

Struct Actions

Struct actions are complex data actions designed to be used with [XINA Structs](#). Unlike most API actions, they may involve complex multi-step operations, and are dependent on the structs configuration of groups and databases.

Data Actions

STRUCT BUFFER IMPORT

Imports a buffer source file into a model.

Property	Value	Req	Default
action	"struct_buffer_import"	?	
model	model group specifier	?	
origin	origin name	?	
object_id	object ID of data file	?	
format	string	?	
conf	jsonobject		
strict_units	boolean		false

If the `mn` column is an integer it will be interpreted as a literal mnemonic ID. Otherwise the name will be parsed from this format:

```
<name>[(<unit>[;n0=v0|n1=v1|...])]
```

`<name>` will be used for the mnemonic name lookup. The comparison is case insensitive and any whitespace is treated as a single underscore. `<unit>` is optional. If provided, it must match the unit of an associated mnemonic definition, otherwise an error is thrown. The section after unit defines discrete value mapping.

When a data set is imported the XINA server will run the following steps:

- For each row:
 - validate time and value
 - process mnemonic
 - If mnemonic ID
 - If found in definitions database:
 - If mnemonic is deprecated, throw error
 - Else, use mnemonic for row
 - Else, throw error due to unrecognized ID
 - Else, parse name and optional unit
 - If name match found:
 - If unit is provided and does not match, throw error

- If mnemonic is deprecated, throw error
 - Else, use mnemonic for row
- Else, mnemonic is new, create new temporary mnemonic definition based on provided information
- If any rows contain same mnemonic and time, throw error
- Check for time overlap in database
 - If found
 - If `on_overlap = fail`, throw error
 - Else If `on_overlap = delete`, delete all data from database in time range of imported data
 - Else (`on_overlap = ignore`), do nothing
- If new mnemonic definitions created, insert into mnemonic definition database
- Insert data into mnemonic database

STRUCT MN ALIAS

Adds one or more aliases of name/unit pairs to a single existing mnemonic.

Property	Value
<code>action</code>	<code>"struct_mn_edit"</code>
<code>database</code>	mnemonic definition database specifier
<code>mn</code>	mnemonic ID
<code>aliases</code>	<code>string[]</code> , name/unit pair alias(es) for mnemonic

STRUCT MN EDIT

Edits one or more properties of a single existing mnemonic.

Property	Value	Required
<code>action</code>	<code>"struct_mn_edit"</code>	?
<code>database</code>	mnemonic definition database specifier	?
<code>mn</code>	mnemonic ID	?
<code>name</code>	<code>string</code> , new name/unit pair for mnemonic	
<code>state</code>	<code>string</code>	

STRUCT MN MERGE

Merges one or more existing mnemonics into a single existing mnemonic.

STRUCT INT OPEN

Opens one or more intervals in a model.

STRUCT INT CLOSE

Closes one or more intervals in a model.

Schema Actions

STRUCT CREATE

The STRUCT CREATE action is used to create a variety of XINA Structs compatible schema elements.

STRUCT CREATE PROJECT

Creates a structs project group.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"project"</code>	?	
parent	group specifier		
name	<code>string</code>	?	
label	<code>string</code>		name
desc	<code>string</code>		label

If a `parent` group is specified, it may not include a structs definition (since project groups must be at the top level of a struct heirarchy). The `name` (and `label`, if provided) must not be in use by any group siblings, or the action will fail.

STRUCT CREATE CATEGORY

Creates a structs category group.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"category"</code>	?	
parent	group specifier	?	
name	<code>string</code>	?	
label	<code>string</code>		name
desc	<code>string</code>		label

The `parent` group must be either a project group or category group, or the action will fail. The `name` (and `label`, if provided) must not be in use by any group siblings, or the action will fail.

STRUCT CREATE MODEL

Creates a structs model group.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"model"</code>	?	
parent	group specifier	?	
name	<code>string</code>	?	
label	<code>string</code>		name
desc	<code>string</code>		label
event	<code>boolean</code>		<code>false</code>
eventf	<code>boolean</code>		<code>false</code>
eventfs	<code>boolean</code>		<code>false</code>
group_teams	team group privilege map		
database_teams	team database privilege map		

The `parent` group must be either a project group or category group, or the action will fail. The `name` (and `label`, if provided) must not be in use by any group siblings, or the action will fail.

STRUCT CREATE ORIGIN

Creates a structs origin group.

Property	Value	Required	Default
action	<code>"struct_create"</code>	?	
create	<code>"origin"</code>	?	
model	group specifier	?	
name	<code>string</code>	?	
label	<code>string</code>		name
desc	<code>string</code>		label
event	<code>boolean</code>		<code>false</code>
eventf	<code>boolean</code>		<code>false</code>
eventfs	<code>boolean</code>		<code>false</code>
group_teams	team group privilege map		
database_teams	team database privilege map		
partition	<code>boolean</code> or <code>{ "from": <start year>, "to": <end year> }</code>		<code>false</code>

The `parent` group must be either a project group or category group, or the action will fail. The `name` (and `label`, if provided) must not be in use by any group siblings, or the action will fail.

STRUCT CREATE DEF

Creates a structs definitions group, with associated databases.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"def"</code>	?	
parent	group specifier	?	

The `parent` group must be either a project, category, or model group, or the action will fail.

STRUCT CREATE EVENT

Creates a new structs event database.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"event"</code>	?	
group	group specifier	?	
type	<code>"none"</code> , <code>"file"</code> , or <code>"files"</code>		<code>"none"</code>
name	string		<code>"event"</code> , <code>"eventf"</code> , or <code>"eventfs"</code>
label	string		name
desc	string		label
singular	string		<code>"event"</code>
plural	string		singular <code>s</code>
conf	JSON object		
fields	array of field definitions		
teams	team database privilege map		

STRUCT CREATE NOTEBOOK

Creates a new structs notebook database.

Property	Value	Req	Default
action	<code>"struct_create"</code>	?	
create	<code>"notebook"</code>	?	
parent	group specifier	?	
name	string	?	
label	string		name

Property	Value	Req	Default
desc	string		label
fields	array of field definitions		
teams	team database privilege map		

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