

ROS Jazzy Jalisco

--- What's new for ROS 2 core ---

see more details to

<https://docs.ros.org/en/jazzy/Releases/Release-Jazzy-Jalisco.html>



Jazzy Documentation

Installation, Tutorials, How-to Guides and Packages are available.



Supported Platform

- Tier 1 platforms
 - **Ubuntu 24.04 Nobel** (amd64 / aarch64)
 - Windows 10 (VS 2019) (amd64)
- Tier 2 platforms
 - RHEL 9 (amd64)
- Tier 3 platforms
 - macOS (amd64)
 - Debian Bookworm (amd64)

New Features

Preview RMW Zenoh

A new ROS MiddleWare (RMW) that integrates [Zenoh](#) with ROS 2 and [rmw_zenoh](#) is now available. However, it is still a preview because there are some known bugs in it, and we aren't quite ready to commit to it for the long term.

[rmw_zenoh](#) is one of `Non-DDS` RMW implementations.

Note that [rmw_zenoh](#) requires `Zenh Router` daemon running.

To use, we need to compile ROS 2 Jazzy from source along with the [rmw_zenoh](#).



```
### Start the zenoh router
ros2 run rmw_zenoh_cpp rmw_zenohd

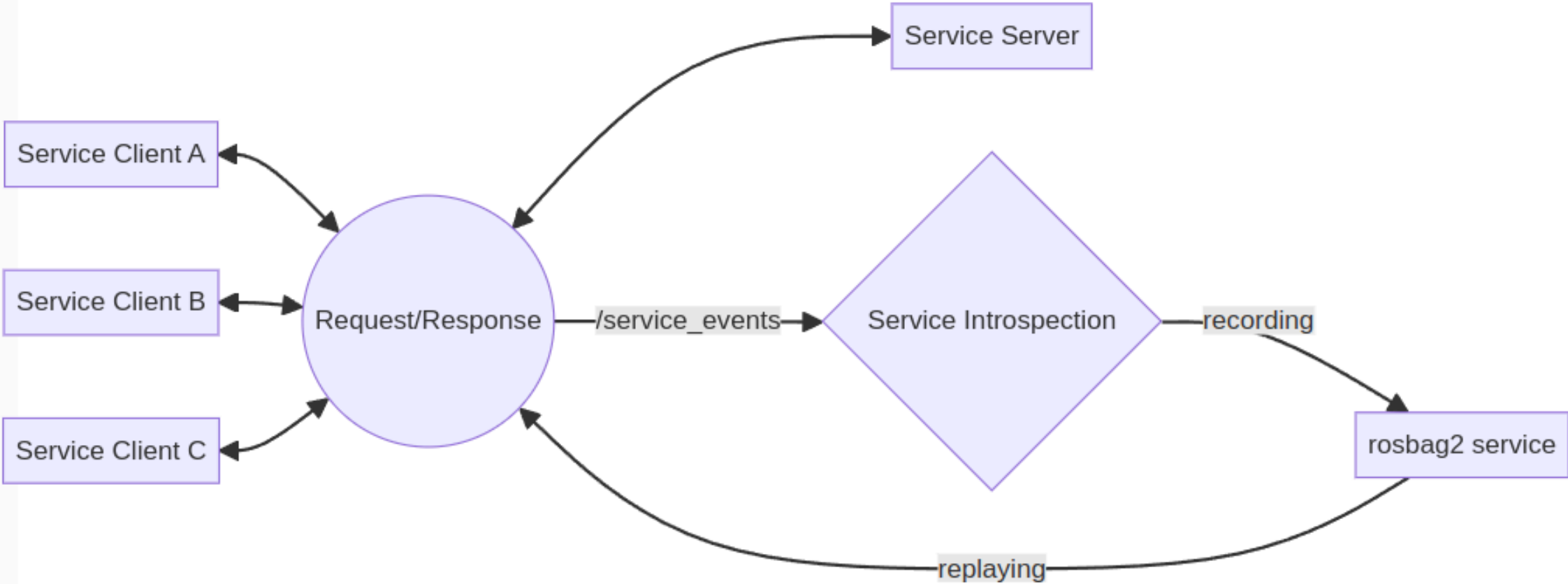
### Talker and Listener
RMW_IMPLEMENTATION=rmw_zenoh_cpp ros2 run demo_nodes_cpp talker
RMW_IMPLEMENTATION=rmw_zenoh_cpp ros2 run demo_nodes_cpp listener
```

- By default, discovery traffic is only in local host system. If network communication is needed, we need to [configure zenoh router and restart](#).
- uses CDR as the serialization format. (Compatible with DDS based RMWs)

rosvbag2 record and replay service

This feature depends on [Service introspection](#) implemented in Iron. rosvbag2 takes advantage of it to record all service requests and responses, and also replays service data from the bag file.

This feature allows you to debug/enhance/test/simulate the ROS 2 services more efficiently.



- Recording

```
# All services and all topics  
ros2 bag record --all-services  
  
# All services  
ros2 bag record --all-services
```

- Playback

```
ros2 bag play --publish-service-requests bag_path
```

Please check out [Managing Service Data Tutorial](#) and [Design Document](#) for more information.

Core Feature Development

- [message_filters](#)
 - Now we can use `TypeAdapter` to the subscription, so that user defined message type can be declared and converted by user callback for the filtering process.
- [rcl](#)
 - `~/get_type_description` service is added to support upcoming feature [Evolving Message Type](#).

- `rclcpp`
 - `get_service_typesupport_handle` API is added to resolve service type at runtime. this is required by rosbag2 service playback which requires dynamic service type resolving.
- `ros2cli`
 - Now you can specify the log file name prefix with `--ros-args --log-file-name filename`. This is useful when you run with `ros2 run` because prefix is `python` by default.

- `rosbag2`
 - `Player` and `Recorder` are now exposed as `rclcpp` components. this brings the capability that you can record and play via intra-process communication with high performance.
 - `Compression threads priority control support`.
 - `Split bag files during conversion`.
 - bag files self-contain metadata. this means each bag file is self-contained, ready to play on anywhere.

- **ros2action**
 - `type` sub-command is now supported to look up the action type.

```
ros2 action type /fibonacci  
action_tutorials_interfaces/action/Fibonacci
```

Core Updates from Iron Irwini

- **rcl**
 - **rcl_timer_call_with_info** is added to allow user application know expected timer call time and when actual timer is called. e.g user application can know the jitter and delay for the timer.
 - **rcl_wait improvement** to avoid spurious wake-ups.
- **rclcpp**
 - **Data Racy Condition Improvement.**
 - **Enhancement rclcpp::WaitSet.**
 - **rclcpp::get_typesupport_handle** is deprecated.
 - **Actual and expected call time when timer is called.**
 - **Entity Execution Order is NOT predictable (W.I.P).**

- `rclcpp_action`
 - `Safely release goal handle`, to drop the handle in a locked context.
- `rclpy`
 - `forbid parameter to be declared statically without initialization`.
 - Several `TypeDescriptionsInterface` enhancement for `Evolving Message Type`.

- **rosvbag2**
 - **--exclude CLI option was renamed to the --exclude-regex** (part of rosvbag2 service development).
 - **Add node name to the Read(Write)SplitEvent message** to support multiple rosvbag2 instance.
 - **Signal Handling Enhancement.**
 - **Add topic_id returned by storage to the TopicMetadata**, performance improvement with id but topic names via storage backend and tell multiple topics with id.
 - **Improve performance in SqliteStorage::get_bagfile_size()**

See you at **ROSCon 2024**

Odense, Denmark

October 21st - 23rd, 2024

