

Code examples

###

Example: C++ Tango client

```
/*
 * example of a client using the TANGO C++ api.
 */
#include <tango.h>
using namespace Tango;
int main(unsigned int argc, char **argv)
{
    try
    {
        //
        //
        // create a connection to a TANGO device
        DeviceProxy *device = new DeviceProxy("sys/database/2");
        //
        //
        // Ping the device
        device->ping();
        //
        //
        // Execute a command on the device and extract the reply as a string
        string db_info;
        DeviceData cmd_reply;
        cmd_reply = device->command_inout("DbInfo");
        cmd_reply >> db_info;
        cout << "Command reply " << db_info << endl;
        //
        // Read a device attribute (string data type)
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        //
        string spr;
        DeviceAttribute att_reply;
        att_reply = device->read_attribute("StoredProcedureRelease");
        att_reply >> spr;
        cout << "Database device stored procedure release: " << spr << endl;
    }
    catch (DevFailed &e)
    {
        Except::print_exception(e);
        exit(-1);
    }
}
```

###

Example: DevSimple

```
1 Tango::DevFloat DocDs::dev_simple(Tango::DevFloat argin)
2 {
3
4
5
6
7
8 Tango::DevFloat argout ;
9 DEBUG_STREAM << "DocDs::dev_simple(): entering... !" << endl;
10 // Add your own code to control device here
11 argout = argin * 2;
```

```
9 return argout;
10 }
```

###

Example: DevArray

```
Tango::DevVarLongArray *DocDs::dev_array(const Tango::DevVarLongArray *argin)
2 {
3 // POGO has generated a method core with argout allocation.
4 // If you would like to use a static reference without copying
5 // See "TANGO Device Server Programmer's Manual"
6 // (chapter x.x)
7 //-----
8 Tango::DevVarLongArray *argout = new Tango::DevVarLongArray();
9
10 DEBUG_STREAM << "DocDs::dev_array(): entering... !" << endl;
11
12 // Add your own code to control device here
13
14 long argin_length = argin->length();
15 argout->length(argin_length);
16 for (int i = 0; i < argin_length; i++)
17 (*argout)[i] = (*argin)[i] * 2;
18
19 return argout;
20 }
```

###

Example: DevString

```
Tango::DevString DocDs::dev_string(Tango::DevString argin)
2 {
3 // POGO has generated a method core with argout allocation.
4 // If you would like to use a static reference without copying
5 // See "TANGO Device Server Programmer's Manual"
6 // (chapter x.x)
7 //-----
8 Tango::DevString argout;
9 DEBUG_STREAM << "DocDs::dev_string(): entering... !" << endl;
10
11 // Add your own code to control device here
12
13 cout << "the received string is " << argin << endl;
14
15 string str("Am I a good Tango dancer ?");
16 argout = new char[str.size() + 1];
17 strcpy(argout, str.c_str());
18
19 return argout;
20 }
```

###

Example: DevStrArray

```
1 Tango::DevVarStringArray *DocDs::dev_str_array()
2 {
3 // 4 // POGO has generated a method core with argout allocation.
```

```

If you would like to use a static reference without copying
5 // See "TANGO Device Server Programmer's Manual"
6 // (chapter x.x)
7 //-----
8 Tango::DevVarStringArray *argout = new Tango::DevVarStringAr
9
10 DEBUG_STREAM << "DocDs::dev_str_array(): entering... !" << endl;
11
12 // Add your own code to control device here
13
14 argout->length(3);
15 (*argout)[0] = CORBA::string_dup("Rumba");
16 (*argout)[1] = CORBA::string_dup("Waltz");
17 string str("Jerck");
18 (*argout)[2] = CORBA::string_dup(str.c_str());
19 return argout;
20 }

###

```

Example: DevStruct

```

1 Tango::DevVarDoubleStringArray *DocDs::dev_struct()
2 {
3 // POGO has generated a method core with argout allocation.
4 // If you would like to use a static reference without copying
5 // See "TANGO Device Server Programmer's Manual"
6 // (chapter x.x)
7 //-----
8 Tango::DevVarDoubleStringArray *argout = new Tango::DevVarDoubleSt
9
10 DEBUG_STREAM << "DocDs::dev_struct(): entering... !" << endl;
11
12 // Add your own code to control device here
13
14 argout->dvalue.length(3);
15 argout->dvalue[0] = 0.0;
16 argout->dvalue[1] = 11.11;
17 argout->dvalue[2] = 22.22;
18
19 argout->svalue.length(2);
20 argout->svalue[0] = CORBA::string_dup("Be Bop");
21 string str("Smurf");
22 argout->svalue[1] = CORBA::string_dup(str.c_str());
23

###

```

Example: read_attr_hardware

```

1 void DocDs::read_attr_hardware(vector<long> &attr_list)
2 {
3 DEBUG_STREAM << "DocDs::read_attr_hardware(vector<long> &attr_list) entering.
4 // Add your own code here
5
6 string att_name;
7 for (long i = 0; i < attr_list.size(); i++)
8 {
9 att_name = dev_attr->get_attr_by_ind(attr_list[i]).get_name();
10

```

```

11 if (att_name == "LongRdAttr")
12 {
13   attr_rd = 5;
14 }
15 }
16 }
18 void DocDs::read_LongRdAttr(Tango::Attribute &attr)
19 {
20 21
23 }
24
26 {
27 28
30 }
31
33 {
34 35
37 38 }
39
41 {
42 43
46
48 }
DEBUG_STREAM << "DocDs::read_LongRdAttr(Tango::Attribute &attr) entering...
22 attr.set_value(&attr_rd);
25 void DocDs::read_LongWrAttr(Tango::Attribute &attr)
DEBUG_STREAM << "DocDs::read_LongWrAttr(Tango::Attribute &attr) entering...
29 attr.set_value(&attr_wr);
32 void DocDs::write_LongWrAttr(Tango::WAttribute &attr)
DEBUG_STREAM << "DocDs::write_LongWrAttr(Tango::WAttribute &attr) entering..
36 attr.get_write_value(attr_wr);
DEBUG_STREAM << "Value to be written = " << attr_wr << endl;
40 void DocDs::read_StrAttr(Tango::Attribute &attr)
DEBUG_STREAM << "DocDs::read_StrAttr(Tango::Attribute &attr) entering... "<<
44 attr_str_array[0] = CORBA::string_dup("Rock");
45 attr_str_array[1] = CORBA::string_dup("Samba");
47 attr_set_value(attr_str_array, 2);

###

```