

INFORM

New version 8.2 PC and SystemArchitect Planned release: 16th February '09

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Overview of the new functions / **Benefits for the user**

- Introduction of groups in the rack
Enables functional summary of rack modules
- Introduction of group rules
Control the required components for specific groups
- Graphic redesign for configurable components (racks, blade frames, ...)
Adapt to physical situation and requirements
- Introduction of special regulations for BX900
Error-free configuration of the new Blade system

Note: All displayed screenshots are based on a test database. The terms used are not the final ones and will certainly be changed when version 8.2 is released.

The conversion to V8.2 must be made in conjunction with a new database version, i.e. an update to the program version 8.2 is compulsory with an update to the then valid new database!

Introduction of groups in the rack

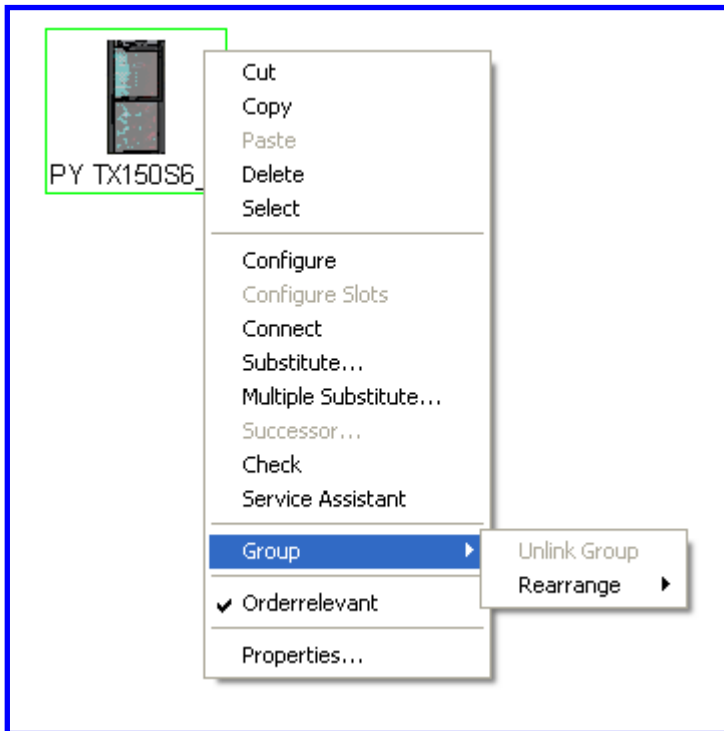
Introduction

Version 7.4 gives the user - as a first step - the option of creating own groups in the floor area of the SystemArchitect. The special interaction of certain systems can thus be documented, e.g. location link.

The new version 8.2 implements this functionality for rack modules as well. The previous use for floor systems has been extended by some functions so as to ensure that floor and rack groups are treated the same.

Functions for components which can be grouped

Each component which can be selected in floor or rack view, is a so-called team player and has a context function "Group" with subfunctions



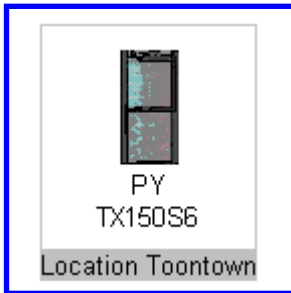
Non-selectable functions are marked by gray text as required. The following functions are offered:

- "Unlink Group" means that the selected component is removed from the group without the component itself being deleted. When the last or only component has been removed from a group, the group is implicitly deleted. An "empty" group is not supported.
- "Rearrange" is required to assign the selected component to a new group (the new group is thus created as well), or it is assigned to another group that already exists.

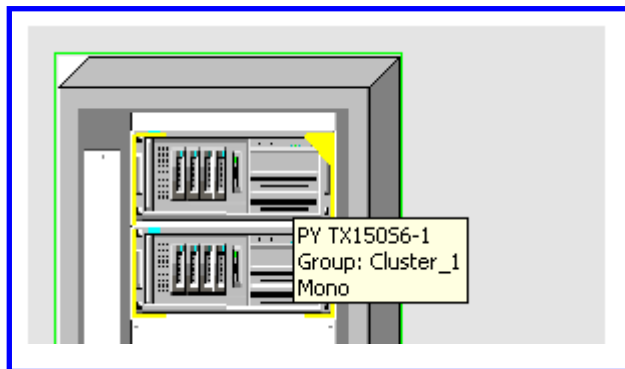
Existing components can also be included in an existing group (rearranged) or removed. This is done by pressing the keys CTRL and Shift while simultaneously moving the mouse.

Depiction of groups

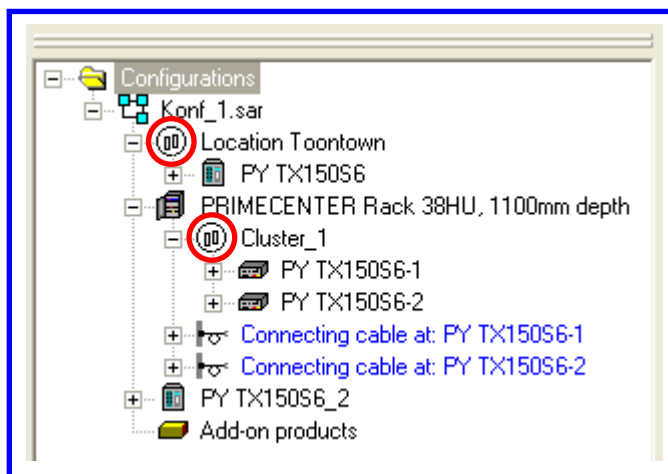
The floor view shows the group, as was previously the case, in a surrounding gray border. The group name is shown in the footer of the border. A double click allows it to also be modified there. The context functions of the group are selected by right-clicking with the mouse on the footer.



The rack view shows the group surrounded by a yellow border. Since any following group name would overwrite other rack modules, the group name is displayed in the tooltip in the line under the name of the component. The specification 'Mono' (in the example shown) is used to control the power cable and is not of significance here. The yellow triangle to the top right is the graphic representation of the object 'Group'. It is selectable and is required to call up the context menu and functions of the group.

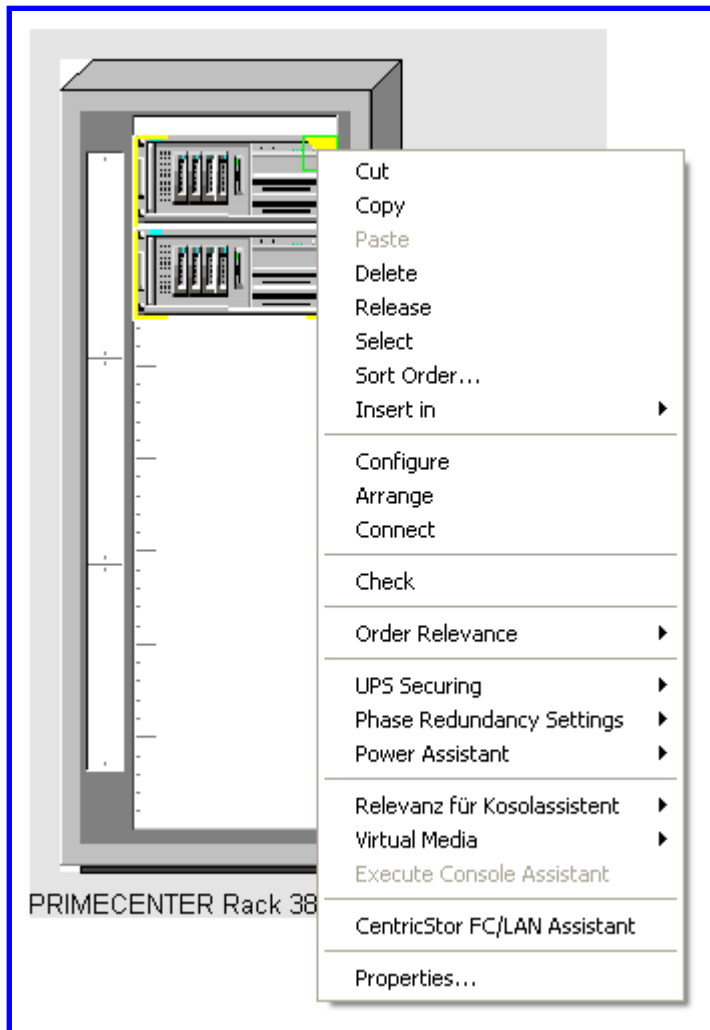


In the tree view of the configuration and in the cable view groups are depicted by means of the already known symbol, with the team players of a group appearing as subcomponents of the group.



Functions of a group

As a result of the graphical presentation of the group in all views it is possible to call up the context menu of a group at any time. Apart from the group-specific functions 'Release', 'Sort Order', 'Insert in', 'Arrange' and 'Properties', all the functions are provided that can be applied to the individual team players of the group at component level. Non-selectable functions are marked by gray text. This occurs if no single team player of the group is permitted for this function. (e.g. 'Execute Console Assistant' and no rack as a team player).



Introduction of group rules

Introduction

The rules for the installation of certain rack modules, which have been in existence for quite some time, could only be adhered to and monitored to a limited extent with the previous means. Here we are primarily dealing with neighboring rules, which are valid for the affected components. Only as a result of the previously described introduction of general groups in each position in the configuration is it now also possible to provide these groups with rules. They replace the 'Slot on Top concept', which was primarily used in the grouping of storage systems.

The new version 8.2 makes it possible to define more complex laws for the formation of groups (= neighboring systems). These are primarily used in racks. The team players of a 'Group with rules' are specially marked in the database. A distinction is made between 'Basis' and 'Extension'. The database also documents which rules are valid for the individual basis units and extensions.

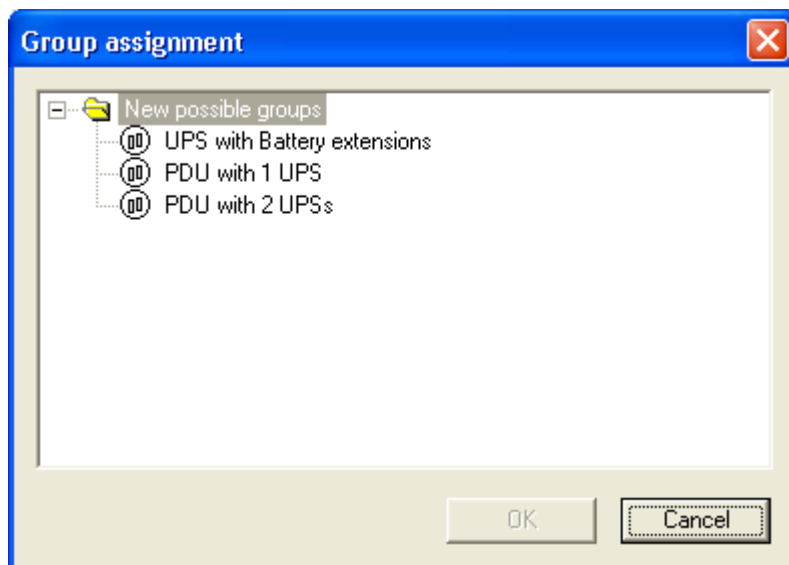
Consequently, it is possible to set up the following scenarios in future correctly and with support for the user

- Basis as the bottom module with all the extensions above it (previous slot-on-top concept)
- Basis as the top module with all the extensions below it (for UPS [Uninterruptible Power Supply] with battery extensions, tape drives with extensions)
- The extensions are alternately arranged above and below the basis (PDU [Power Distribution Unit] with UPSs)
- The extensions are asymmetrically arranged above and below the basis (tape drive with extensions)
- More rules are possible at any time..

Although the rules are primarily intended to monitor and control the installation of the team players in a rack, they are also used when the team players are configured outside a rack (lying on the floor).

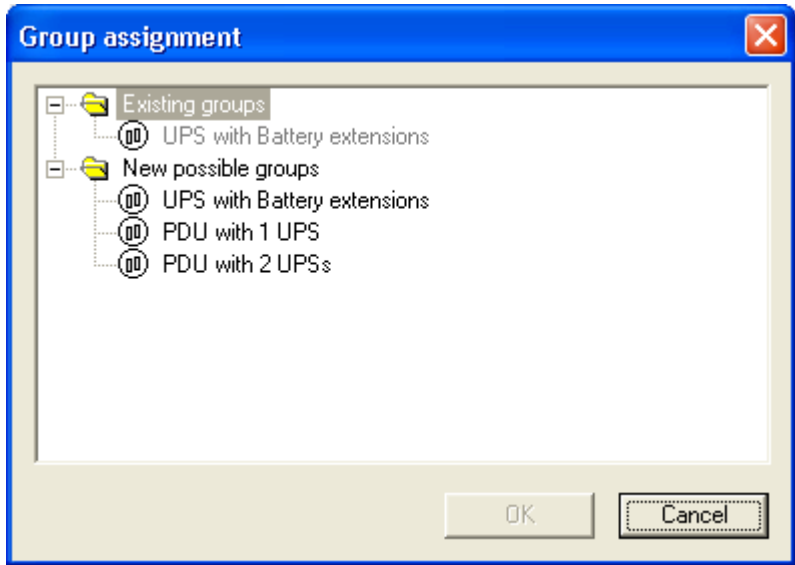
Assignment of a rule

Since each component, as described in the introduction, "knows" the rules assigned to it from the database, assignment to a rule is already effected when the component is introduced to the configuration. Optimal user management is achieved as a result. If several rules have been documented for the appropriate component, a prompt determines which rule is to be applied.



The example shows the dialog after a UPS has been added, which by all means needs to be extended with batteries. However, since the same UPS (incl. batteries) can also be used in connection with different PDUs, the rules must be precisely defined at this juncture. Only in this way can the further installation of extensions be controlled. A subsequent change to the rule is possible and is explained later. The group is initially assigned the name of the rule.

In case other suitable groups are available when the new component is introduced, these are shown in addition in a separate folder. Groups that have a gray text can on account of the documented rules no longer accept the new component (e.g. overcrowding).

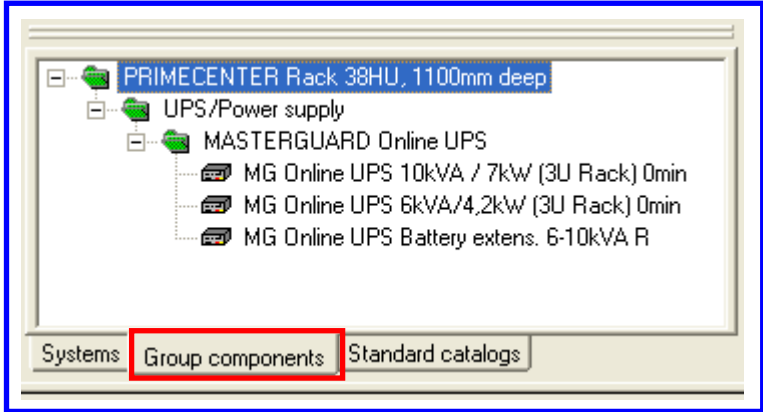


Dialog after adding a second, identical UPS to the rack

Extending a group

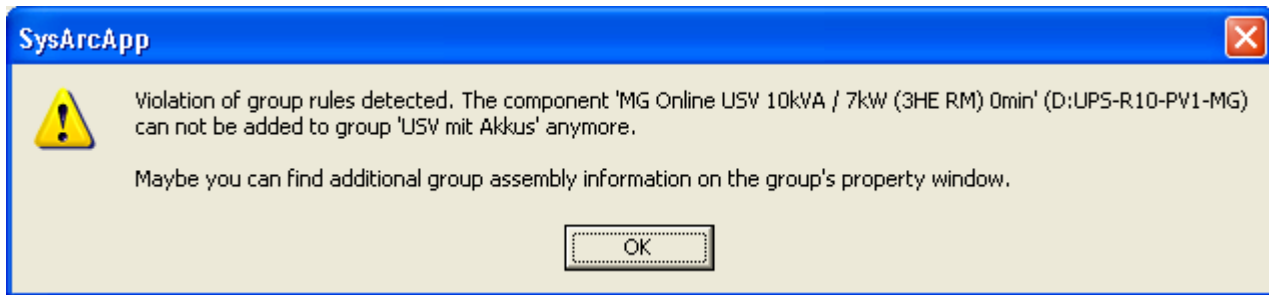
The procedure described here does not depend on whether it is a group with or without rules. In contrast to the function 'Rearrange', which presumes components that already exist in the configuration, the following describes how new components are added for an existing group.

The selection of a grouped component automatically causes a switch to the middle system tab. It is given the name 'Group components' and offers all the components that have been released for the extension of this group. For a group without rules all the components are offered, whereas a group with rules only offers the basis units and extensions that are released for the corresponding group. Consequently, the user is provided with very good support for component selection, especially for groups with rules.



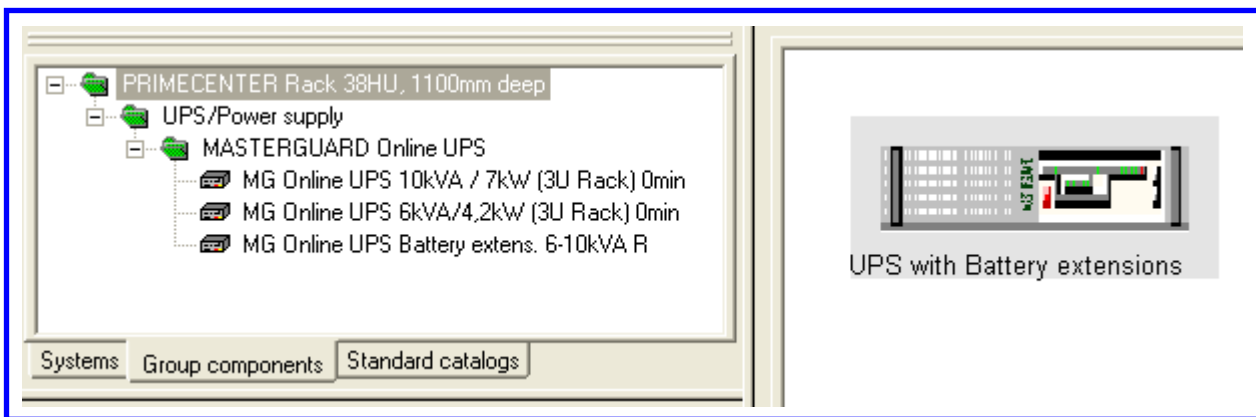
The example shows all the team players that are permitted for the previously selected group 'UPS with battery'. Extending is performed by simply dragging & dropping the component to the appropriate group. The new component is automatically correctly positioned according to the selected group rule. If the mouse cursor is not over the target group when you release the left mouse key, it is assumed that a new group is to be created - and the rules are queried as described at the start of this section.

In case the existing group is overcrowded after the introduction of the new component (more than one basis, too many extensions), an appropriate text appears after the drag & drop action.



Selection of the group view

The selection of the context function 'Arrange' or a double click on the graphical representation of a group (gray footer in the floor view or a yellow triangle in the rack view) opens a new view, in which only the components that have previously been assigned to the group are shown. This view enables greater focus to be placed on the group, in which uninvolved team players are not displayed.



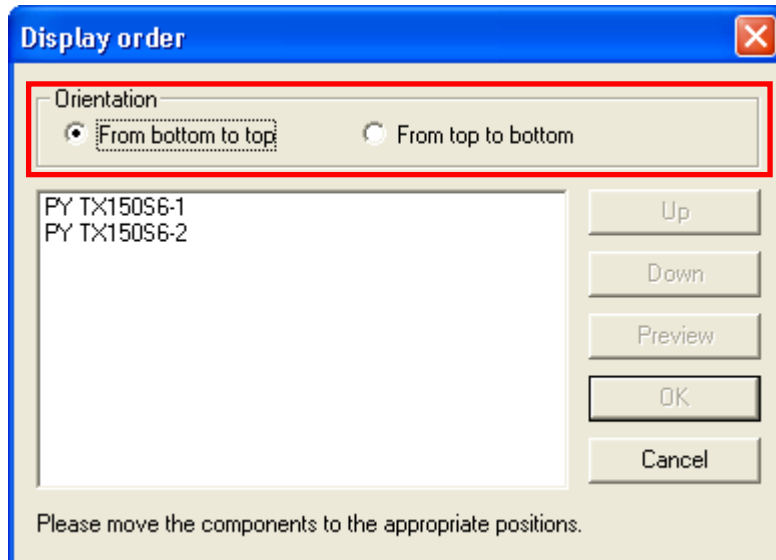
Extending the group is effected in this view in the same way as previously described in the section.

Other group functions

All the functions described here are equally valid for groups with and without rules. The function 'Arrange' has already been handled in the previous section.

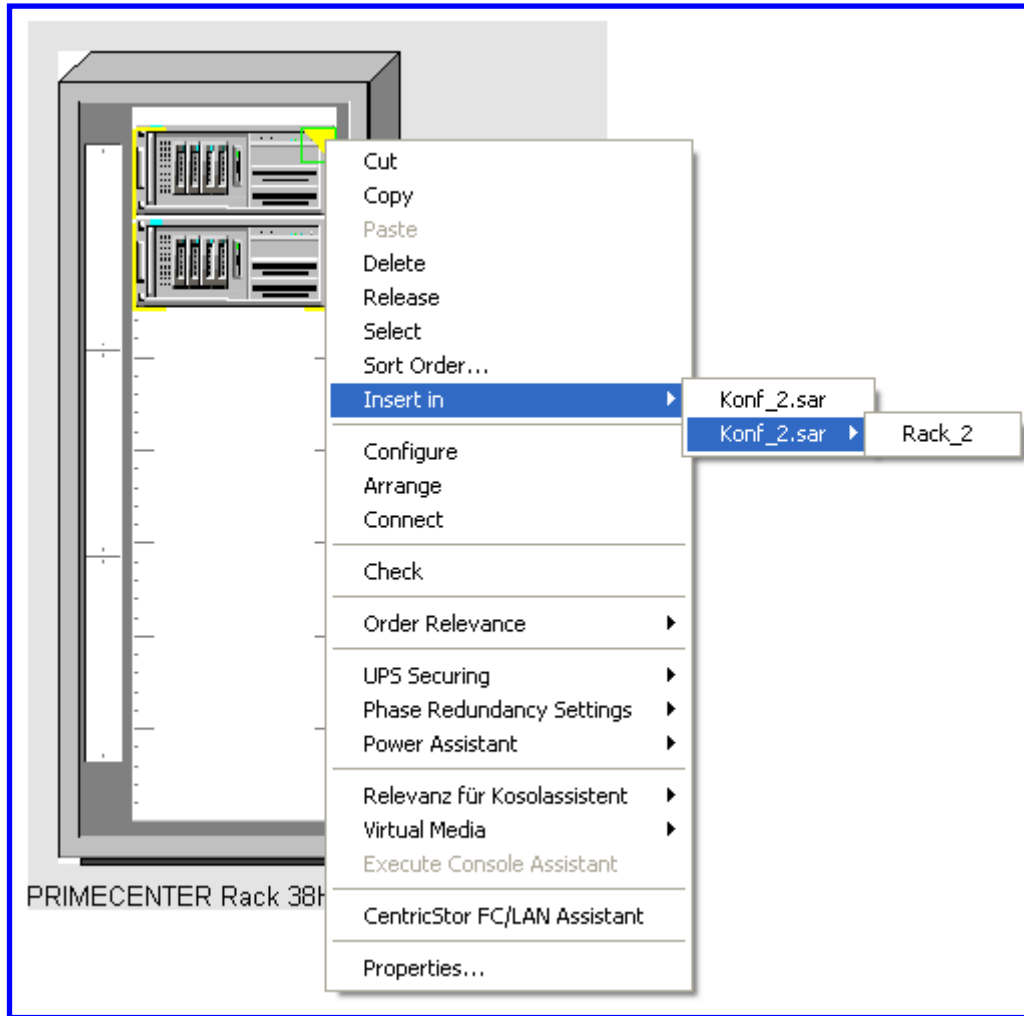
The function 'Release' means that all the components included in the group are released from the group and the group itself is subsequently deleted. The components are retained.

The function 'Sort Order' is only available if we are dealing with a group without rules. Otherwise, it is grayed out and the positioning of the components is determined by the defined group rule. The function has already been provided with the introduction of the group concept (version 7.4). Based on the environment of the group (floor or rack group) the orientation "From right to left" or "From top to bottom" and their converse functions are offered.



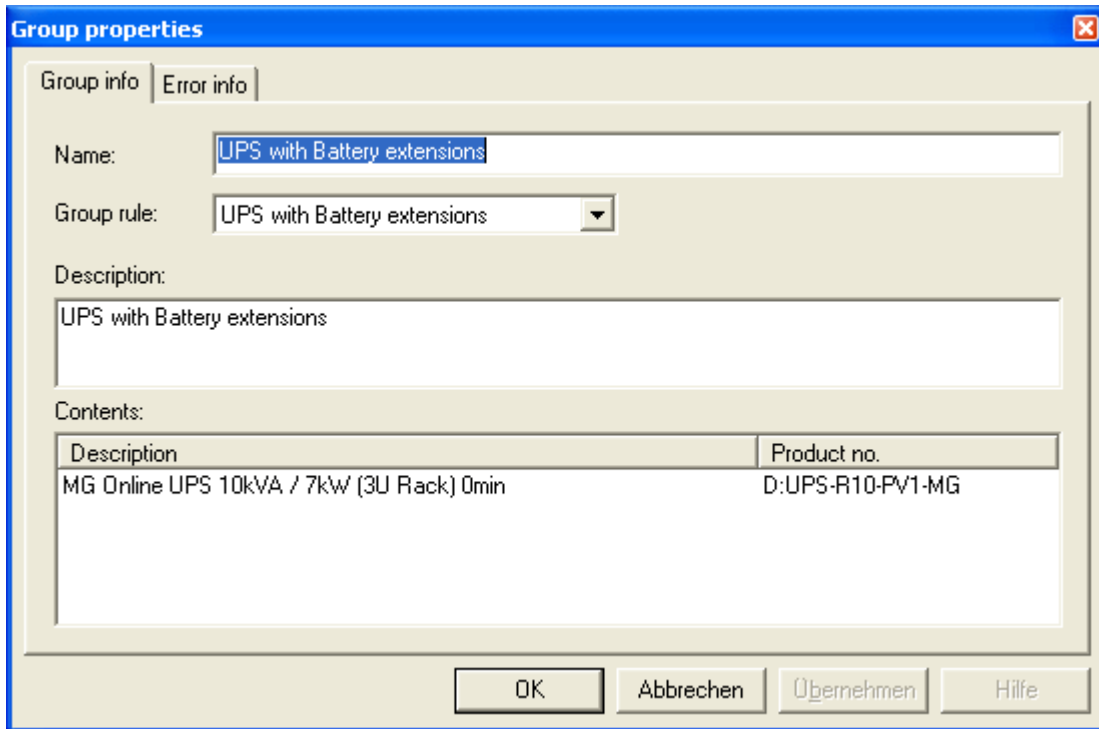
→The example shows a group that is created in a rack. The specification of the orientation has horizontal references.

The function "Insert in" can be used to move the entire group within the configuration, with the possible destinations being shown as subitems of the function. A black triangle after a subitem signals further nested destinations



→ The selected group with the two rack servers can either be inserted in the floor view (first menu option = top level of the configuration) or in 'Rack_2', which is a different rack in the same configuration (second menu option).

The properties dialog of a group can be used to handle the following functions:

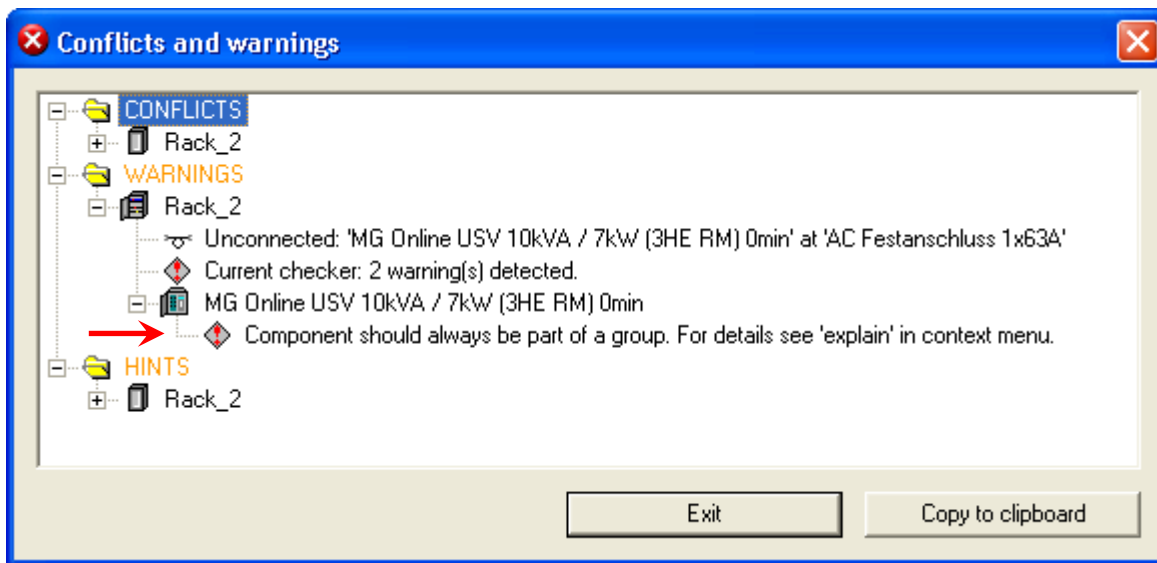


- Renaming a group in the field 'Name'. The name selected must be unique in the same hierarchy level of the configuration (analog behavior to that for the system name).
- Changing the group rules. The drop-down menu offers all the rules that can be used for the currently existing team players. The selection 'not defined / not determined' deletes the existing group rule. This value is also used for all groups that were created by the user automatically and without rules.
- Further-reaching explanations for groups with rules are available in the field 'Description'. These are documented in the database and cannot be changed by the user. For groups without rules the field can be edited by the user and the text is saved in the configuration.
- The field 'Contents' lists all the team players of the group. Using the right mouse key it is possible to perform component-specific context functions for each entry in this list.
- In the event of inconsistencies the tab 'Error info' contains further information. At the same time the group symbol is provided with a red exclamation mark and the yellow border in the rack is colored red.

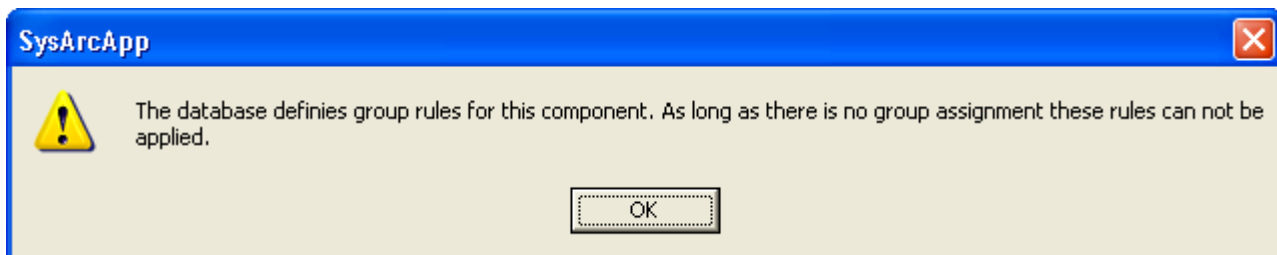
Checking groups

Groups without rules are created and arranged by the user - in no way are they subject to a check.

Groups with rules are for the most part already monitored when created and extended, so errors usually do not occur. Nevertheless, groups with rules, basis and extension components are especially monitored during checking. For example, this error message appears with a subsequent release of the group for a UPS:



After the function "Explain" has been selected, the following text appears:

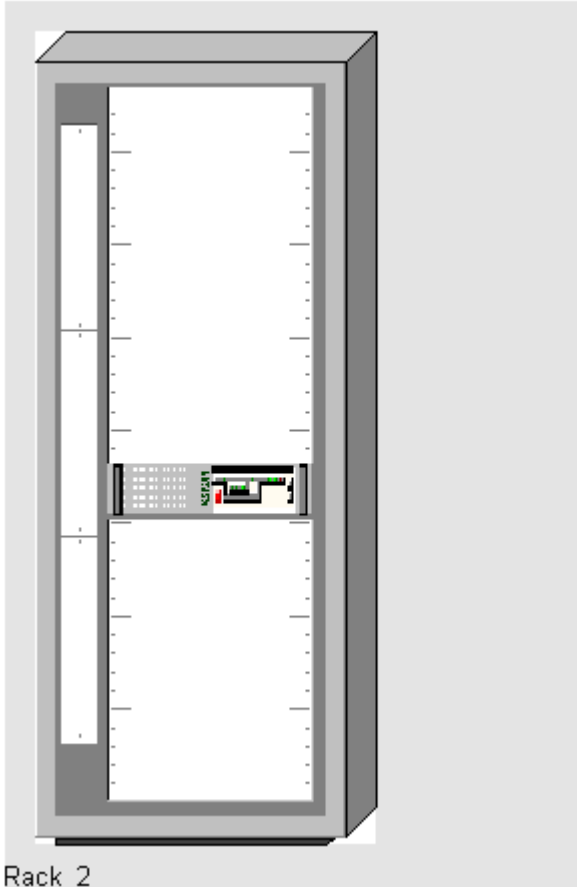


In this case the UPS must be reassigned to a group with rules via the function 'Rearrange'.

Graphical redesign for configurable components

Prior to inserting rack modules, which themselves can in turn be configured in several levels, the previous concept for the presentation of configurable areas had to be adapted. In future the graphic presentation of these areas will be geared to the actual physical requirements. These are documented in the database and can be adapted there at any time.

As far as the application and handling are concerned, only the graphic presentation has been modified. Thus in version 8.2 a 38U rack version is for example shown as follows:



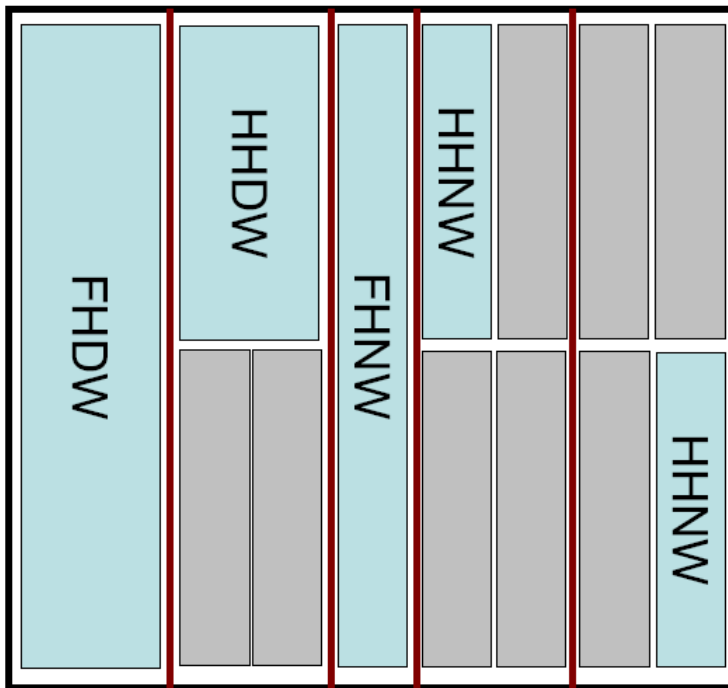
Introduction of special rules for BX900

Introduction

The coming new blade system (chassis) has two levels, which are each equipped with 9 side-by-side blade slots. The concept allows different constructions to be used for the blades (slots) depending on functionality

- Blade with half height and normal width
- Blade with half height and double width
- Blade with full height and normal width
- Blade with full height and double width

Furthermore, the existing wiring on the backplane does not give full freedom of choice as regards the position of installation of all the blades.



As a result of the change described in the previous section for the graphic configuration it is possible with version 8.2 to handle these relatively complex requirements regarding configuration correctly.

New rules are also valid for the configuration of the chassis backplane with connection blades, which are very closely related to the Mezzanine cards configured in the server blades.

The configuration rules and special features are not gone into in detail here - please see the appropriate documents for these. The functional integration in SystemArchitect is described below.

Proposed work order for the configuration of the new blade system

Even if one of the basic rules for work with PC and SystemArchitect says that the order in which the configuration is created is not to be imposed on the user, the following order should be observed when configuring the new blade system. This is also optimally monitored by the Check function so that simple and fast configuration is also possible for these systems.

Create a concept

Determine the required external interfaces and their number / redundancy. The following Interfaces are currently supported

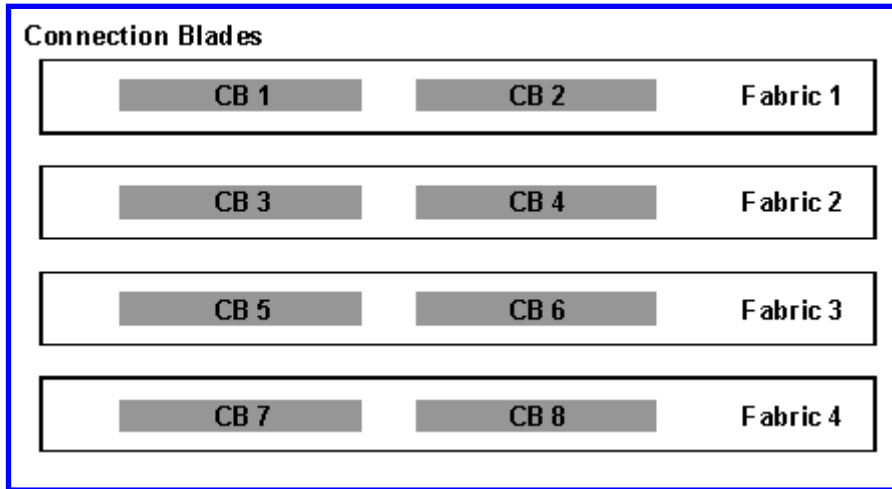
- LAN 1 Gb Ethernet
- LAN 10 Gb Ethernet
- FC 4 Gb
- FC 8 Gb

Introduction of the chassis

Selection of the chassis and introduction in the configuration via drag & drop. Subsequently configure (add) the required connection blades as well as all further internal components in the configuration view (grid) of the chassis.

Slot assignment for the connection blades

Assignment of the previously configured connection blades to the slots of the backplane with the function "Configure slots". The assignment of the slots on the rear looks like this diagram:



'CB 1' to 'CB 8' denotes the slots for the connection blades

Once selected, the "Configure slots" view looks like this:

KR-SwitchSlot										
KR-Bx900 - Blade-Chassis PRIMERGY BX900 S1										
Product no.	Description	Slot	CB1	CB2	CB3	CB4	CB5	CB6	CB7	CB8
S26361-F3206-E6	1 GB Switch	●								
S26361-F3206-E8	10 GB Switch	●								
S26361-K1234-V200	FC Switch 3	●								

Here you can see that the potential slots for each type of connection blade are known. Thus the 10 GbE and the FC switches may only be used in fabrics 2 and 3, whereas the 1 GbE switch can be used in every fabric.

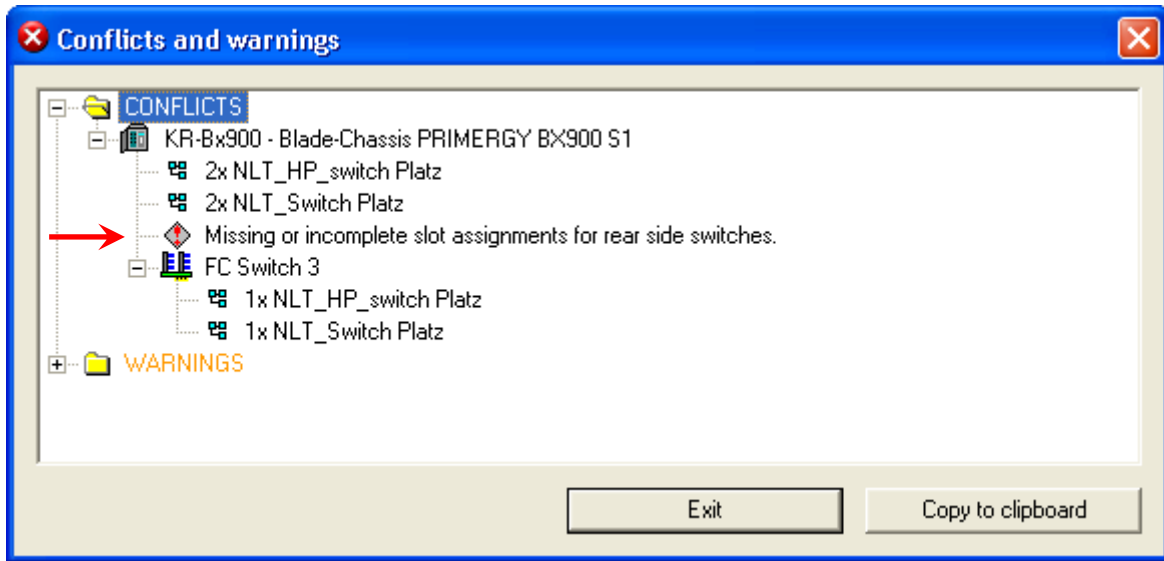
After each individual assignment a 'Check on the fly' immediately takes place in the background, which controls the selection of any further assignments. Thus for example, it is not permitted to use different types of connection blades within one fabric.

KR-SwitchSlot										
KR-Bx900 - Blade-Chassis PRIMERGY BX900 S1										
Product no.	Description	Slot	CB1	CB2	CB3	CB4	CB5	CB6	CB7	CB8
S26361-F3206-E6	1 GB Switch	●								
S26361-F3206-E8	10 GB Switch				✓					
S26361-K1234-V200	FC Switch 3	●								

→ The assignment of the 10 GbE switch to 'CB3' (=fabric 2) prevents other switch types being assigned to slot 'CB4'.

A missing slot assignment for the connection blades in the chassis:

- is reported during the check



- stops the checking of the Mezzanine cards in the server blades with regard to their existence
- stops the possibility of slot assignment for Mezzanine cards in the server blades

Therefore, slot assignment of the connection blades should by all means take place here!

Add / Configure the server blades

As before, these are pulled into the chassis by means of drag & drop and then configured in the configuration view (grid). The Mezzanine cards that have to suit the corresponding connection blades in the chassis should also be selected here.

Slot assignment for Mezzanine cards

Use the function "Configure slots" to assign the previously configured cards to the slots in the server blades. The names of the slots are 'Mezzanine 1' and 'Mezzanine 2'.

Assignment is only possible if all the connection blades in the chassis are assigned to a slot!

Only then is checking or user management possible, because the selection of the correct slot depends on the assigned slot of the connection blade.

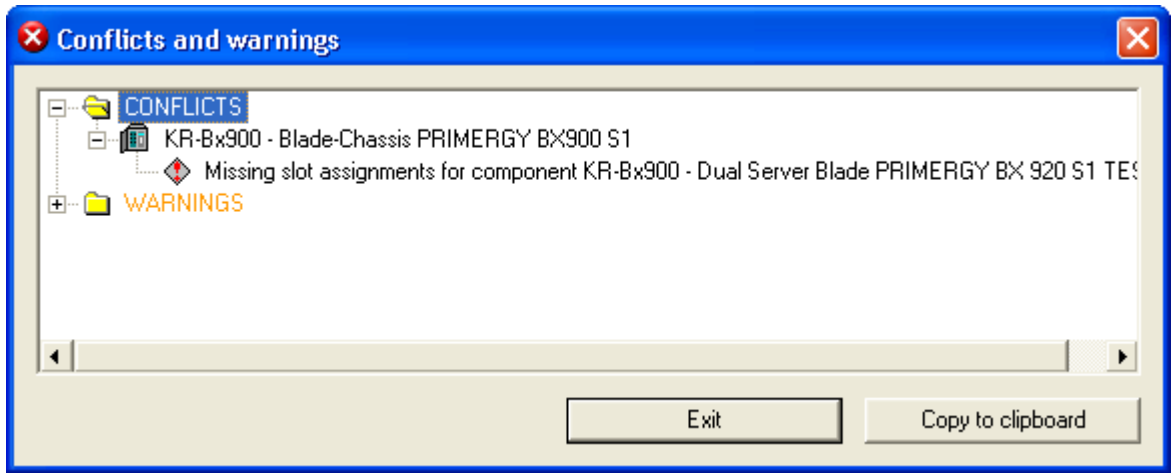
KR-Mezz-Typ				
KR-Bx900 - Dual Server Blade PRIMERGY BX 920 S1 TEST				
Product no.	Description	Slot	Mezz-1	Mezz-2
KR-S26361-F3332-E1	10 Gbit Ethernet - Mezz	●		
KR-S26361-F3874-E1	8 Gbit FC - Mezz	●		

➔ The missing slot assignment for the connection blades means that the fields for the slot assignment of the Mezzanine cards are disabled.

KR-Mezz-Typ				
KR-Bx900 - Dual Server Blade PRIMERGY BX 920 S1 TEST				
Product no.	Description	Slot	Mezz-1	Mezz-2
KR-S26361-F3332-E1	10 Gbit Ethernet - Mezz	●		
KR-S26361-F3874-E1	8 Gbit FC - Mezz	●		

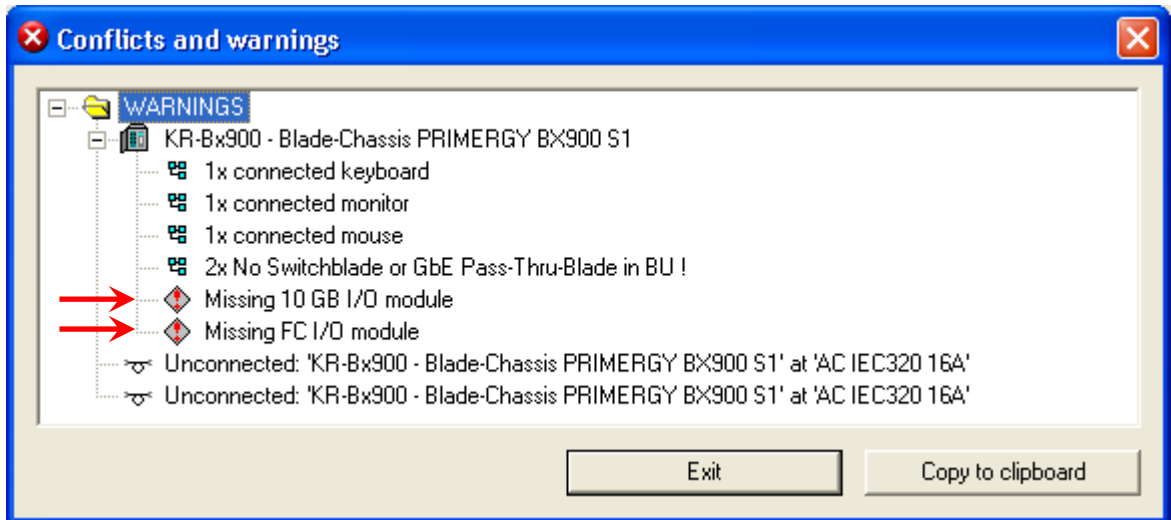
➔ After completing the slot assignment of all connection blades, the potential slots for the Mezzanine cards are determined and only remain to be selected by the user.

If this is forgotten, an appropriate conflict message appears during the check:

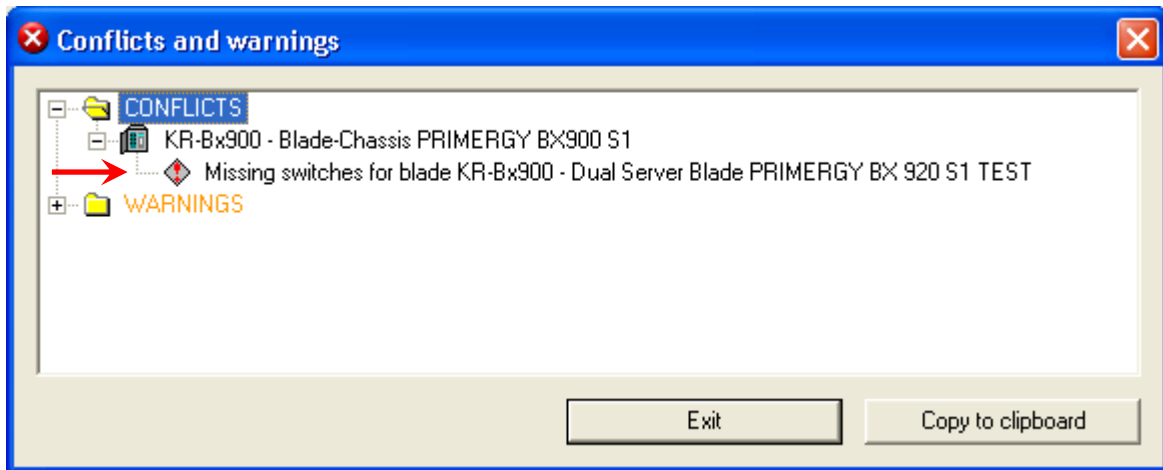


Then the configuration of the entire blade systems is concluded. The final check should not report any further conflicts.

Any inconsistencies between Mezzanine cards and connection blades are detected during the check:



→ This warning appears if the existing connection blades do not find any Mezzanine cards in the existing server blades. Since the configuration of a connection blade is designed for any possible future extensions, this message appears as a warning and not as a conflict



→ On the other hand, a conflict arises if an existing Mezzanine card does not find a corresponding connection blade in the chassis.

The currently 'superfluous' Mezzanine card can on account of the missing connection blade also not be assigned to a Mezzanine card slot.

KR-Mezz-Typ				
KR-Bx900 - Dual Server Blade PRIMERGY BX 920 S1 TEST				
Product no.	Description	Slot	Mezz-1	Mezz-2
KR-S26361-F3332-E1	10 Gbit Ethernet - Mezz	●		
KR-S26361-F3874-E1	8 Gbit FC - Mezz			✓

For further Information:

German/English http://partners.fujitsu-siemens.com/order_supply/configurators/
German: www.fujitsu-siemens.de/Konfigurator
English: www.fujitsu-siemens.com/Configurator

Training Offer

Training programs are offered on the topic of 'Configuration Tools' and can be adapted to meet the needs of the individual participant group.

Course objectives: To provide a functional and performance overview
To create simple and complex configurations
To provide practical experience of tool handling through exercises

Target group: Technical consultants, sales employees (with or without previous knowledge of the tool) with the relevant product know-how

Language: German and English

Duration: 3 hours to 2 days (depending on individual needs)

Possible topics: Selection of systems, add-on and upgrade components
Configuration of individual systems
Assembly of racks and rack modules
Handling offer packages
Special functions for PRIMERGY, PRIMEPOWER, PRIMEQUEST, SPARC-Enterprise and CentricStor
External cabling / Handling the cabling wizard
Plausibility checking
Creation and use of configuration templates
Import and export functions

Contact: christian.buechner@fujitsu-siemens.com

Registration for 1-day standard training: <http://www.fujitsu-siemens.de/rl/workshops/architect/>

(The standard training courses are only in German, in English on request)