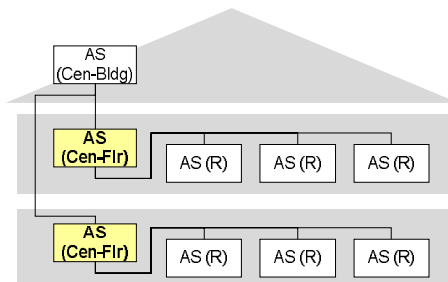




- **Support of cascaded central functions:**
 - Providing data from central functions on building scope to rooms within a floor scope
- **Covered functions**
 - **Central common functions**
 - **Central Hvac functions**
 - **Central lighting functions**
 - **Central shading functions**

Plant diagram

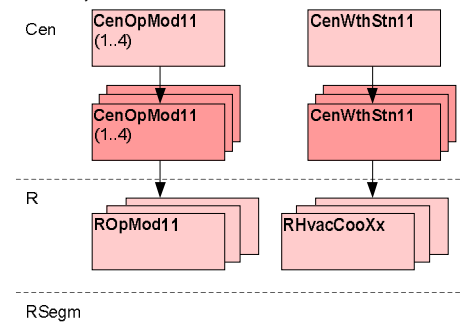


AS (Cen-Bldg) Automation station on building level
 AS (Cen-Flr) Automation station on floor level

AS (R) Automation station in the room

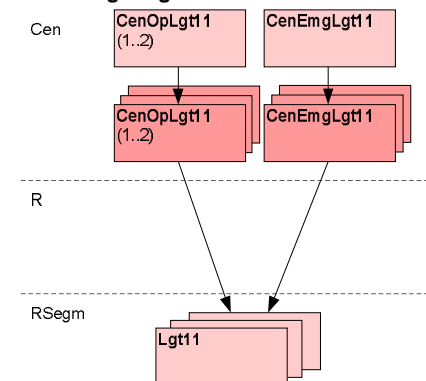
Function diagrams

Central, common functions



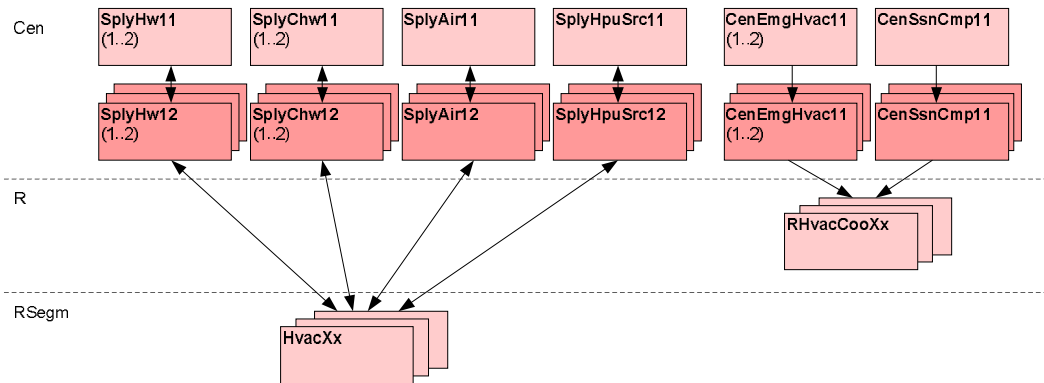
CenOpMod11 Central operating mode data, getting provided from building scope to floor scope and from floor scope to rooms
 CenWthStn11 Central weather data, getting provided from building scope to floor scope and from floor scope to rooms
 ROpMod11 Operating mode functionality in room
 RHvacCooXx Hvac coordination in room

Central lighting functions



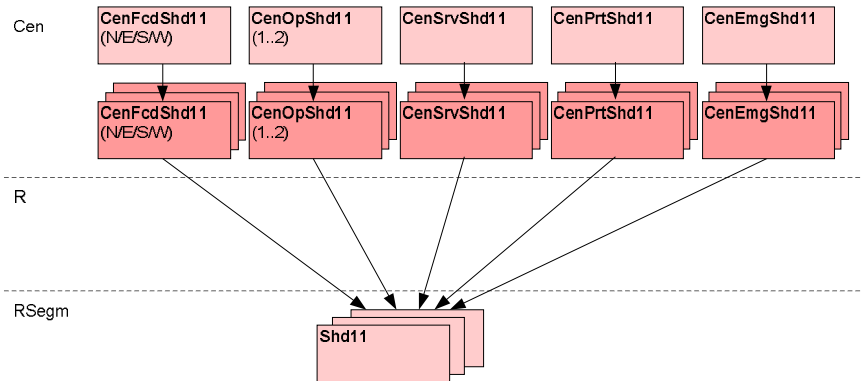
CenOpLgt1 Central lighting commands, getting provided from building scope to floor scope and from floor scope to rooms
 CenEmgLgt1 Central emergency lighting commands, getting provided from building scope to floor scope and from floor scope to rooms
 Lgt11 Lighting functionality in room

Central Hvac functions



SplyHw11	Supply chain hot water on building scope, interacting with primary plant	SplyAir11	Supply chain air on building scope, interacting with primary plant
SplyHw12	Supply chain hot water on floor scope, bundling data	SplyAir12	Supply chain air on floor scope, bundling data
SplyChw11	Supply chain chilled water on building scope, interacting with primary plant	SplyHpuSrc11	Supply chain for heat pump source on building scope, interacting with primary plant
SplyChw12	Supply chain chilled water on floor scope, bundling data	SplyHpuSrc12	Supply chain for heat pump source on floor scope, bundling data
CenEmgHvac11	Central emergency HVAC commands, getting provided from building scope to floor scope and from floor scope to rooms	CenSsnCmp11	Room temperature setpoints, adjusted acc. to outside temperature, getting provided from building scope to floor scope and from floor scope to rooms

Central shading functions



CenFcdShd11	Central façade control data, getting provided from building scope to floor scope and from floor scope to shades in the room segments	CenPrtShd11	Central protection data, getting provided from building scope to floor scope and from floor scope to shades in the room segments
CenOpShd11	Central operation commands, getting provided from building scope to floor scope and from floor scope to shades in the room segments	CenEmgShd11	Central emergency commands, getting provided from building scope to floor scope and from floor scope to shades in the room segments
CenPrtShd11	Central protection commands, getting provided from building scope to floor scope and from floor scope to shades in the room segments		

Description of functions

Basic function

- Providing data from central function of building scope to rooms within the scope of a floor:
 - For central common functions
 - For central HVAC functions (general HVAC functions and supply chain coordination)
 - For central lighting functions
 - For central shading functions

Options

- Additional functions on floor-scope for:
 - Shading: Manual operation (last command wins)
 - Shading: Emergency detection (floor scope wins)
 - Shading: Service switch (floor scope wins)
 - Shading: Protection (floor scope wins)
 - Lighting: Manual operation (last command wins)
 - Lighting: Emergency detection (floor scope wins)
 - Hvac: Emergency detection (floor scope wins)

Siemens devices

Key	Device	Datasheet	Product no.	No.
DXR2...	Compact room automation station, BACnet/IP, 24 V, DIN housing, 2 DI, 4 UI, 8 DO Triacs, 4 AO 0... 10 V	N9205	DXR2.E18-101A/ DXR2.E18-102A	1

Application configuration

	Equipment	Values/range	Template settings
Central operating mode (1..4)	Optimum start stop control	None Active	Active
	Central operating mode extended funct.11	None Active	Active
Supply chain for chilled water (1..2)	Changeover function for 2-pipe	None Active	Active
Central emergency lighting	Central emergency for lighting: Emergency command	None Active	Active
Central facade for shading	Brightness determination	None Centr.brightness from weather station 11 Central brightness on facade 11	Centr.brightness from weather station 11
	Anti-glare protection	None Central anti-glare protection 11 Central annual shading 11	Central anti-glare protection 11
	Solar radiation determination	None Centr.solar rad.from weather station 11 Central solar radiation on facade 11	Centr.solar rad.from weather station 11
	Thermal protection	None Active	Active

Optional configuration

	Equipment	Values/range	Template settings
Central operating mode 1 / 2 / 3 / 4	Operating mode switch-on delay 1	None Active	None
	Operating mode switch-on delay 2	None Active	None
	Operating mode switch-on delay 3	None Active	None
Central facade for shading north / east / south / west	Facade switch-on delay 1	None Active	None
	Facade switch-on delay 2	None Active	None
	Facade switch-on delay 3	None Active	None

Optional configuration

	Equipment	Values/range	Template settings
Central operation for shading 1 / 2	Operation switch-on delay 1	None Active	None
	Operation switch-on delay 2	None Active	None
	Operation switch-on delay 3	None Active	None
Central service for shading products	Service switch-on delay 1	None Active	None
	Service switch-on delay 2	None Active	None
	Service switch-on delay 3	None Active	None
Central protection for shading products	Protection switch-on delay 1	None Active	None
	Protection switch-on delay 2	None Active	None
	Protection switch-on delay 3	None Active	None
Central emergency for shading products	Emergency switch-on delay 1	None Active	None
	Emergency switch-on delay 2	None Active	None
	Emergency switch-on delay 3	None Active	None

Engineering

- The ABT Site engineering tool is required to engineer DXR2 automation stations.
- See the Siemens Download Center www.siemens.com/bt/download for the latest application configurations and workflow tutorials.

It is the life safety and security management, and not Desigo room automation, that is responsible for fire detection and evaluation of the correct HVAC emergency operating modes for a fire section and primary plants.

The configurable Desigo room automation can switch all available luminaires to a specified value at the highest priority during an emergency. This is not emergency lighting or evacuation route control, but rather is only a supporting measure during an emergency to supply all rooms with the maximum brightness.

The configurable Desigo room automation does not support emergency lighting control with service and test functions for decentralized or centralized batteries.