

# r2s: A Terminal User Interface for ROS 2



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# k9s -> r2s

```
Context: minikube
Cluster: minikube
User: minikube
K9s Rev: dev
K8s Rev: v1.17.3
CPU: 5%
MEM: 17%

<0> all
<1> kube-system
<2> default

<a> Attach
<ctrl-d> Delete
<d> Describe
<e> Edit
<ctrl-k> Kill
<l> Logs

<ctrl-j> Logs (jq)
<ctrl-l> Logs <Stern>
<shift-l> Logs Previous
<shift-f> Port-Forward
<s> Shell
<y> YAML
```



```
Pod(s)[23]
NAMESPACE+ NAME READY RESTART STATUS CPU MEM %CPU/R %MEM/R %CPU/L %MEM/L IP NODE
default hello-1582785780-lsrtd 0/1 0 Completed n/a n/a n/a n/a n/a n/a 172.17.0.12 minikube
default hello-1582785840-rq8h5 0/1 0 Completed n/a n/a n/a n/a n/a n/a 172.17.0.12 minikube
default hello-1582785900-4zbfk 0/1 0 Completed n/a n/a n/a n/a n/a n/a 172.17.0.12 minikube
default jaeger-5bbc8c887-cmjj7 1/1 1 Running 0 7 0 3 0 3 172.17.0.11 minikube
default nginx 1/1 1 Running 0 4 0 0 0 0 172.17.0.10 minikube
default nginx-6fbbbd48c-5kv5p 1/1 0 Running 0 2 0 28 0 14 172.17.0.15 minikube
default nginx-6fbbbd48c-7xn7j 1/1 0 Running n/a n/a n/a n/a n/a n/a 172.17.0.7 minikube
default nginx-6fbbbd48c-bmqj 1/1 0 Running n/a n/a n/a n/a n/a n/a 172.17.0.13 minikube
default nginx-6fbbbd48c-jf944 1/1 0 Running n/a n/a n/a n/a n/a n/a 172.17.0.12 minikube
default nginx-6fbbbd48c-xwjnb 1/1 0 Running 0 3 0 39 0 19 172.17.0.14 minikube
kube-system coredns-6955765f44-2pkvx 1/1 1 Running 3 7 3 10 0 4 172.17.0.2 minikube
kube-system coredns-6955765f44-wr88k 1/1 1 Running 3 7 3 10 0 4 172.17.0.3 minikube
kube-system etcd-minikube 1/1 1 Running 20 29 0 0 0 0 192.168.64.15 minikube
kube-system fluentd-elasticsearch-vnt25 1/1 1 Running 1 51 1 25 0 25 172.17.0.5 minikube
kube-system kube-apiserver-minikube 1/1 1 Running 47 227 18 0 0 0 192.168.64.15 minikube
kube-system kube-controller-manager-minikube 1/1 2 Running 20 35 10 0 0 0 192.168.64.15 minikube
kube-system kube-proxy-sqs9s 1/1 1 Running 0 14 0 0 0 0 192.168.64.15 minikube
kube-system kube-scheduler-minikube 1/1 2 Running 4 12 4 0 0 0 192.168.64.15 minikube
kube-system metrics-server-6754dbc9df-t8x2n 1/1 1 Running 0 13 0 0 0 0 172.17.0.8 minikube
kube-system metrics-server-6754dbc9df-tz7kh 1/1 1 Running 0 10 0 0 0 0 172.17.0.6 minikube
kube-system storage-provisioner 1/1 2 Running 0 14 0 0 0 0 192.168.64.15 minikube
kubernetes-dashboard dashboard-metrics-scraper-7b64584c5c-5tjsh 1/1 1 Running 0 5 0 0 0 0 172.17.0.4 minikube
kubernetes-dashboard kubernetes-dashboard-79d9cd965-wbzzv 1/1 1 Running 0 11 0 0 0 0 172.17.0.9 minikube
```

```
<pulses> <pod>
```

# Our answer: r2s

In short: TUI wrapper of ROS 2 command line tools (`ros2cli`)

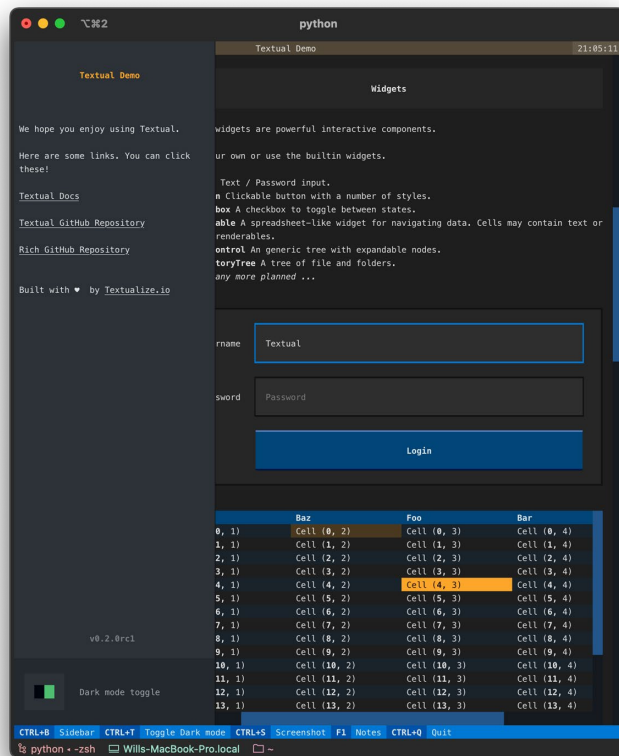


# Textual

Relatively new TUI library

API inspired by modern web development.

Includes mouse support, full color support, layout engine, and component library.



# Features of r2s

```
r2s Version: 0.0.1
ROS Version: rolling
Hostname:    dalinar.local
Workspace:  /home/mjcarroll/repos/r2s
```



Namespace	Name	Subscribers	Publishers	Nodes (visible) [0]	Service Servers	Service Clients	Lifecycle
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# Current features

- Nodes
- Topics, Services and Actions
- Filter based off search expressions
- Generic Header, GridView, and LogView Widgets
- Viewing logs from a node (WIP)



# Future ideas

- Parameters
- Publishing from r2s
- Changing phases of lifecycle nodes
- Interacting with launch
- Loading components such as composable nodes
- Showing message definitions
- Expanding to Gazebo cli tools (and colcon!)
- and much more!

- Check us out on github:

<https://github.com/mjcarroll/r2s>

- Can use ROS 2 demo system for reference:

[https://github.com/safe-ros/reference\\_system](https://github.com/safe-ros/reference_system)

- Questions?

