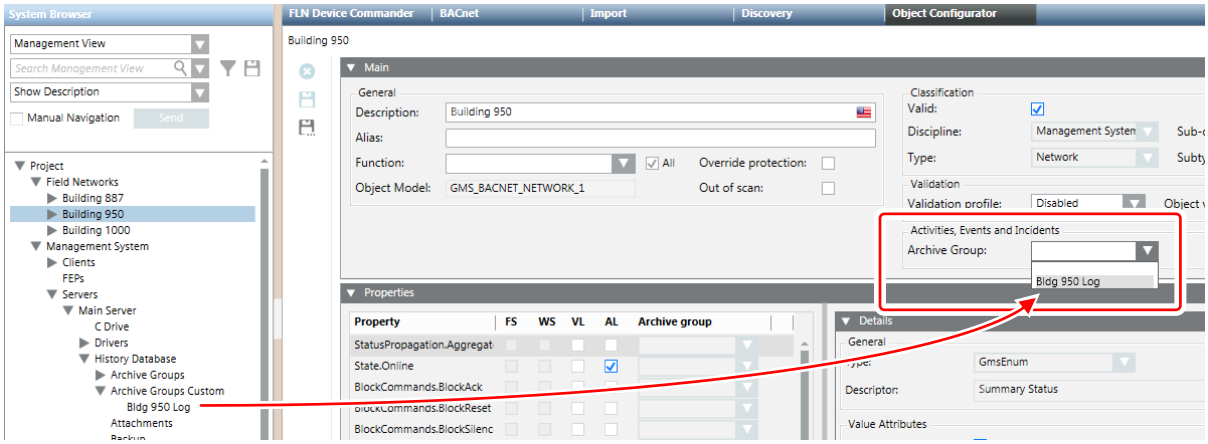
The new Custom Archive Group will appear in the System Browser. It is only possible to create new Archive Groups in the “Custom” folder.



Associate an Object to the Custom Archive Group

In the example provided here, all historical records pertaining to Building 950 should be written and archived into a dedicated LTS Storage. To facilitate this, the “Building 950” network has been selected in the System Browser. The Object Configurator tab has been selected in Engineering Mode. On the far right of the “Main” section, use the drop-down selector to pick the desired Custom Archive Group. Notice in the following image that only custom Archive Groups are listed.

NOTE: The Custom Archive Group must be associated to a Storage in the System Management Console. That step was skipped here because it was illustrated previously.



Licensing

The standard Desigo CC license supports a single Long Term Storage group. Additional groups must be individually licensed.

Discovery Enhancements

Discovery Process Changes

The Desigo CC Discovery engine has been completely redesigned from the ground up. The new approach is designed to provide more control for the Technician performing discovery and import functions. The enhancements are the result of feedback from the Field pertaining to the following items:

- Once the discovery process was started, it could not be safely stopped.
- Discovery automatically imported every field panel point and TEC; this was not always desired.
- If a Discovery filter was entered incorrectly, it was possible that Desigo CC would “discover the world”. When combined with the first two bullets, that’s a very bad thing.

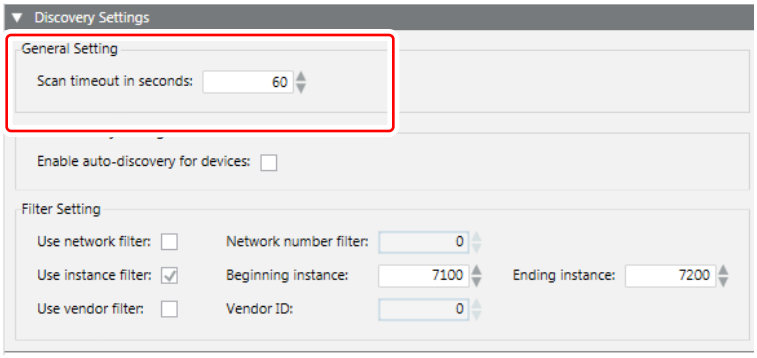
To address these things, the following changes were implemented:

- A [Cancel] button to safely stop the discovery process.
- Initially, only devices are discovered and reported. From there, the Technician can decide whether to import the device or not and optionally which points to import.
- Because Desigo CC initially only returns a list of discovered devices, any mistakes can be corrected and a new discovery initiated.

Discovery Settings

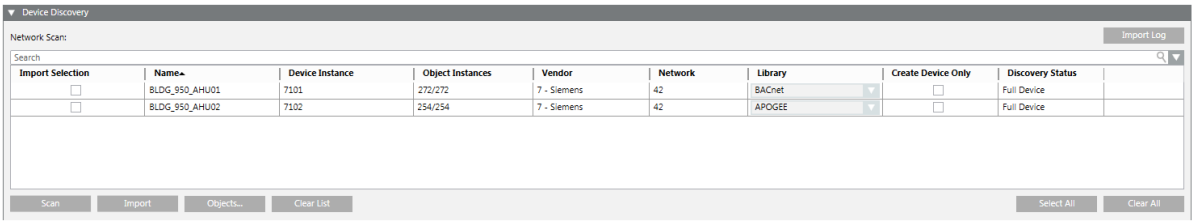
Configuring the Discovery settings is unchanged from previous versions. However, it is now possible to limit the amount of time the driver spends on the Discovery process.

In the “General Settings” section, enter the discovery timeout in seconds. Be sure to provide enough time given the network’s speed and load. If, during the discovery process, all the devices are discovered before the timeout, the discovery can be safely stopped. So there is no harm in using a longer time than might be necessary.



Network Scan

With the Discovery Settings set, click the [Scan] button in the Device Discovery section. Desigo CC broadcasts a BACnet WHO-IS and returns a list of replying devices matching the discovery filter(s).



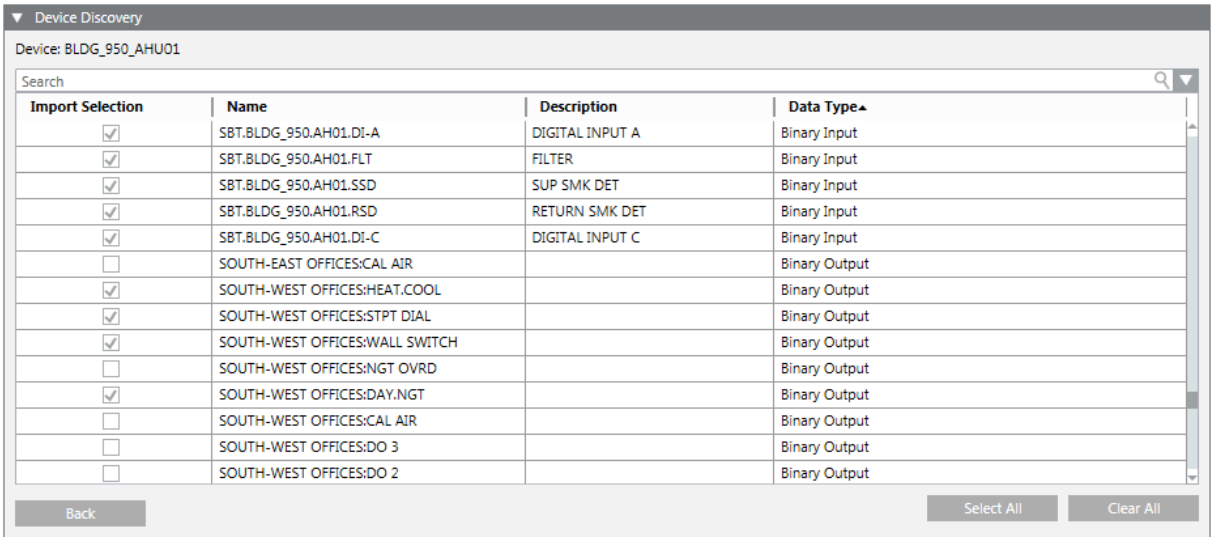
Selective Importing

It is possible that only a subset of objects is desired from a device. If this is the case, select one of the devices and click the [Objects…] button to view a list of discovered objects within the device. By default, all objects are selected.

To Select all objects, either do nothing or click the [Select All] button. To deselect all objects, click the [Clear All] button. From there, individual objects can be selected.

Notice in the following image that the field panel has TEC subpoints. Only those subpoints on the short list are selected by default.

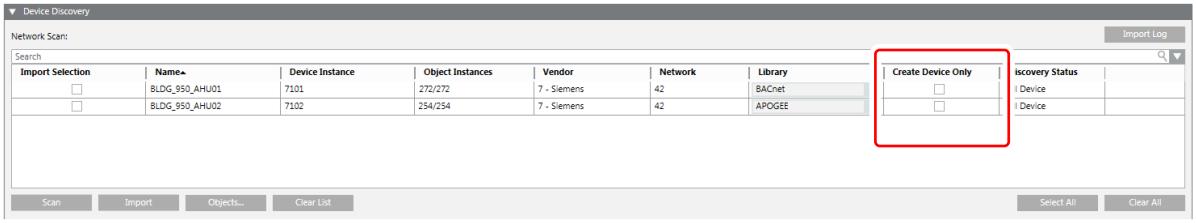
When finished selecting points to import, click the [Back] button.



Create Device Only

In some situations, it is desired to only import the device. For example, to merely monitor the device's connection or power status. If this is the case, check the box in the "Create Device Only" column prior to clicking the [Import] button.

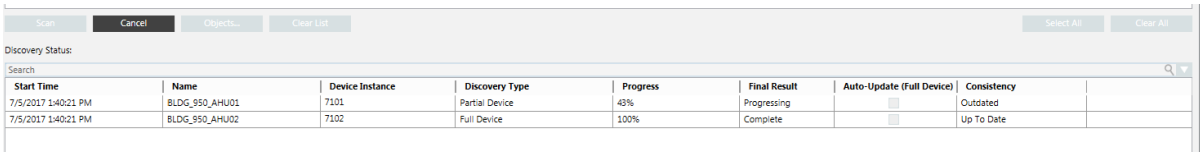
NOTE: Even if only creating the device, it is still necessary to check the "Import Selection" box in the first column.



Discovery Status

When the [Import] button is clicked, the driver initiates the process of importing all the points, only selected points, or creating the device only. The process can be monitored in the "Progress" column.

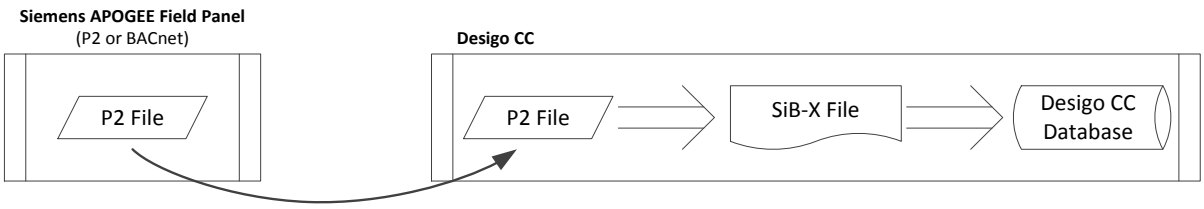
Notice in the following image that the [Import] button changes to [Cancel] in case the process must be canceled.



Almost Ten Times Faster

As mentioned previously, the entire Desigo CC discovery engine has been rebuilt. Benchmarks performed on a variety of network sizes show the new discovery process to be almost ten times faster than previous versions.

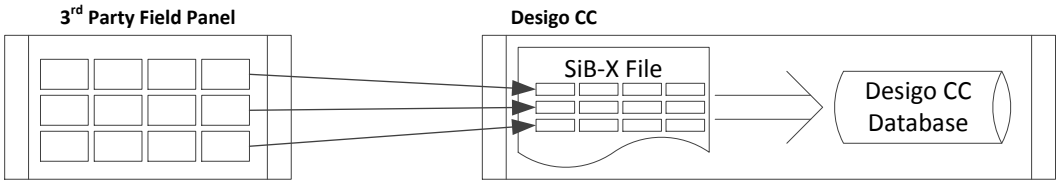
Siemens APOGEE Field Panels
Because APOGEE field panels all contain a P2 file (even the BACnet panels), Desigo CC uploads this file, uses it to create a SiB-X file, and imports the SiB-X file. In this way, only one file transfer is required and all the work is performed at the workstation. A visual representation of the process is below.



Almost Ten Times Faster, *continued*

Non-Siemens Field Panels

Because third party devices do not have P2 files, Desigo CC reads all the objects and uses them to create the SiB-X file. Once all the objects are read and the SiB-X file completed, it is imported into the database. A visual representation of the process is below.



Subsystem Enhancements

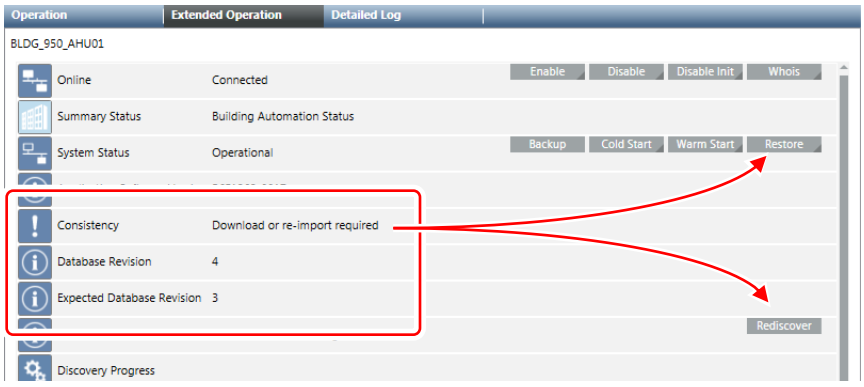
Database Revision Tracking

In previous revisions, it was possible that changes could be made to a field panel database after Desigo CC discovered or imported that panel. For example, changes made to the database via MMI or LaunchPad. This would create an inconsistency between what Desigo CC thought was in the database versus what was actually in the database.

Starting with MP3.0, when Desigo CC initially discovers or imports a field panel, the “Database Revision” property is set to one (1). This is not meant to indicate that the field panel is brand new; it is merely a way of saying, “this is the initial state in which Desigo CC was made aware of this database.”

From that point forward, Desigo CC will monitor the database for changes. If a change is detected, the “Database Revision” is incremented. If the new revision number does not match the “Expected Database Revision” then Desigo CC presents a Status alarm.

Information about the “Database Revision” can be found in the Extended Operation tab, as shown below.



The only way to clear the alarm is to rediscover the field panel or push Desigo CC’s version of the database to the panel, Either way will resolve the inconsistencies. The following image shows the result of a rediscovery, which incremented the “Expected Database Revision” to match the “Database Revision” in the panel.

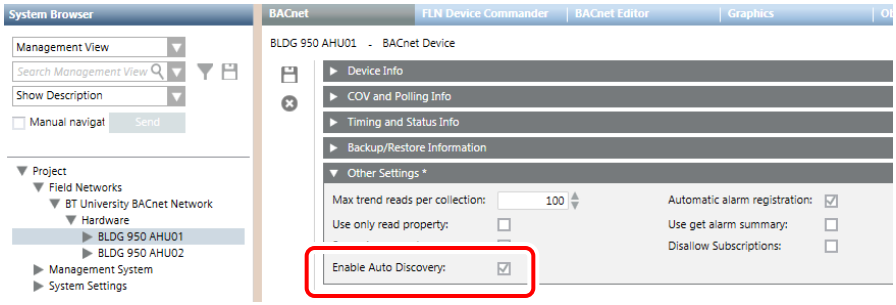
Database Revision Tracking, *continued*

Automatic Discovery

Desigo CC can automatically perform a rediscovery and database backup when it detects a change to the field panel's revision number.

This feature is disabled by default because not all customers want automatic rediscovery. To enable it:

1. Select the Field Panel in the System Browser.
2. Toggle Desigo CC into Engineering Mode.
3. Select the BACnet tab.
4. Expand the "Other Settings" section.
5. Check the box for "Enable Auto Discovery".



APOGEE Cross Trunk

Desigo CC MP3.0 brings Cross Trunk to APOGEE networks.

Cross Trunk enables an APOGEE P2 panel to reference BACnet points or P2 points that are on a different Building Level Network (BLN). Using Cross Trunk in Desigo CC is as simple as adding a reference to a point on another BLN, or a BACnet location. Cross Trunk supports Front End Processor network connections to network field panels.

Cross Trunk can be used in the following ways:

- References within the PPCL Editor
- Trigger points in Trends
- Command points in Zones of the Equipment Scheduler (EQS)

General Guidelines
Some general guidelines for using Cross Trunk include:

- Cross Trunk is not intended for real-time control; therefore avoid Cross Trunk references in commands such as PPCL LOOP statements.
- Because commands and COVs are sent once per second, if multiple commands per second are attempted, only the last command is sent. Likewise, with multiple COVs, only the last COV is sent.
- Cross Trunk relies on established communication between Desigo CC and the field networks. References to other BLNs will fail if communication is lost.

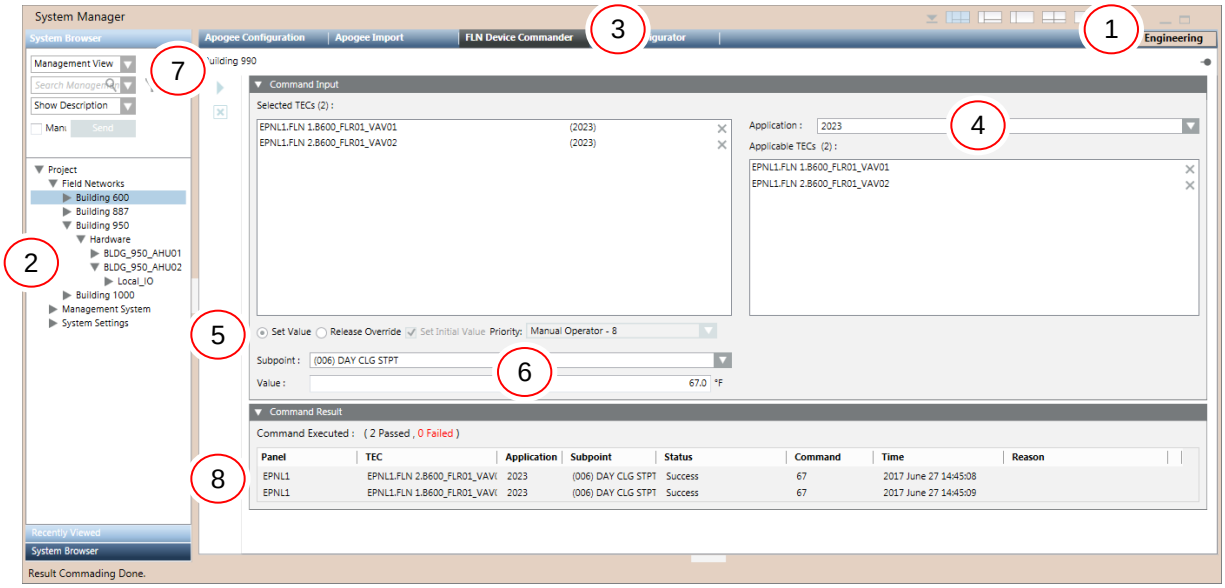
FLN Enhancements

FLN Device Commander

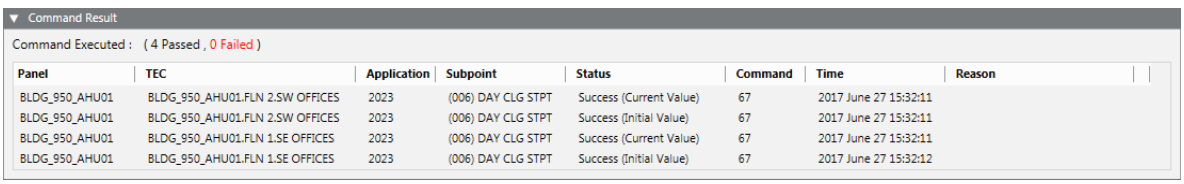
Desigo CC MP3.0 introduces the FLN Device Commander. With this new functionality, it is now possible to send the same command to hundreds of TECs simultaneously.

To use the FLN Device Commander:

1. Toggle Desigo CC into Engineering Mode.
2. In the System Browser, select a network, field panel, or FLN.
3. In the Primary Pane, select the FLN Device Commander tab.
4. Use the drop-down pick list to select the TEC application of the devices to command.
5. Select whether to set the value or release an override
6. Use the drop-down to choose the subpoint and set the value.
7. Click the “Execute Command” button in the button bar.
8. The results will be listed in the “Command Result” section.



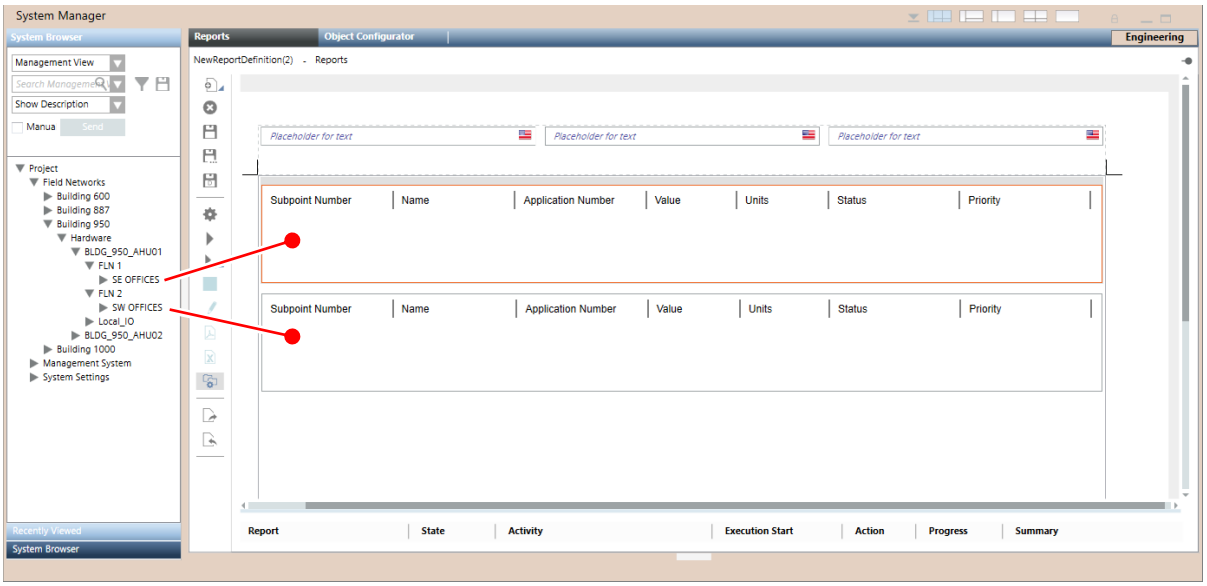
NOTE:
Proprietary P1 TECs networked to an APOGEE P2 field panel will display one Result line per TEC. However, a P1 TEC networked to a BACnet field panel will show two Result lines per TEC. One line reports the setting of the Current Value and one for the Initial Value.



Create a TEC Subpoint Report

When a TEC is dragged onto a Report Definition, a TEC Subpoint Block is automatically created and added to the report. The block contains the following columns by default: Subpoint Number, Name, Application Number, Value, Units, Status, and Priority.

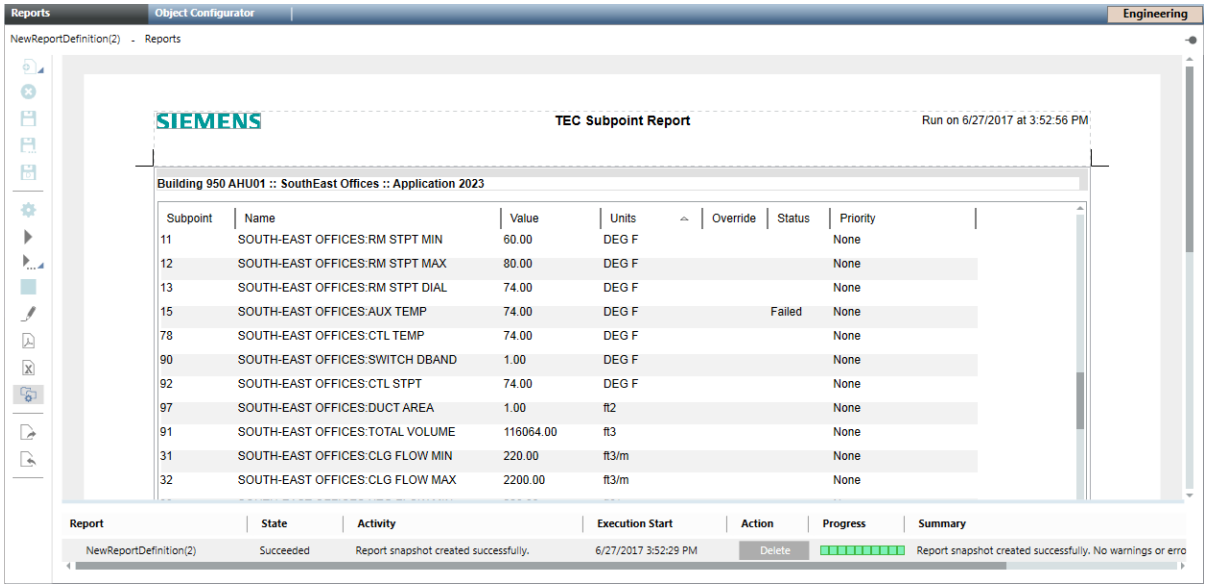
Because the Desigo CC Report application can support multiple data blocks, it is possible to create reports containing multiple TECs. This is shown here.



With the basis of a TEC Subpoint Report established, consider the following:

- If adding multiple TECs, add a Text Block to serve as a title for each TEC.
- The Application number is not really needed in the Data Block since it will be identical for every subpoint; consider adding it to the Title for each TEC. This will save horizontal space.
- Add a logo, report title, and the date it was run.
- Put it in the Related Items pane so that with a TEC selected in the System Browser, the report can be run to quickly view the status of its subpoints.

Refer to the following image for examples of the above items.



WARNING:
Desigo CC does not store current values of TEC subpoints. When the report is run or executed, Desigo CC queries the field panels for all subpoints of all the TECs in the report. Something to think about before creating a report with dozens of TECs.

Scripting

Overview

Market Package 3.0 introduces Scripting, which allows users to create configurable programs that customize or extend the behavior of their system. Based on the JavaScript platform, there is virtually no limit to the extent to which scripts could be implemented. One such use would be to monitor system statuses to execute automatic decisions; in this way, Scripting provides an advanced Reaction Processor that is many times more flexible and powerful.

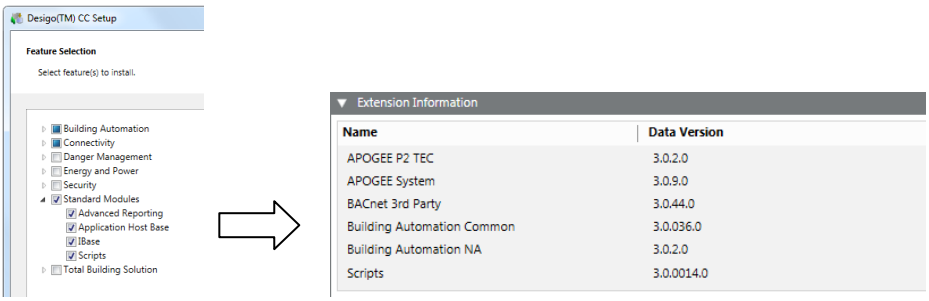
Scripts interact with the Desigo CC system through commands that access system objects, retrieve properties, and subscribe to value changes. When necessary, Scripts can write modifications. Additionally, Scripts can interact with the host system's file system to access, read, and modify files.

The topic of composing scripts is beyond the scope of this document. This document will endeavor to show how to access the Scripting application, enable/disable scripts, create Virtual Objects, and other topics related to the Scripting application. Refer to Online Help for Script creation.

Scripting is an Option

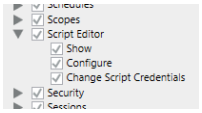
The Scripting function is a default feature of the Standard Feature Set. If the customer has purchased a Compact license, Scripting cannot be added.

When installing Desigo CC, make sure to expand the "Standard Modules" folder and verify the "Scripts" option is checked. When creating the project in the System Management Console, make sure the "Scripts" extension module is added to the project. The Data Version might differ from shown below.



Application Rights

Whether a Security Group can interact with the Scripting application is controlled in the Application Rights section of the Security Group's configuration.

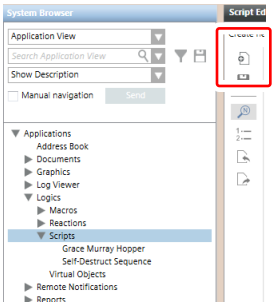


Due to the nature of some scripts, the security concerning which users can access them, start them, or stop them should be taken very seriously.

Creating Folders for Organization

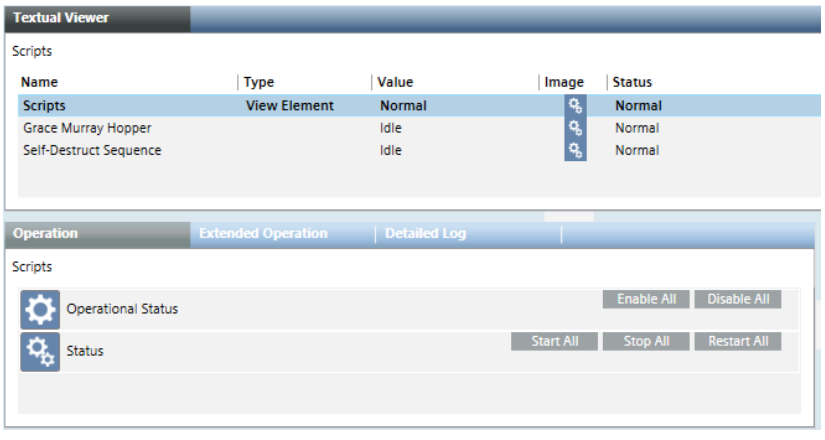
It is always a good idea to create folders to help organize system objects. It is perceivable that there could be multiple scripts being used for various reasons. It will be easier to find the scripts if they are stored in descriptive folders.

Creating folders can only be done when the main Scripts System Browser object is selected. Click the "New Scripts Folder" button at the top of the button bar.



Starting or Stopping Scripts.

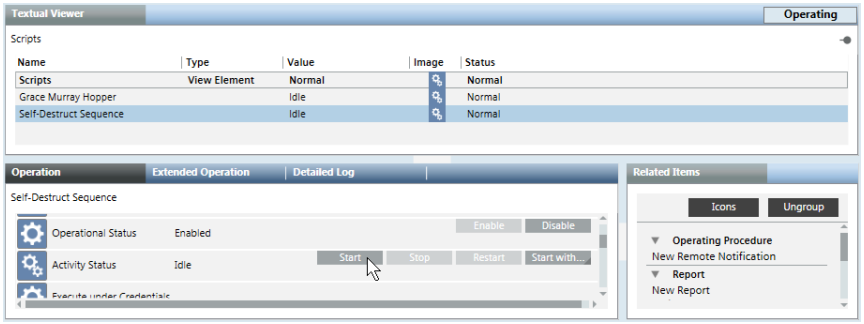
Starting or Stopping All Scripts
It is possible to take actions that affect all scripts in the system or in a designated folder. In the System Browser, select the main "Scripts" object or a folder containing scripts. The Operation tab will show buttons to Enable All, Disable All, Start All, Stop All, and Restart All.



Be aware that these buttons will affect every script in the system or selected folder and should be used only when the overall affect is understood.

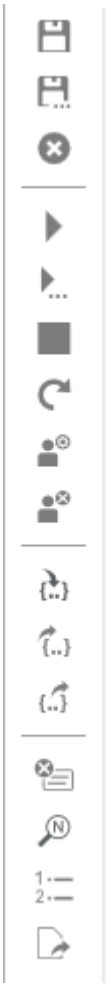
Starting or Stopping Individual Scripts

To affect a single script, select it specifically either in the System Browser or Textual Viewer.



Scripts Editor Button Bar

The following is an overview of the buttons of the Scripts Button Bar. Some will be discussed in detail.



	Save	
	Save As…	
	Delete	
	Run	
	Run with Parameter	Enter an initial value
	Stop	
	Restart	
	Set Execution Credentials	Used to set or clear Username and Password protection for the execution of the script.
	Clear Execution Credentials	
	Step Into	These three buttons are good for troubleshooting the Script and stepping through it line-by-line. Use “Step Into” to progress the script, “Step Over” to not execute the current line, and “Step Out” to exit Step Mode and complete execution of the script.
	Step Over	
	Step Out	
	Clear Console	
	Collapse Names	
	Display Line Numbers	
	Export	

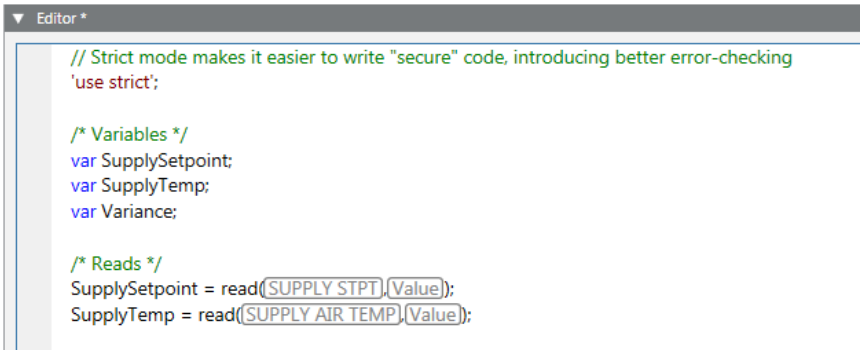
Writing a script

This section will step through a very simple script. This script will read the Setpoint, the Room Temp, and calculate the variance.

For a complete list of Script Syntax and how to use various commands and variables, refer to the online Help. Use the following path:

Reference ▸ Engineering & Operating Reference ▸ Management Platform Reference ▸ Scripts Reference ▸ Scripts Syntax Reference

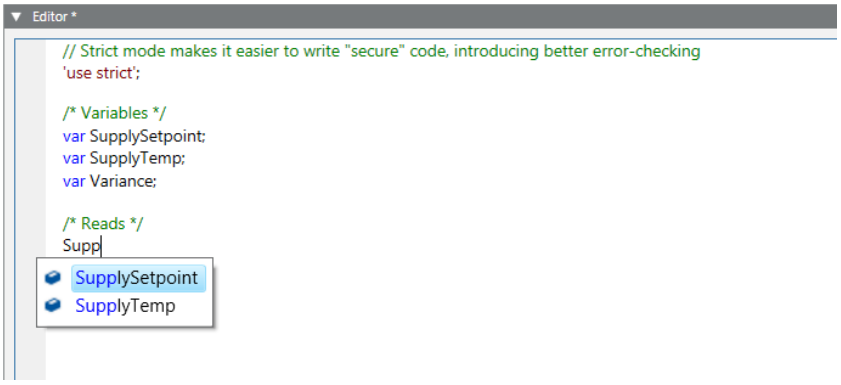
The first requirements are to read the values and store them in variables. This is shown in the following image. The comment lines are designed to help show the different sections of the script.



Type-Ahead Features

Let's step back and see how the above image was created. The Desigo CC Scripting Engine provides type-ahead assistance to help with spelling, syntax, and proper command usage.

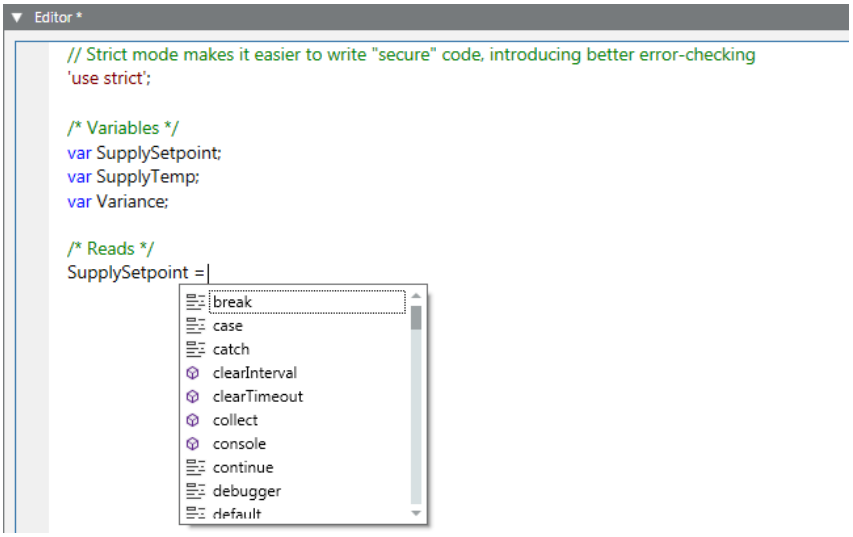
Variables
Once variables are defined, they will be provided as type-ahead options. To accept the top-most a type-ahead option, press the [Enter] key on the keyboard. To select a different option, either continue typing until the desired option is on top or use the down arrow key to move the selection.



Type-Ahead Features, *continued*

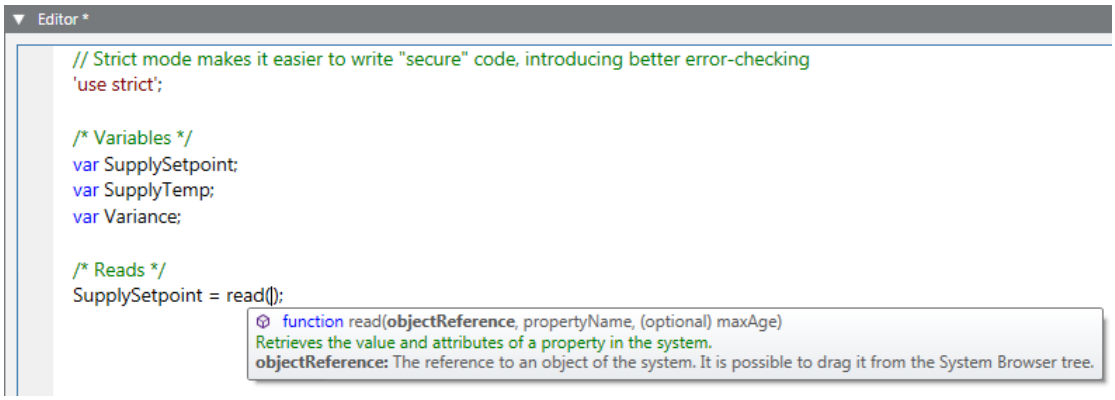
Commands

When the Scripting Engine expects a command to be entered (per script syntax), it will present a complete list of all commands matching the situation. Not all commands match all situations; the list will vary based on the situation.



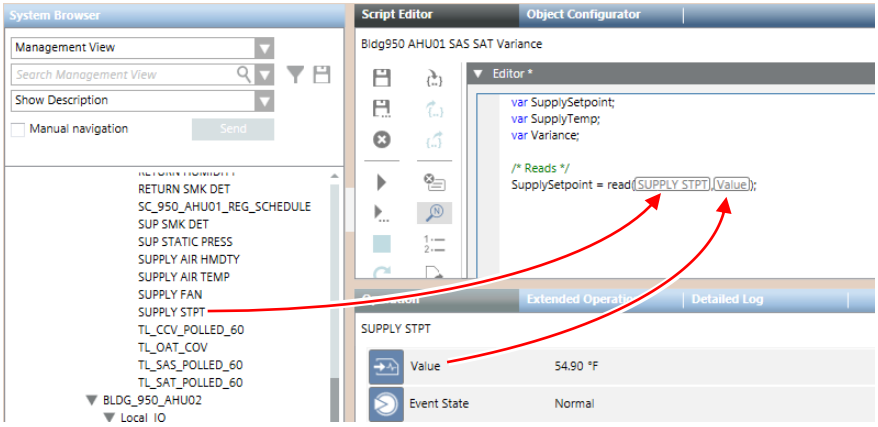
Command Assistance

When a command is being used, a pop-up window will provide assistance. The top line shows how to structure the command with the current parameter in bold. The second line explains what the command does. The third line explains the parameter that is bold in the first line.



Drag and Drop Objects and Properties

System objects can be dragged from the System Browser and dropped directly into the Editor space. If object properties are being used, they can be dragged out of the Operation or Extended Operation tabs.



If the “Expand Names” option is enabled, the complete System Name is displayed. Otherwise, the point will reflect the name as shown in the System Browser. Changing the System Browser between “Show Name” and “Show Description” will be reflected in the Editor.

When using the “Read” command, it is necessary to specify the point and which property to read. The syntax of the command as being used here is:

```
Read(Object,Property);
```

Drag the Property from the Operation or Extended Operation tab.

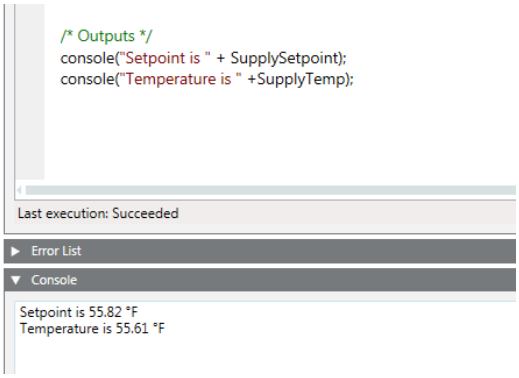
HINT: Once you have dragged the point into the script, click it and its properties will populate the Operation / Extended Operation tab. From there, you can drag the desired property.

Output to the Console

The Console provides an opportunity to check the script. In this case, the console will be used to ensure the proper values are being read and that the variance is being calculated correctly.

To output information to the Console, use the following command:

Console(*DesiredOutput*);

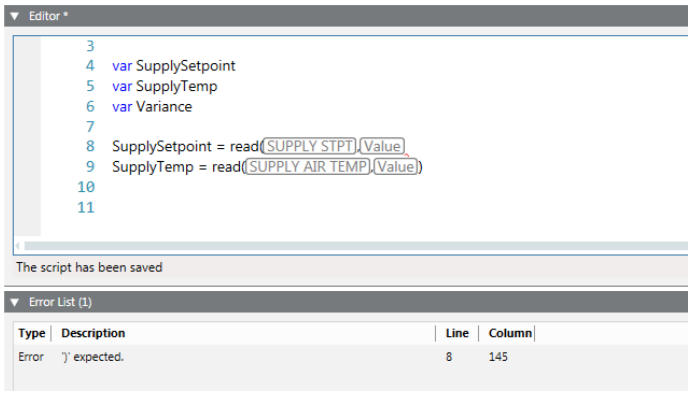


Notice the combination of the quotations and variables. This makes the output a little more legible than numeric output alone.

Error List

As you edit the script, the script editor is continuously evaluating the script for syntax errors. Any errors are automatically reported in the "Error List" below the Editor.

The type of error will be presented as either a "Warning" or an "Error". A description of the error will be provided along with the line and column. When using the Error List, it is a good idea to turn on the line numbers. In the following image, notice the lack of a right-parenthesis at the end of line 8.



Double-clicking on the Error List line navigates to the location of the error.

Calculating the Variance

With the two points' values read into the script, it is time to perform the calculation that will provide the variance.

The calculation of the Variance will take place in a function. This allows the script to "call" the function and receive the calculated output in reply. The basic structure of a function is:

```
Function FunctionName()
{
Whatever activity takes place within the function
}
```

In order to use the function, it is necessary to "call" it. There are far too many situations and considerations when working with functions to address them here. For the purpose of this scenario, the "Variance" variable will execute the function and hold the result.

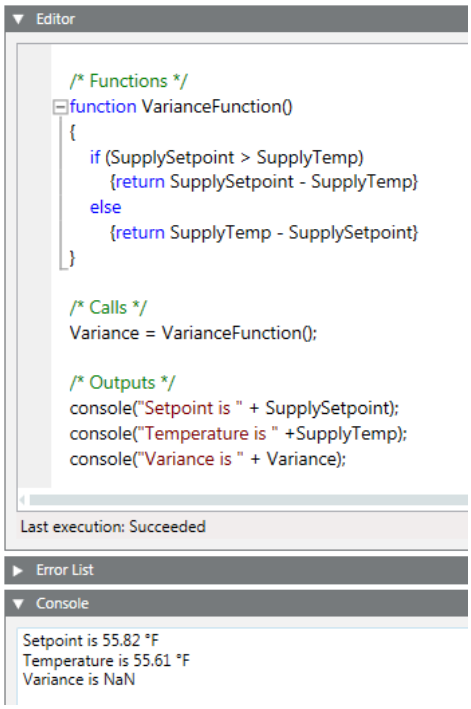
```
Variance = FunctionName();
```

IF THEN Statement

Because there is no way of knowing whether the Temperature is higher or lower than the Setpoint, an IF statement will be used to account for both situations. It will fundamentally look like this:

```
Function VarianceFunction()
{
If (SupplySetpoint > SupplyTemp)
      {SupplySetpoint – SupplyTemp}
else
      {SupplyTemp – SupplySetpoint}
}

Variance = VarianceFunction();
```



Unfortunately, this will not work because when the Scripting engine reads a Desigo CC object and value, it returns a character string of the property. Refer to the Console output to the left and notice the "ºF" in the output. It is not possible to perform math on a number containing the unit of measure.

Refer to the image to the left. The console shows "Variance is NaN" which means "Not a Number". This is accurate because ("55.82 ºF" – "55.61 ºF") really isn't a number. We are attempting to perform math on two character strings.

Before the math will work, the character strings must be converted to numbers.

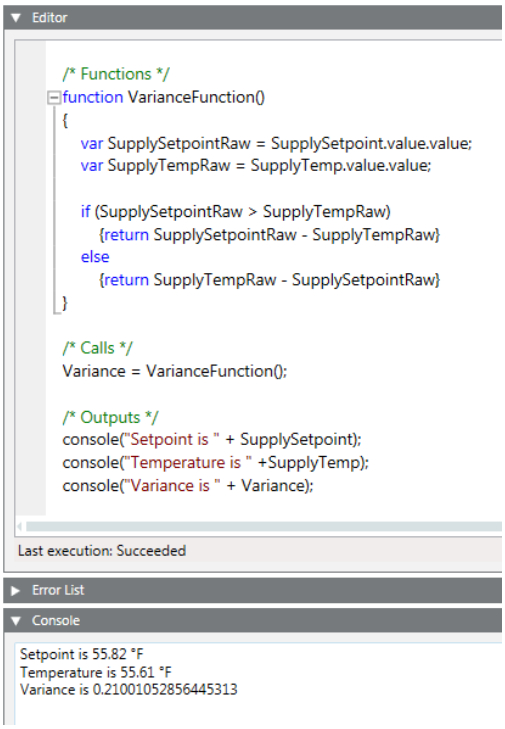
Convert a Character String to a Number

In order to convert the character string of the property Value into a number for the purpose of performing math, it is necessary to explicitly tell the Scripting engine that we want the raw value of the property.

Remember that the variables established at the beginning of the script each contain a property of the object. Within the function, we must 'convert' that property into a number.

Regardless of the property being used, the syntax is:

Var VariableName = PreviouslyDefinedVariable.value.value;



In essence, reference an established variable and create a new variable to hold the numeric version and then perform the math on the new variable. This step must be performed in the function rather than in the "/* Variables */" section because the point property must be read before it can be converted. With this, the function looks like the image to the left.

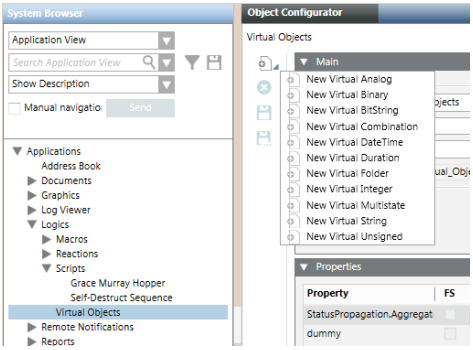
Notice that the first thing the function does is to convert the variables to raw numbers by using ".value.value". Then, the math is performed on the numeric variables.

The function is called by "Variance", which now holds a raw number as the function's output.

When the script is executed and sent to the console, Variance provides the result of the function.

Create a Virtual Point

Virtual Points make it possible for a script to store values that can be used by other Desigo CC applications. The virtual points are only stored in Desigo CC and are only accessible in Desigo CC.

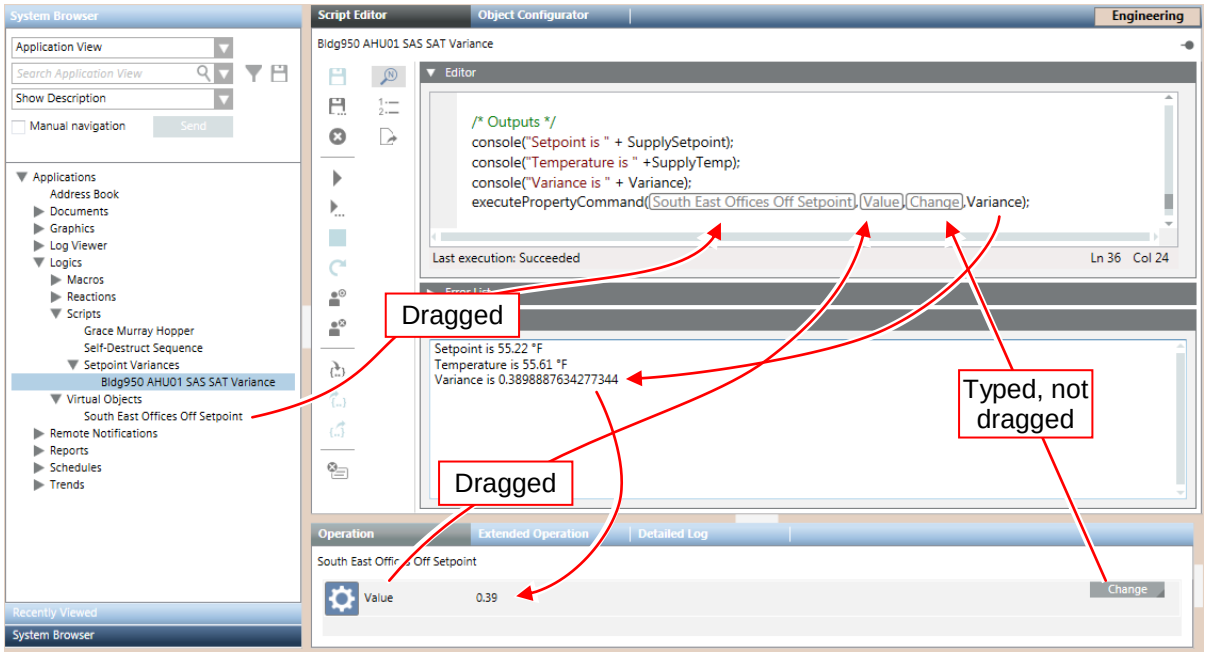


To create a new Virtual Point, select the "Virtual Objects" object in the System Browser, toggle into Engineering Mode, click the "New" button at the top of the Button Bar and select the appropriate point type.

No further configuration is necessary.

Writing to a System Point

With the Virtual Point created, the script can write the Variance to it. This is accomplished with the ExecutePropertyCommand command. This command can be used to perform various actions on an object's property. In this scenario, the intent is to write the value to the object.



Scrutinizing the above image, you can see that the format of the ExecutePropertyCommand command is:

ExecutePropertyCommand(OutputObject,Property,Action,Output)

- The OutputObject is dragged from the System Browser.
- The Property to write to is dragged from the Operation tab.
- The Action is typed and must match the text on the button correlating to the Property.
- The Output in this scenario is the variable "Variance".

When the script is executed, the value of the virtual point is updated.

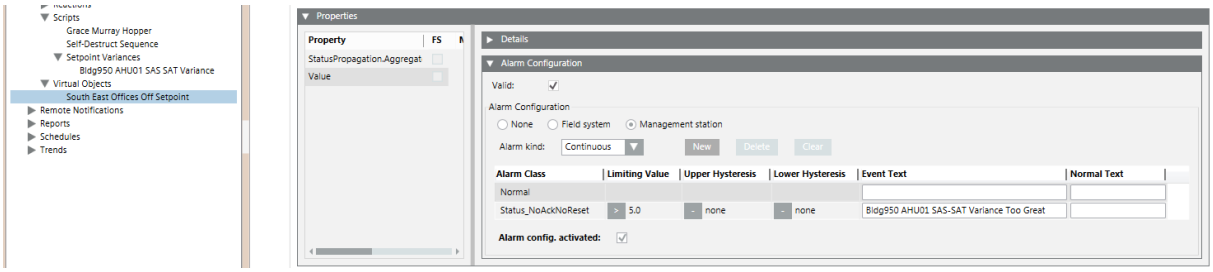
I can do that in PPCL

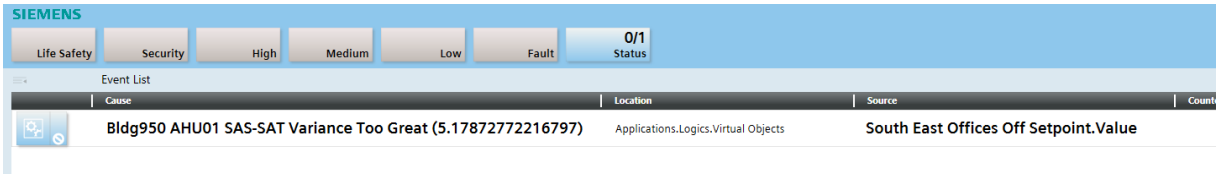
Do not be lulled into the belief that Scripting is redundant to what can be done in PPCL based on this example using points in a Siemens field panel. Desigo CC can integrate hundreds of various devices and dozens of protocols from several vendors; none of which support PPCL.

Now What?

The virtual point is now an active object in the System. As such, it can be used on Graphics, in Reports, Trended, and/or used in other Scripts.

Since this scenario was for the variance of SAT to SAS, it might be a good idea to alarm it. That can be done by configuring a Management Station Alarm for the virtual point. Because this is not new information, only a screen shot of the settings will be provided here.

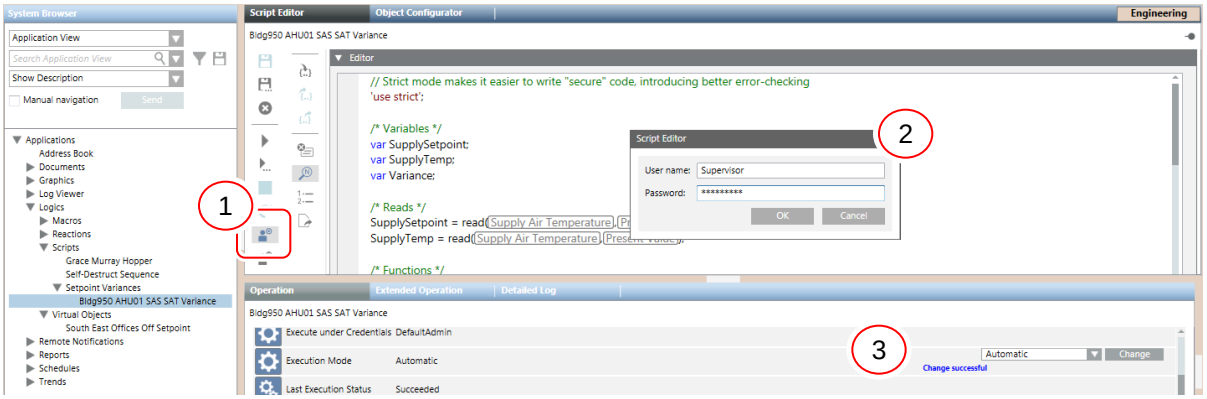




Setting a Script to Execute at System Start-up.

It is possible to configure a script to execute automatically when the system starts. To do this:

1. Click the “Set execution credentials” button in the Button Bar.
2. Enter a user’s credentials. This user must have permission to execute scripts.
3. Change the script’s “Execution Mode” property to “Automatic”. This step cannot be completed until Step 2 is completed.



Graphics

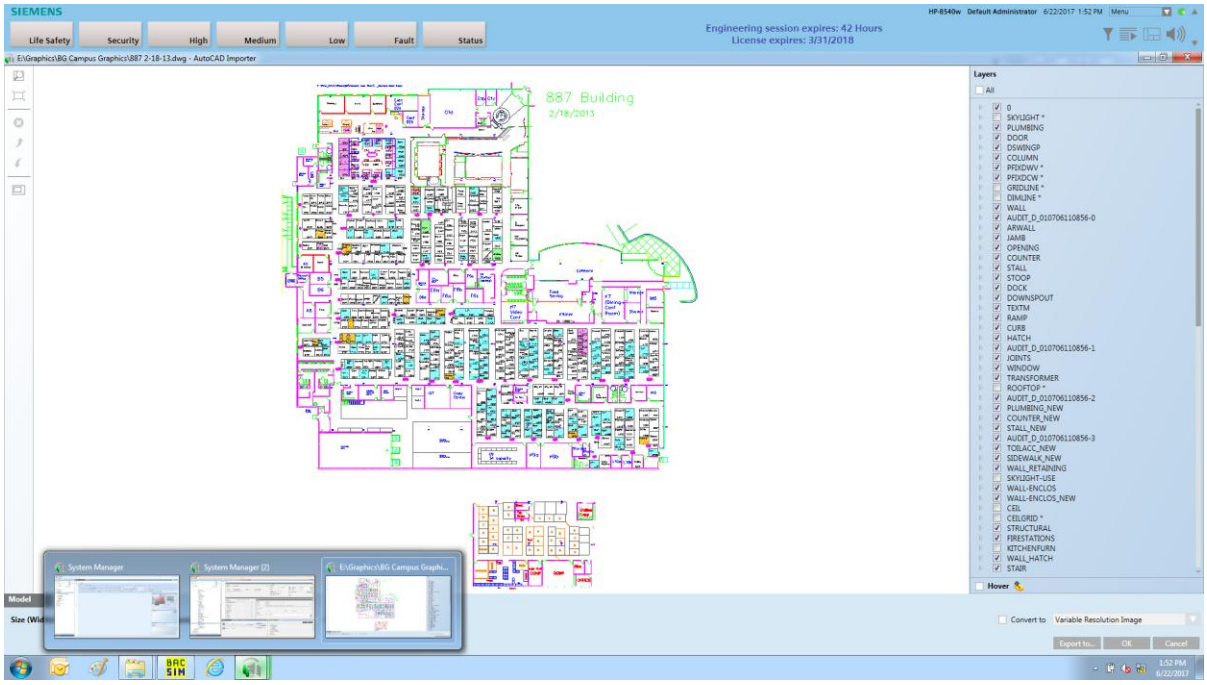
AutoCAD Importer Enhancements

Several enhancements have been implemented to improve the process of importing AutoCAD drawings.

NOTE: All following images are from the same AutoCAD drawing. This is specified to make it clear that there is no 'trickery' in the images.

Full Screen

The AutoCAD importer window is now an individual window rather than a static-sized dialog box. This means it can be maximized to occupy the entire size of the computer monitor. It is possible to use other System Manager windows while the AutoCAD Importer window is open *except the Graphics window that initiated the import*.



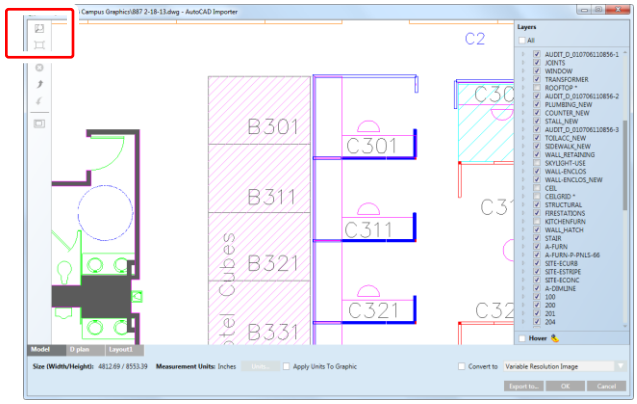
AutoCAD Importer Enhancements, *continued*

Zoomable

The AutoCAD Importer window can be zoomed to help identify which layers might be imported or skipped.

To Zoom:

- Scroll the wheel on the mouse forward to zoom in and backward to zoom out. There is no need to hold the [Ctrl] key.
- Press the [+] or [-] button on the keyboard.
- Click the “Zoom” button in the horizontal button bar and then draw a box around the desired area.



Selecting Blocks within Layers

In previous revisions of Desigo CC, AutoCAD layers were imported or skipped as entire units. Sometimes, however, there was a desire to import one aspect of a layer but not another. By expanding the layers on the right of the window, it is possible to deselect individual blocks of lines while leaving others selected.

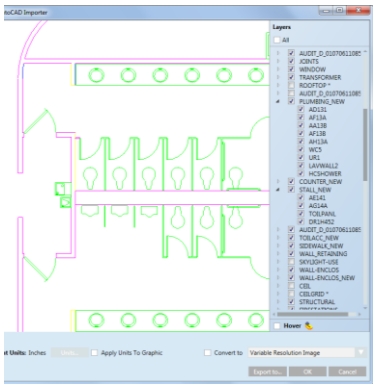


Image 1: Entire “Stall_New” layer selected.

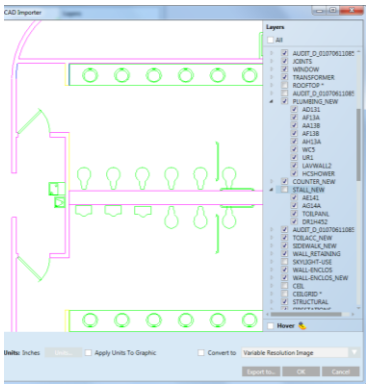


Image 2:Entire “Stall_New” layer deselected.

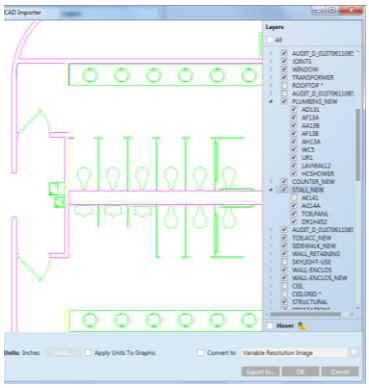


Image 3: Only the AE141 block of “Stall_New” deselected.

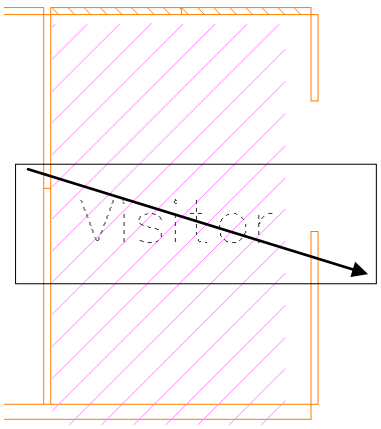
AutoCAD Importer Enhancements, *continued*

Selecting Individual Objects

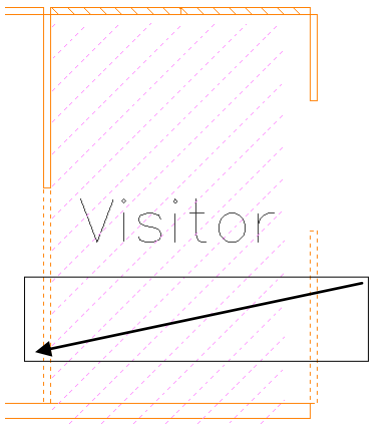
It is possible to select an object by clicking it. However, because the lines on an AutoCAD drawing are often very thin, it might be easier to draw boxes around the desired object.

When selecting objects in the AutoCAD drawing, pay attention to the direction in which you draw the box.

- Left-to-Right: Only select the object if the selection box completely envelopes the object.
- Right-to-Left: Select the entire object even if the selection box only partially covers the object.



Left to Right:
Only the word “Visitor” is selected.



Right-to-Left:
The hashing and both walls are selected.

When an object is selected, its lines change from solid to dashed. Selecting objects is cumulative. It is possible to select an object, navigate to another section of the drawing and select something else. They are both selected; selecting the second object does not deselect the first object.

Deselecting

To remove <u>all</u> current selections, press the [Esc] key on the keyboard.

Deleting Selected Objects

There are two methods for deleting an object from the AutoCAD drawing:

- Press the [Del] key on the keyboard.
- Click the “Delete Selection” button in the button bar.

It is important to keep in mind that you are merely removing it from the import and not manipulating the original source file.

WARNING
The Importer engine does not support individual undo. It is only possible to completely revert to the original drawing.

AutoCAD Importer Enhancements, *continued*

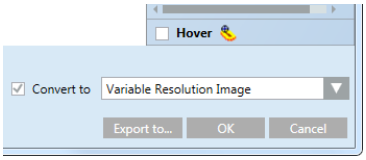
Export Modified AutoCAD Drawing

It is possible to export the modified AutoCAD drawing to a DWFx file format.

NOTE: The exported DWFx file cannot be reopened for additional editing.

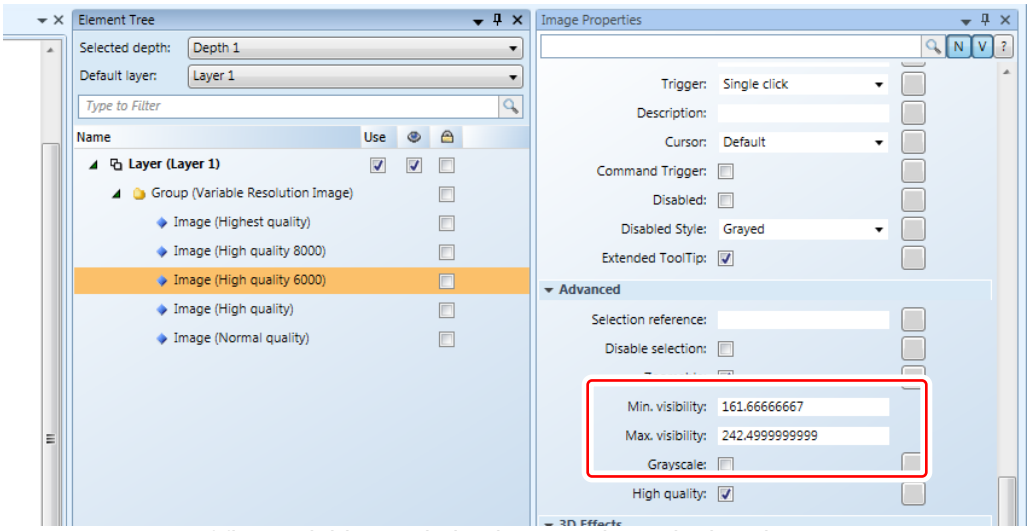
Variable Resolution Image

In previous versions of Desigo CC, there were three options for converting the AutoCAD drawing to a raster image. However, these options had trade-offs: one option provided better resolution at high zoom levels, one was clearer when zoomed out, and the third tried to split the difference. MP3.0 introduces “Variable Resolution Image”.



Variable Resolution ensures that the imported drawing maintains clarity at all zoom factors. To achieve this, it actually creates a group of 5 raster images, each optimized for specific zoom factors. By using Min/Max Zoom Visibility, when one raster image would start showing pixelization, it disappears and a better, clearer one appears.

The group can be exposed in the Element Tree. It is best to not manually mess with the group.



Group of five variable resolution images shown in the Element Tree.
Using Min/Max Visibility, the images only appear at their best resolution.

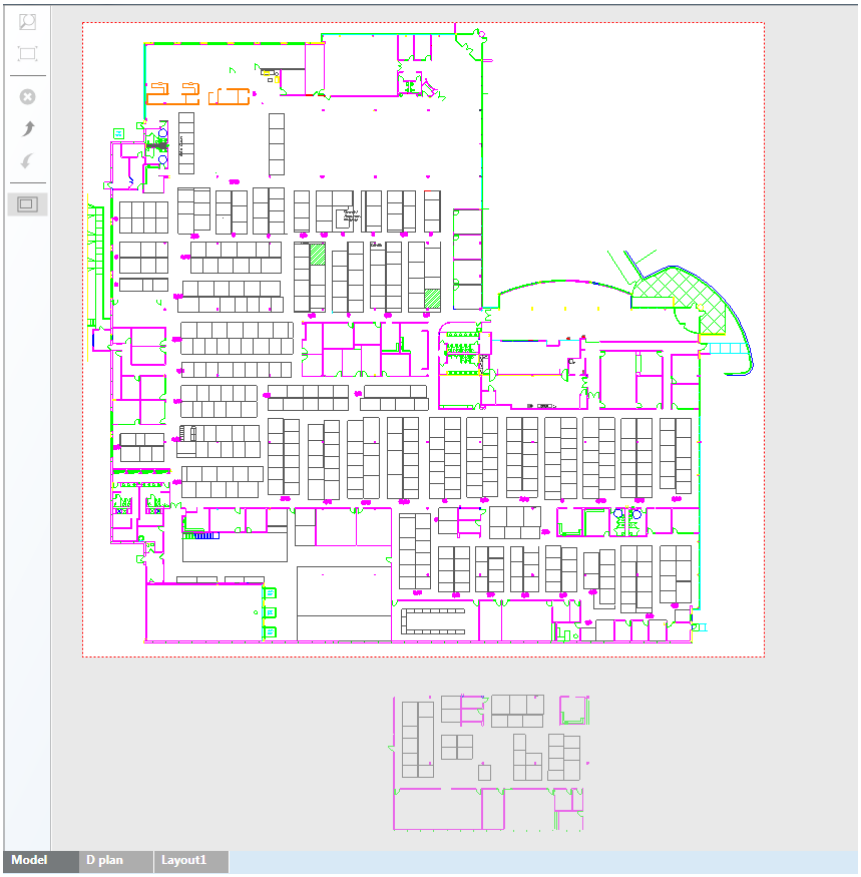
AutoCAD Importer Enhancements, *continued*

Cropping the Drawing

Sometimes, it is preferred to only import a section of the drawing. While deleting blocks can help refine it, cropping is the ultimate method for creating clean, straight edges.

To execute the crop, toggle into Cropping mode by clicking the Crop button bar button. Draw a rectangle around the area you wish to import. It does not matter in which corner you start the rectangle.

NOTE: This is the last thing you do before importing the drawing. Applying the Crop disables all other features. Clicking in the gray area around the rectangle or any of the button bars disables the crop.



Usage Tips

- Hold the [Space] bar on the keyboard to drag the AutoCAD drawing around within the window.

Command Control Objects

Market Package 3.0 introduces Command Control Objects. These are specially designed objects that allow a user to affect an object with a single click. As opposed to selecting the object, clicking [Command], entering the new value, and clicking [Send].

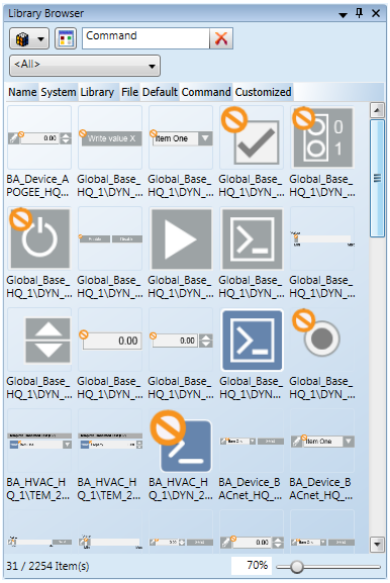
Seven types of Command Objects have been added: Dropdown, Numeric, Password, Rotator, Slider, Spin Button, and String. This document will explain their uses but will not delve into the creation of them all.

Stand-Alone versus Grouped Command Objects
There are two primary types of Command objects:

- **Stand-Alone**
  Think about a simple button. With one touch, the target object is affected. No other action or input is required.
- **Grouped**
  To avoid accidentally commanding an object or commanding to an incorrect value, the Grouped Command Object requires a "Send" button. This type of Command Object is best for sliders, rotators, and spin buttons.

Command Symbols

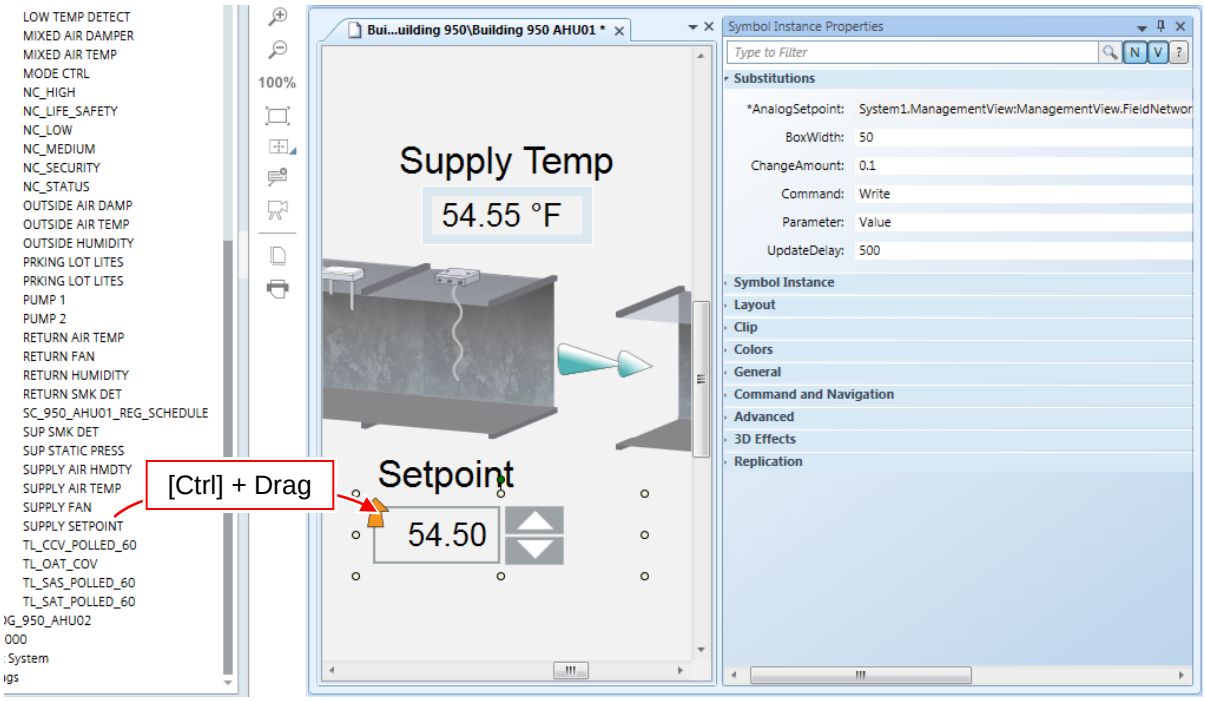
The Desigo CC Global Libraries contain multiple "canned" Command Objects. To locate the Command Objects, open the Library Browser, enter "Command" into the filter, and select <All>. This will list all Command Objects in all the libraries.



Preferably, functions have Command Objects associated to them by default. This is just like any other graphic symbol associated at the Function or Object Model level.

When this is the case, adding the Command symbol for a specific point is accomplished by holding the [Ctrl] key on the keyboard while dragging the point onto the graphic. This is shown in the following image.

Once added to the graphic, use the "Substitutions" section of the Symbol Properties window to adjust such things as the width of the box, the amount to change the value per click, and the amount of time to wait before issuing the command, in milliseconds.



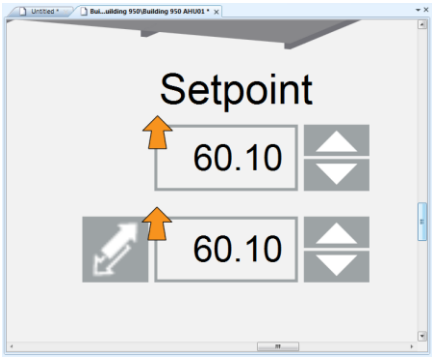
Command Symbols, *continued*

If the point does not have a Command Object associated to its Function, the default symbol will appear on the graphic. If this is the case, locate the desired Command Object symbol in the Library Browser, drag it onto the graphic, and "[Shift]+Drag" the point onto it to create the association. This is the same process for associating any Desigo CC object to any symbol.

Command Objects and Graphical Modes
In order to test the Command Object, the Graphics Editor must be in Runtime Mode. It is not possible to issue commands in Design or Test Mode.

Single-Click Command Objects

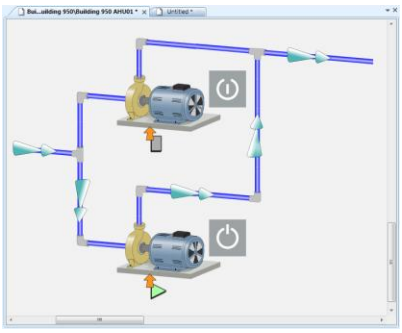
The above image shows a Command Object that will command the Supply Air Setpoint in 0.1 increments. However, it would be desirable to Release the point to automation control as well. Some Command Symbols have a "Release" button built in. The button on the left of the bottom symbol is a one-click Release command.



Single-Click Command Objects, *continued*

There are Command symbols for binary points as well. Here are two pumps, each can be manually turned on or off with a single click of their respective Command Object symbol.

Notice that the vertical dash moves up when the point is ON and is in the middle of the circle when the point is OFF.



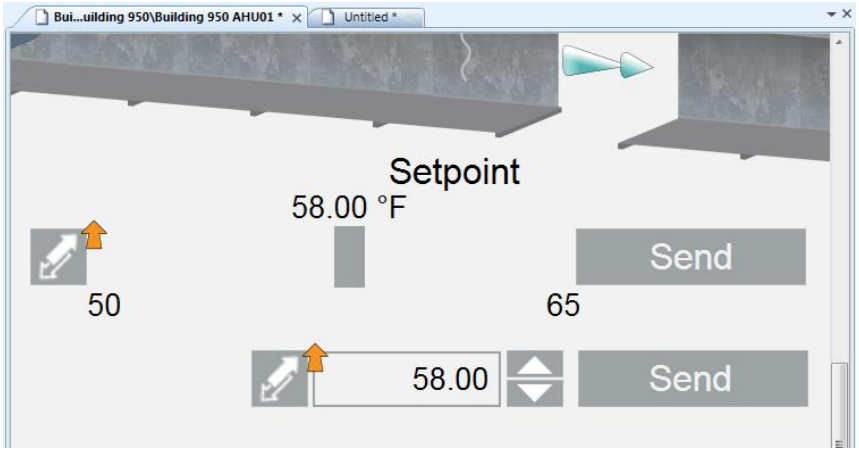
Grouped Command Objects

As mentioned previously, Grouped Commands require that the operator send the command once the value has been set. This ensures that the operator has time to review the analog value before setting it. It also helps eliminate the possibility of accidentally 'bumping' a binary point.

The following image shows two types of Grouped Commands for analog points.

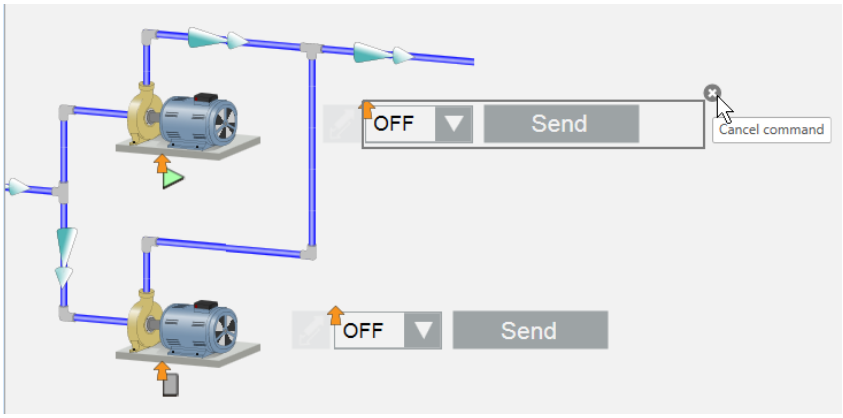
The top symbol is a slider. The lowest and highest commandable values are shown below the slider with the current value displayed above the slider. After adjusting the slider to the desired position, click the [Send] button to execute the command. The granularity of the slider can be configured in the "Substitutions" section of the Property window. Additionally, the highest and lowest values could be used to restrict the range of command values.

The bottom symbol is similar to the incremental symbol from above. This one requires clicking the [Send] button to execute the command.



Grouped Command Objects, *continued*

For points with a limited number of command options – binary and multistate points, for example – a pick list could be used. The following image shows the two pumps with pick list Command symbols. The operator must select the command value and click the [Send] button in order to execute the command. Notice that once a selection is made, a small (x) symbol appears in the upper-right. If the operator decides to not execute the command, clicking the (x) cancels the operation.



For additional information about Command Objects, refer to the Desigo CC Online Help.

Trend Manual Correction

Manual Correction Application

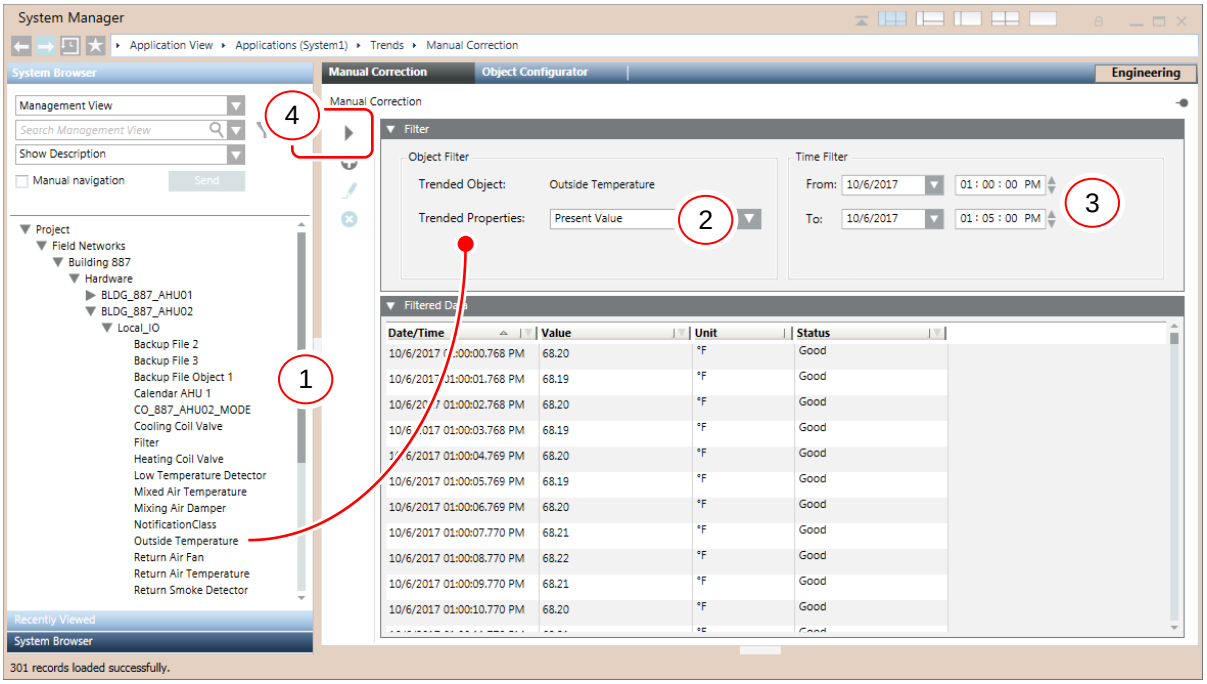
The Manual Correction application allows you to add, modify, and delete values of trended objects for online or offline trends. The application displays date/time, value, status, and unit information of the trended data in a column pattern in a grid. The trend information pertaining to only a single trended property displays in the grid.

By default, the data is displayed for a time period of one day. However, you can select the desired time range to fetch the latest data. You can apply further sorting and filtering on the displayed data to get a more precise data set.

Reviewing Existing Trend Data

The Manual Correction application is located in the "Trending" node of the Application View. To review existing trend data for a system object:

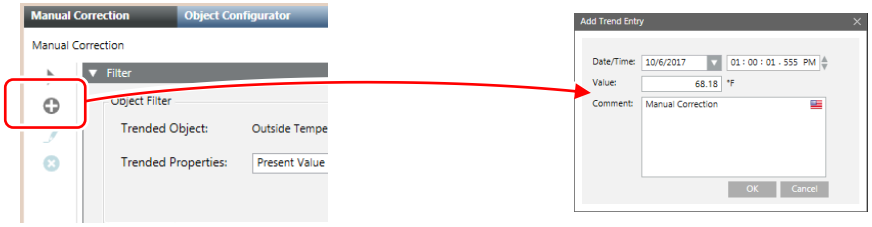
1. Drag the object from the System Browser into the "Filter" section of the screen.
2. If multiple properties are being trended, use the drop-down selector to pick the appropriate one.
3. Enter the desired timeframe in the "Time Filter" section.
4. Click the "Run" button. This will fetch the data and display it in the "Filtered Data" section of the screen.

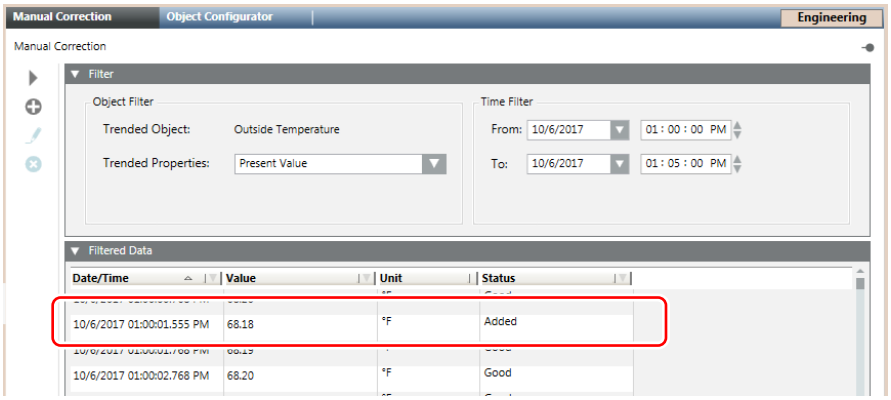


Adding a Trend Entry

If a new entry is necessary, click the “Add” button on the button bar. 

In the “Add Trend Entry” dialog box, enter the date and time for the new entry. Specify the value and enter a comment.



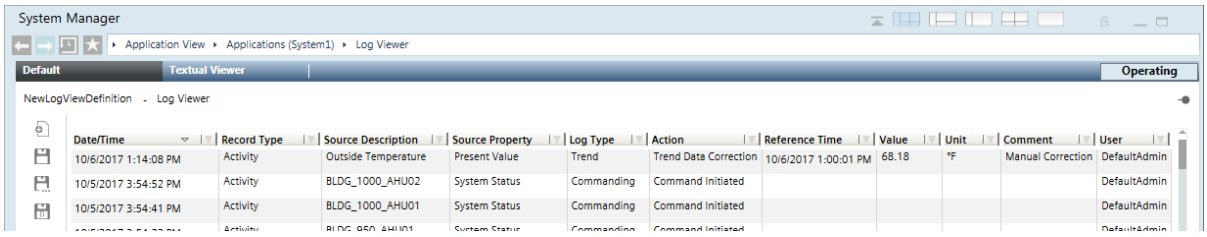


Tracking in the Log Viewer

To aid in the tracking of manipulated data, a historical entry is made in the HDB and can be queried with the Log Viewer. The following image shows the “Trend Data Collection” activity. Compare it to the images above.

The following columns were added to the Log Viewer:

- **Reference Time** is the date/time stamp of the entry.
- **Comment** is the comment entered in the dialog box.

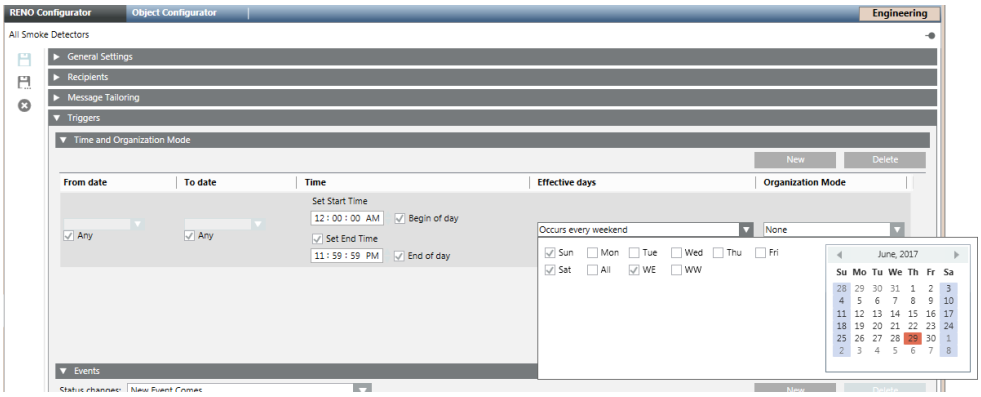


Remote Notification

Remote Notification

The Remote Notification (ReNo) application has received some enhancements in MP3.0. This section will step through what has changed.

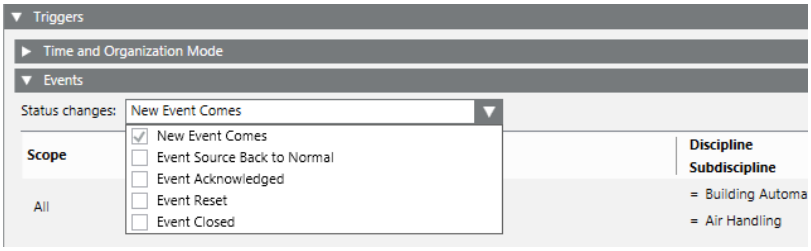
Time and Organization Mode
In the “Triggers” section, a “Time and Organization Mode” subsection has been added. Using this section, it is possible to schedule when the Remote Notification is active. In the image below, the Remote Notification will only be triggered on Saturdays and Sundays.



NOTE: It is important to keep in mind that this only determines whether or not to distribute the Remote Notification. This does not affect whether or not the alarm is reported within Desigo CC.

New Event Options
In addition to sending ReNo messages when an object triggers an alarm, the Remote Notification application provides the ability to distribute notifications for the following events:

- Event Source Back to Normal
- Event Acknowledged
- Event Reset
- Event Closed

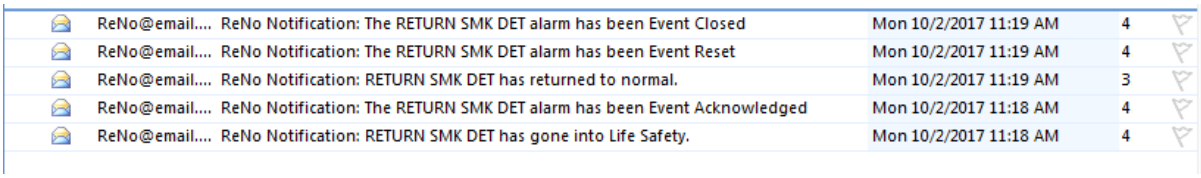


Best Practice: Create Multiple Notifications

It is possible to select multiple (or all) options for a single ReNo definition. However, the exact same message will be sent for each event state change. For example, if the message contains the word “ALARM” then the recipient would receive an “ALARM” message five times.

Consider performing a “Save As…” to create multiple notifications with “Return to Normal” or “Alarm State” in their names. Modify the messages to use state changes.

Refer to the following image. It shows five emails received from the Desigo CC ReNo system as the point and the alarm progressed through all five state changes. Notice that there are three different templates: ToAlarm, ToNormal, and one for the alarm states.



ReNo@email....	ReNo Notification: The RETURN SMK DET alarm has been Event Closed	Mon 10/2/2017 11:19 AM	4
ReNo@email....	ReNo Notification: The RETURN SMK DET alarm has been Event Reset	Mon 10/2/2017 11:19 AM	4
ReNo@email....	ReNo Notification: RETURN SMK DET has returned to normal.	Mon 10/2/2017 11:19 AM	3
ReNo@email....	ReNo Notification: The RETURN SMK DET alarm has been Event Acknowledged	Mon 10/2/2017 11:18 AM	4
ReNo@email....	ReNo Notification: RETURN SMK DET has gone into Life Safety.	Mon 10/2/2017 11:18 AM	4

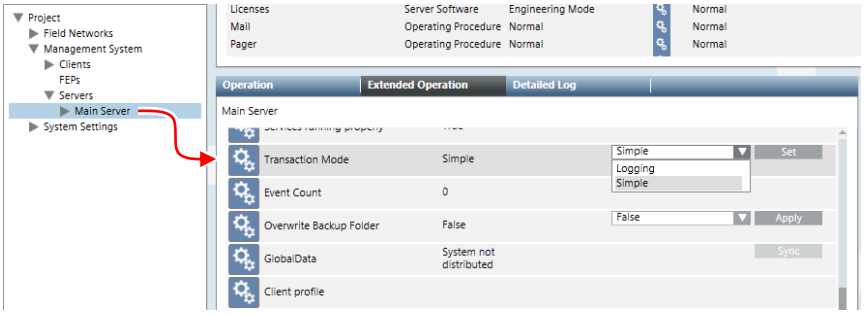
User Interface Changes and Enhancements

Toggling Transaction Mode

In previous versions, toggling the Transaction Mode from Simple to Logging required the System Management Console.

To toggle the Transaction Mode:

1. Select the Main Server in the System Browser.
2. In the Extended Operation tab, locate the “Transaction Mode” property.
3. Adjust accordingly and click [Set].

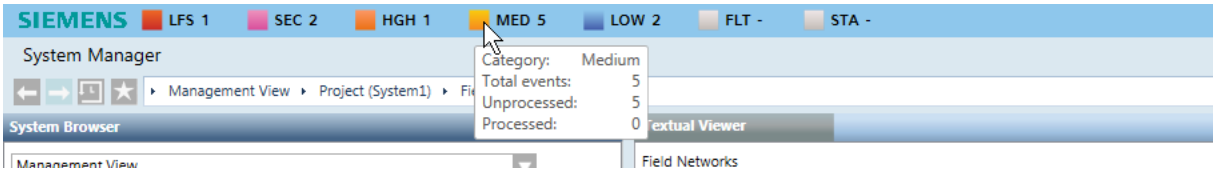


Remember: Transaction Mode should only be “Simple” during periods of bulk engineering. For example, importing/discovering/removing networks. Always return the Transaction Mode to “Logging” to reduce the risk of database corruption.

Slim Alarm Bar

Previous versions of Desigo CC allowed the user to collapse the Alarm Bar to the point of hiding the Lamps, depending on the user profile. Unfortunately, this created a situation in which a user might not see new alarms coming into the system.

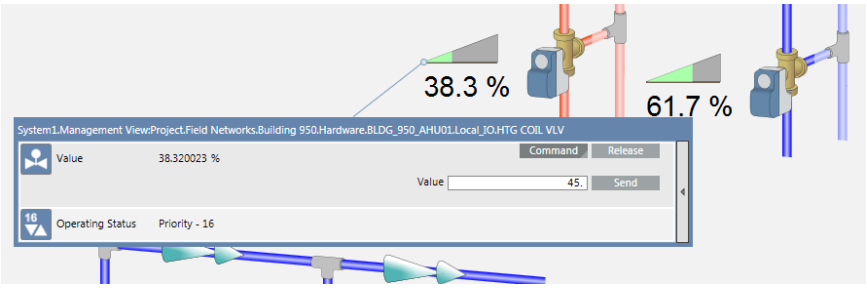
To remove the possibility of completely hiding the Event Lamps, there is a new slim profile of the Alarm Bar. With MP3.0, when the Alarm Bar is collapsed to its fullest extent, the Event Lamps are replaced with squares. Just like their respective Event Lamps, these squares are gray when there are no alarms in their category. They blink with the appropriate color when there are active alarms.



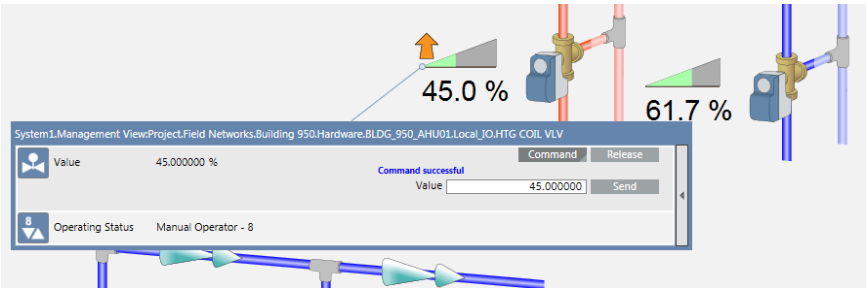
Streamlined Commanding and Releasing for BACnet Points

Starting with MP3.0, simple commanding of BACnet points has been streamlined by the removal of the drop-down pick-list used to select the command priority. Simple commanding and releasing of points are now always performed at Priority 8.

The following images show a point being commanded in a graphic. Before the point is commanded, its priority is 16. Without entering a command priority, it is commanded to priority 8.



Point not yet commanded. Operating Status is Priority 16.



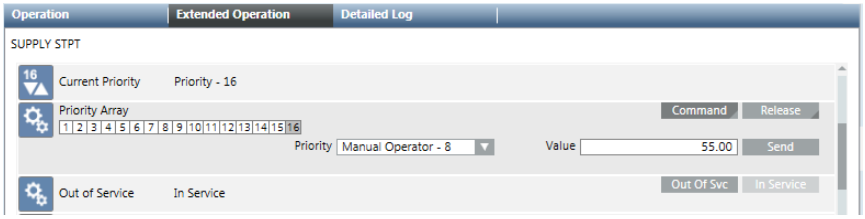
Command successful. Automatically commanded at Priority 8.

Simply releasing a commanded point is similar in which there is no need to designate “Manual Operator – 8”. Clicking the [Release] button automatically releases Priority 8. Close scrutiny of the [Release] button shows that there is no “dog ear” in the lower-right which means clicking it does not expand the Priority selection like previous versions.

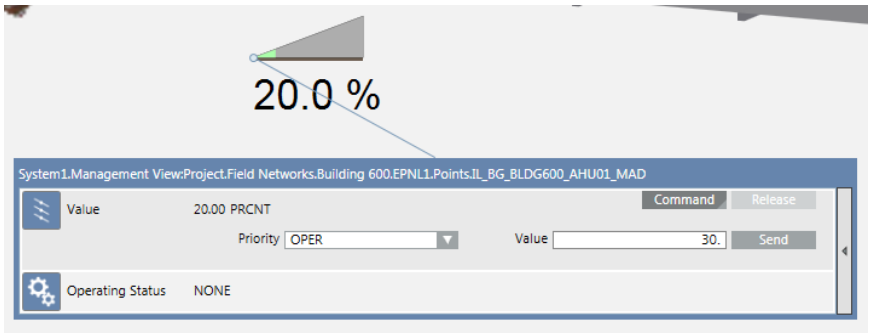
Streamlined Commanding and Releasing for BACnet Points, *continued*

This is not to say that the ability to select a command priority has been completely removed. The previous examples showed “simple” commanding and releasing.

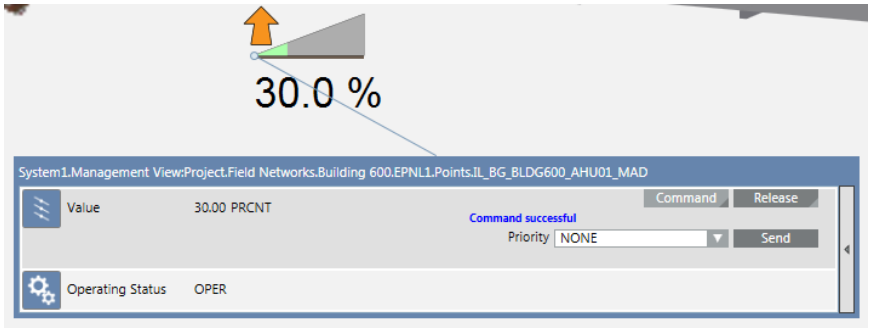
If the designation of a specific command priority is necesary, select the Extended Operation tab and look for the Priority Array property. There you will find the ability to command and release at specific priorities.



Apogee P2 field panel points still require the selection of a priority when commanding.

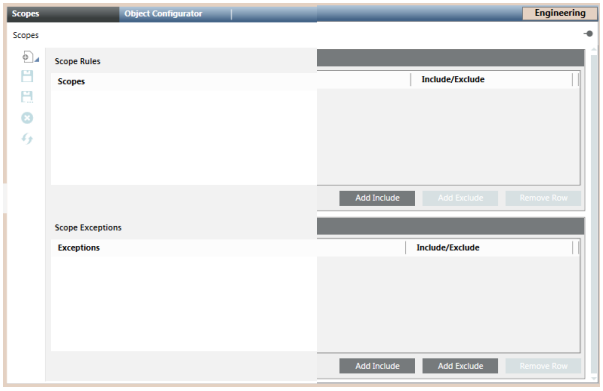


When releasing an Apogee P2 field panel point, you are acutally commanding to the NONE priority. Therefore, you must use the drop-down pick list to select the NONE priority before clicking [Send].



Scopes Screen

The Scopes screen contained very little distinction and could be difficult to discern at times. To remedy this, more contrast has been added between the top and bottom sections. In terms of the Scopes application, this is the only change. Functionality of building and using Scopes has not changed.

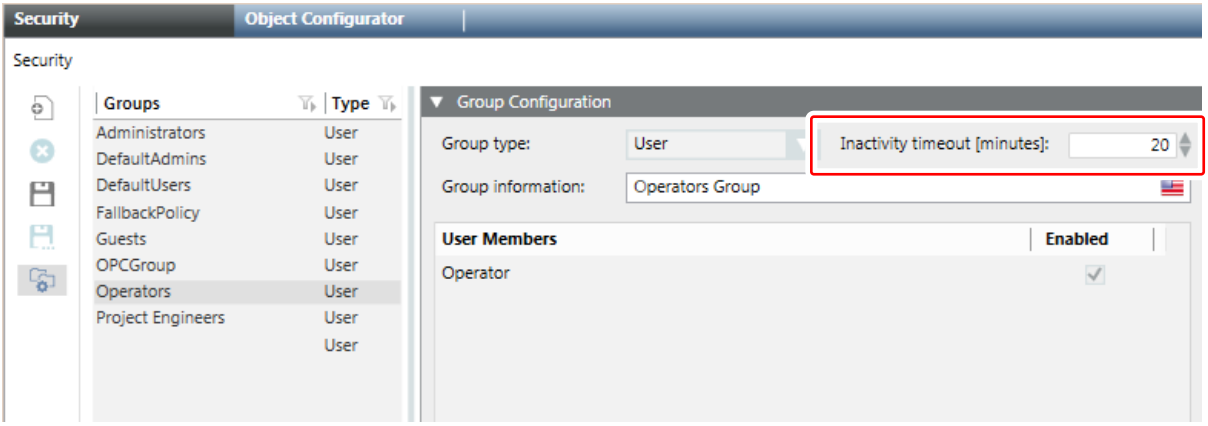


Previous Scopes Screen New Scopes Screen

User Interaction Timeout

In previous versions, the BA_NA_Timeout profile required making changes to the profile's *.LDL file in order to modify the timeout period. In MP3.0, the timeout is configurable on the Security Group page. This means each security group can have different timeout durations. Time is entered in minutes.

Because Security Groups can be set for Management Stations as well as Users, it is possible to designate workstations that will automatically close Desigo CC if the workstation is left unattended.



The BA_NA_Timeout profile will not work in MP3.0. Any security groups using the BA_NA_Timeout profile should be moved to the standard BA_NA profile with the timeout period designated appropriately.

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