

# Create Dynamic Table for Structure using Runtime Type Identification (RTTI)

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Another variant to class CL\_ALV\_TABLE\_CREATE that was described on the page

## Dynamic Internal table

is the use of Runtime Type Identification classes (RTTI classes).

As described in the earlier blog, there are cases where the structure and table type are not known at design time. For example if you want to create a generic method with input parameters of 'type ref to data'. There are multiple descriptor classes provided by SAP Basis:

- CL\_ABAP\_TYPEDDESCR
- CL\_ABAP\_DATADESCR
- CL\_ABAP\_STRUCTDESCR
- CL\_ABAP\_TABLEDESCR

see also [https://help.sap.com/doc/abapdocu\\_750\\_index\\_htm/7.50/en-US/abapassign\\_mem\\_area\\_dynamic\\_dobj.htm](https://help.sap.com/doc/abapdocu_750_index_htm/7.50/en-US/abapassign_mem_area_dynamic_dobj.htm)

Below some coding examples how to use them...

### Create a dynamic structure

```
DATA lr_structdescr TYPE REF TO cl_abap_structdescr.  
DATA lr_structure TYPE REF TO data.  
lr_structdescr ?= cl_abap_typedescr=>describe_by_data_ref( ir_data ).  
CREATE DATA lr_structure TYPE HANDLE lr_structdescr.  
ASSIGN lr_structure->* TO FIELD-SYMBOL(<fs_structure>).
```

### Create a dynamic table of a known structure

```
DATA lr_table TYPE REF TO data.  
DATA lr_structdescr TYPE REF TO cl_abap_structdescr.  
lr_structdescr ?= cl_abap_typedescr=>describe_by_data_ref( ref #( ls_structure ) ).  
DATA lr_tabledescr TYPE REF TO cl_abap_tabledescr.  
lr_tabledescr ?= cl_abap_tabledescr=>create( p_line_type = lr_structdescr ).  
CREATE DATA lr_table TYPE HANDLE lr_tabledescr.  
ASSIGN lr_table->* TO FIELD-SYMBOL(<ft_table>).
```

**You can of course add to the first example and create the dynamic table out of the dynamic structure**

```
DATA lr_structdescr TYPE REF TO cl_abap_structdescr.  
DATA lr_structure TYPE REF TO data.
```

```
lr_structdescr ?= cl_abap_typedescr=>describe_by_data_ref( ir_data ).  
CREATE DATA lr_structure TYPE HANDLE lr_structdescr.  
lr_tabledescr ?= cl_abap_tabledescr=>create( p_line_type = lr_structdescr ).  
CREATE DATA lr_table TYPE HANDLE lr_tabledescr.  
ASSIGN lr_table->* TO FIELD-SYMBOL(<ft_table>).
```

### **Accessing a specific field of dynamic structure**

```
ASSIGN COMPONENT 'key' OF STRUCTURE <fs_structure> TO FIELD-SYMBOL(<lv_key>).
```

Here 'key' is a data field of the structure.

No labels