TANGO Kernel Development News

Reynald Bourtembourg
Igor Khokhriakov
On behalf of the Tango Kernel Team
Overview

• cppTango V10
• cppTango 9 LTS
• Kernel Teleconf Meetings
• JTango
• Future plans
cppTango – V10 (master)

Tango 9 LTS is now the default branch
cppTango – V10 (master)

- Dynamic Forwarded Attributes (#342) (PR from Jairo Moldes)
cppTango – V10 (master)

• PR Commands with PipeBlob in/out (#378) (Not yet supported by POGO)
• Example: test_DevicePipeBlob() in test/cpp_test_suite/new_tests/cxx_cmd_types.cpp (master branch)
DevicePipeBlob in{"TestPipeCmd"};
DeviceData din, dout;

vector <string> names{"long","double","string","double array"};
in.set_data_elt_names(names);
DevLong long_data = 123;
in["long"] << long_data;
DevDouble double_data = 3.14;
in["double"] << double_data;
string data_str = "String value";
in["string"] << data_str;
vector<double> double_array = {0.1, -0.02, 0.003, -0.0004};
in["double array"] << double_array;
din << in;

dout = device->command_inout("IOPipeBlob", din);
int data_type = dout.get_type();
TS_ASSERT_EQUALS(data_type, Tango::DEV_PIPE_BLOB);
DevicePipeBlob received{};
dout.extract(&received);
cppTango – V10

Coveralls (Tests Code Coverage measurement tool) (IK)

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cppTango – Tango 9 LTS

Continuous Integration with AppVeyor

Sebastien Gara - NEXEYA
cppTango

**LATEST BUILD**

**Update RELEASE_NOTES with #458 and #459**

6 days ago by Reynald Bourtembourg (committed by GitHub)

**UPDATE**

**0.0.193**

6 days ago in 2 hr 36 min

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**JOB NAME**

- Environment: platform=x64, ARCH=x64-msvc14, configuration=Release, CMAKE_GENERATOR=Visual Studio 14 2015 Win64
- Environment: platform=x64, ARCH=x64-msvc12, configuration=Release, CMAKE_GENERATOR=Visual Studio 12 2013 Win64
- Environment: platform=x64, ARCH=x64-msvc10, configuration=Release, CMAKE_GENERATOR=Visual Studio 10 2010 Win64
- Environment: platform=x64, ARCH=x64-msvc9, configuration=Release, CMAKE_GENERATOR=Visual Studio 9 2008 Win64

**TESTS**

- 15 min 27 sec
- 17 min 56 sec
- 27 min 52 sec
- 25 min 13 sec
- 30 min 43 sec
- 38 min 49 sec
Update RELEASE_NOTES with #458 and #459
6 days ago by Reynald Bourtembourg (committed by GitHub)

Environment: platform=x64, ARCH=x64-msvc12, configuration=Release, CMAKE_GENERATOR=Visual Studio 12 2013
Win64, MSVCVERSION=v120, MSVCYEAR=vs2013, VC_VER=13.0, PYTHONPATH=OMNI=/cygdrive
C\Python33-x64/python, BOOST_ROOT=C:\Libraries\boost_1_63_0, ZMQ_BASE=C:\projects\libzmq, IDL_BASE=C:\projects\tangoIdl, OMNIBASE=C:\projects\omniORB-4.2.1

The last 2,000 lines of the build log are shown. Display or download complete log.

06/06/2018
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Tango 9 LTS

cppTango

Update RELEASE_NOTES with #458 and #459

6 days ago by Reynald Bourtembourg (committed by GitHub)

Environment: platform=x64, ARCH=x64-msvc12, configuration=Release, CMAKE_GENERATOR=Visual Studio 12 2013 Win64, MSVCCVERSION=v120, MSVCYEAR=vs2013, MSVCABR=13, VC_VER=13.0, PYTHONPATHOMNI=/cygdrive/c/Python33-x64/python, BOOST_ROOT=C:\Libraries\boost_1_63_0, ZMQ_BASE=C:\projects\libzmq, IDL_BASE=C:\projects\tangoidl, IDL_BIN=C:\Program Files\tangoidl, OMNI_BASE=C:\projects\omniORB-4.2.1

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</tr>
</tbody>
</table>
Tango 9 LTS

- Msi installer does not install Tango Database and Tango tools
- Only the needed C++ libraries and includes:
  - Tango
  - ZMQ
  - omniORB
Tango 9 LTS

Welcome to the Tango Setup Wizard

The Setup Wizard will install Tango on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
Tango 9 LTS

Ready to install Tango

Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard.
Tango 9 LTS

Installing Tango

Please wait while the Setup Wizard installs Tango.

Status:

Back  Next  Cancel
Tango 9 LTS

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What’s next?

• Visual Studio 2017 support
• Move omniORB and ZMQ builds to tango-controls repositories
• Fix appveyor build in master branch
Tango 9 LTS

Cmake release targets PR(#438)

Git tag → Debian development packages
Automatic build + Deployment on

JFrog Bintray
Tango 9 LTS

Owned Repositories

Search by repository name

<table>
<thead>
<tr>
<th>All (4)</th>
<th>Public (4)</th>
<th>Private (0)</th>
<th>OSS (4)</th>
<th>Premium (0)</th>
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<tr>
<td>jtango</td>
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</tr>
</tbody>
</table>

32 packages
10 packages
2 packages
7 packages

General

Location  Planet Earth
Email      info@tango-controls.org
Website    http://www.tango-controls.org
Twitter    
GitHub     tango-controls

Members (8)

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Tango 9 LTS

cppTango

TANGO kernel c++ implementation

9.3.1
May 23, 2018

TANGO Controls
Tango 9 LTS

- Downloading
- Resolving .deb packages

Using the command line, add the following to your /etc/apt/sources.list system config file:

```
echo "deb https://dl.bintray.com/tango-controls/debian {distribution} {components}" |
```

Or, add the repository URLs using the "Software Sources" admin UI:

```
deb https://dl.bintray.com/tango-controls/debian {distribution} {components}
```

- Using this repo with cURL

Packages are not signed!
Tango 9 LTS

- Dynamic Forwarded Attributes (#342) (PR from Jairo Moldes backported from master)
- Event subscription sleeps reduced to 1ms/0.5ms on Linux (#415) (PR from Sergi Rubio)
Tango 9 LTS

CPU load when device has large number of attributes (#424)

➔ Use a map instead of vector to store the attribute list

PR #430 and #458
Tango 9 LTS

- Many compilation Warnings fixes (Thomas Braun, Reynald Bourtembourg)
- Clang support (Thomas Braun)
- Doxygen improvements (Thomas Braun)
- Improved support for old compilers
- Many bugs fixed (Emmanuel Taurel, Reynald Bourtembourg, ...)

06/06/2018

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cppTango – Tango 9 LTS

• Bug fixed
  – push_change_event() - events stop being issued after some time
    (Matej Komel) (#444)
Due to a bug in ZMQ 4.2.0 and 4.2.1
Work-around suggested by Matej and implemented in PR #445
Tango 9 LTS

Attempt to improve the event system (#423,#315)

Goals:

• Better handling of network aliases
• Solve some issues with events coming from localhost
• Attribute name used in the AttributeProxy constructor will be used in the received events
Tango 9 LTS

Attempt to improve the event system (#423,#315)

First results were very promising!

cppTango 9.3.0 was released!
Tango 9 LTS

cppTango 9.3.0 was released!

BAD IDEA
Some Things Are Just A Bad Idea!!!
cppTango 9.3.0 was released!

- Incompatibilities with Tango 8 and 7 events
- Reconnection works only for the last subscribed event

→ 9.3.0 and 9.3.1 downgraded as pre-release versions

Lesson learnt: Next official release will be announced after deployment on a big control system (ESRF) without any major issue during several weeks. Tests need to improved!
Tango Kernel Teleconf Meetings

• Mainly Core Members + kernel developers
• On https://appear.in/tango-kernel
• To give regular news about the current kernel development status and general Tango News
• Technical discussions (support for old compilers, backwards-compatibility)
• Assign priorities
cppTango – Tango 9 LTS

Tango 9 Long Term Support cppTango GitHub Project
(https://github.com/tango-controls/cppTango/projects/5)
DatabaseDS

- Access Control @ DatabaseDS level

PR TangoDatabase#8 (Alessio Bogani)
JTango

- JTango_9_LTS
  - sync with maven central
  - Javadoc
- tango-idl has been mavenized
  - sync with maven central
## J Tango

### The Central Repository

**Search Results**

<table>
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<th>GroupId</th>
<th>ArtifactId</th>
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<th>Updated</th>
<th>Download</th>
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<td>9.3.10</td>
<td>21-Oct-2017</td>
<td>pom</td>
</tr>
</tbody>
</table>
JTango

SonarCloud

JavaDoc

You can choose the specific version of the library via drop down box after following the links below:

JTangoServer 10.0.0  JTangoClientLang 10.0.0  JTangoCommons 10.0.0  TangORB 10.0.0  JavaTangoIDL 10.0.0
Future plans (Q'4 2018)

- Concentrate on cppTango_9_LTS
- Back port new features/code restructure (tests) from v10
- Improve event system
- Reincarnate TangoSourceDistribution
- REST API rc5&rc6
- V10 design document
Thank you!
Any questions?
https://gist.github.com/Ingvord/fde0164edc94691eb3dd23a1ac36c4b8

https://github.com/Ingvord/tango-v10-design-doc