

The PDF of the images can be downloaded

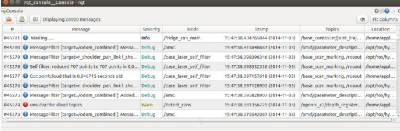
here

ROS Indigo Cheatsheet

Logging Tools

rqt.console

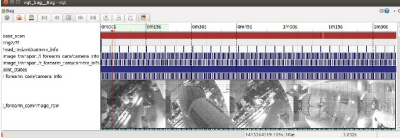
A tool to display and filtering messages published on rosout.



Usage:
\$ rqt.console

rqt.bag

A tool for visualizing, inspecting, and replaying bag files.



Usage, viewing:
\$ rqt.bag bag_file.bag
Usage, bagging:
\$ rqt.bag *press the big red record button.*

rqt_logger_level

Change the logger level of ROS nodes. This will increase or decrease the information they log to the screen and rqt.console.

Usage:
viewing \$ rqt_logger_level

Introspection & Command Tools

rqt.topic

A tool for viewing published topics in real time.

Usage:
\$ rqt
Plugin Menu->Topic->Topic Monitor

rqt.msg, rqt.srv, and rqt.action

A tool for viewing available msgs, srvs, and actions.

Usage:
\$ rqt
Plugin Menu->Topic->Message Type Browser
Plugin Menu->Service->Service Type Browser
Plugin Menu->Action->Action Type Browser

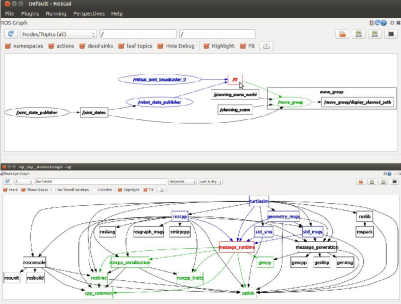
rqt_publisher, and rqt_service_caller

Tools for publishing messages and calling services.

Usage:
\$ rqt
Plugin Menu->Topic->Message Publisher
Plugin Menu->Service->Service Caller

rqt_graph, and rqt_dep

Tools for displaying graphs of running ROS nodes with connecting topics and package dependencies respectively.



Usage:
\$ rqt_graph
\$ rqt_dep

rqt_top

A tool for ROS specific process monitoring.

Usage:
\$ rqt
Plugin Menu->Introspection->Process Monitor

rqt_reconfigure

A tool for dynamically reconfiguring ROS parameters.

Usage:
\$ rqt
Plugin Menu->Configuration->Dynamic Reconfigure

Development Environments

rqt_shell, and rqt_py_console

Two tools for accessing an xterm shell and python console respectively.

Usage:
\$ rqt
Plugin Menu->Miscellaneous Tools->Shell
Plugin Menu->Miscellaneous Tools->Python Console

Data Visualization Tools

tf_echo

A tool that prints the information about a particular transformation between a source.frame and a target.frame.

Usage:
\$ rosrn tf tf_echo <source_frame> <target_frame>

Examples:
To echo the transform between /map and /odom:
\$ rosrn tf tf_echo /map /odom

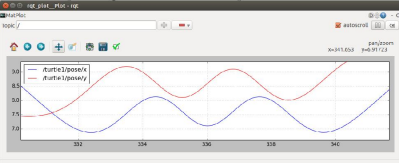
view_frames

A tool for visualizing the full tree of coordinate transforms.

Usage:
\$ rosrn tf2.tools view.frames.py
\$ evince frames.pdf

rqt_plot

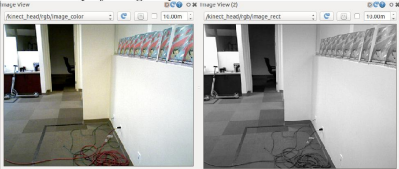
A tool for plotting data from ROS topic fields.



Examples:
To graph the data in different plots:
\$ rqt_plot /topic1/field1 /topic2/field2
To graph the data all on the same plot:
\$ rqt_plot /topic1/field1,topic2/field2
To graph multiple fields of a message:
\$ rqt_plot /topic1/field1:field2:field3

rqt_image_view

A tool to display image topics.



Usage:
\$ rqt_image_view

ROS Indigo Catkin Workspaces

Create a catkin workspace

Setup and use a new catkin workspace from scratch.

Example:

```
$ source /opt/ros/hydro/setup.bash
$ mkdir -p ~/catkin_ws/src
$ cd ~/catkin_ws/src
$ catkin_init_workspace
```

Checkout an existing ROS package

Get a local copy of the code for an existing package and keep it up to date using `wstool`.

Examples:

```
$ cd ~/catkin_ws/src
$ wstool init
$ wstool set tutorials --git git://github.com/ros/ros-tutorials.git
$ wstool update
```

Create a new catkin ROS package

Create a new ROS catkin package in an existing workspace with `catkin create package`. After using this you will need to edit the `CMakeLists.txt` to detail how you want your package built and add information to your `package.xml`.

Usage:

```
$ catkin_create_pkg <package.name> [depend1] [depend2]
```

Example:

```
$ cd ~/catkin_ws/src
$ catkin_create_pkg tutorials std_msgs roscpp
```

Build all packages in a workspace

Use `catkin make` to build all the packages in the workspace and then source the `setup.bash` to add the workspace to the `ROS_PACKAGE_PATH`.

Examples:

```
$ cd ~/catkin_ws
$ ~/catkin_make
$ source devel/setup.bash
```

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