

Process for Adding SAI Extensions

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| **Title** | **Process for Adding SAI Extensions** |
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# SAI Extensions

SAI Extensions can be used for introducing custom attributes and experimental or extension modules.

* Custom attributes – specific to a particular SAI implementation
* Experimental/Extension SAI Modules

## Custom Attributes

Normally reserve a numeric range of 128 values for each SAI implementation that defines custom SAI attributes. Custom SAI attributes are defined in the header file of the module they belong to. For instance:

saiport.h

typedef enum \_sai\_port\_attr\_t

{

…

/\*\* Custom range base value \*/

SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_START = 0x10000000,

SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_SAI\_IMPL\_X\_START = SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_START,

SAI\_PORT\_ATTR\_CAPABILITY\_X,

…

SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_SAI\_IMPL\_X\_END = SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_START + 0x7F

…

/\*\* End of custom range base \*/

SAI\_PORT\_ATTR\_CUSTOM\_RANGE\_END

} sai\_port\_attr\_t;

Do NOT use the word CUSTOM in the attribute name. It will make it easier to move it to the main stream attribute list if the OCP community agrees on it.

## Experimental/Extension SAI Modules

Each experimental SAI Module must define its own header file, as any regular module.

The module **must** contain a doxygen warning, to state that it is an extension, and thus may not be supported by all SAI implementations.

The module description must state what SAI implementation(s) support this module.

/\*\*

…

\* @file saiextensionmodule.h

\*

\* @brief This module defines a …

\* **@description Supported only by Acme Corp. SAI Implementation**

\* **@warning This module is a SAI extension module**

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Extension module APIs are added to sai.h file. The documentation of the module name must state that the module is an extension. However, do not use any indication that the module is an extension in the enum itself. It will make it easier to move it to the main stream API list if the OCP community agrees on it.

typedef enum \_sai\_api\_t

{

SAI\_API\_UNSPECIFIED = 0, /\*\*< unspecified api \*/

SAI\_API\_SWITCH = 1, /\*\*< sai\_switch\_api\_t \*/

…

**SAI\_API\_CUSTOM\_RANGE\_START = 0x1000,**

**/\*\* Extension module provided by Acme Corp. \*/**

**SAI\_API\_ACME\_MODULE = SAI\_API\_CUSTOM\_RANGE\_START + 1,**

} sai\_api\_t;