

NAME

gdbus – Tool for working with D-Bus objects

SYNOPSIS

```
gdbus introspect [--system | --session | --address address] --dest bus_name
    --object-path /path/to/object [--xml] [--recurse] [--only-properties]

gdbus monitor [--system | --session | --address address] --dest bus_name
    [--object-path /path/to/object]

gdbus call [--system | --session | --address address] --dest bus_name --object-path /path/to/object
    --method org.project.InterfaceName.MethodName [--timeout seconds | --interactive] ARG1
    ARG2...

gdbus emit [--system | --session | --address address] --object-path /path/to/object
    --signal org.project.InterfaceName.SignalName [--dest unique_bus_name] ARG1 ARG2...

gdbus wait [--system | --session | --address address] --activate bus_name [--timeout seconds]
    bus_name

gdbus help
```

DESCRIPTION

gdbus is a simple tool for working with D-Bus objects.

COMMANDS**introspect**

Prints out interfaces and property values for a remote object. For this to work, the owner of the object needs to implement the `org.freedesktop.DBus.Introspectable` interface. If the **--xml** option is used, the returned introspection XML is printed, otherwise a parsed pretty representation is printed. The **--recurse** option can be used to introspect children (and their children and so on) and the **--only-properties** option can be used to only print the interfaces with properties.

monitor

Monitors one or all objects owned by the owner of *bus_name*.

call

Invokes a method on a remote object. Each argument to pass to the method must be specified as a serialized **GVariant** except that strings do not need explicit quotes. The return values are printed out as serialized **GVariant** values.

emit

Emits a signal. Each argument to include in the signal must be specified as a serialized **GVariant** except that strings do not need explicit quotes.

wait

Waits until *bus_name* is owned by some process on the bus. If the **--activate** is specified, that bus name will be auto-started first. It may be the same as the bus name being waited for, or different.

help

Prints help and exit.

BASH COMPLETION

gdbus ships with a bash completion script to complete commands, destinations, bus names, object paths and interface/method names.

EXAMPLES

This shows how to introspect an object – note that the value of each property is displayed:

```
$ gdbus introspect --system \
    --dest org.freedesktop.NetworkManager \
    --object-path /org/freedesktop/NetworkManager/Devices/0
```

```

node /org/freedesktop/NetworkManager/Devices/0 {
  interface org.freedesktop.DBus.Introspectable {
    methods:
      Introspect(out s data);
  };
  interface org.freedesktop.DBus.Properties {
    methods:
      Get(in s interface,
          in s propname,
          out v value);
      Set(in s interface,
          in s propname,
          in v value);
      GetAll(in s interface,
             out a{sv} props);
  };
  interface org.freedesktop.NetworkManager.Device.Wired {
    signals:
      PropertiesChanged(a{sv} arg_0);
    properties:
      readonly b Carrier = false;
      readonly u Speed = 0;
      readonly s HwAddress = '00:1D:72:88:BE:97';
  };
  interface org.freedesktop.NetworkManager.Device {
    methods:
      Disconnect();
    signals:
      StateChanged(u arg_0,
                   u arg_1,
                   u arg_2);
    properties:
      readonly u DeviceType = 1;
      readonly b Managed = true;
      readwrite o Ip6Config = '/';
      readwrite o Dhcp4Config = '/';
      readwrite o Ip4Config = '/';
      readonly u State = 2;
      readwrite u Ip4Address = 0;
      readonly u Capabilities = 3;
      readonly s Driver = 'e1000e';
      readwrite s Interface = 'eth0';
      readonly s Udi = '/sys/devices/pci0000:00/0000:00:19.0/net/eth0';
  };
};

```

The **—recurse** and **—only-properties** options can be useful when wanting to inspect all objects owned by a particular process:

```

$ gdbus introspect --system --dest org.freedesktop.UPower --object-path / --recurse --only-properties
node / {
  node /org {
    node /org/freedesktop {
      node /org/freedesktop/UPower {
        interface org.freedesktop.UPower {

```

```

properties:
    readonly b IsDocked = true;
    readonly b LidForceSleep = false;
    readonly b LidIsPresent = false;
    readonly b LidIsClosed = false;
    readonly b OnLowBattery = false;
    readonly b OnBattery = false;
    readonly b CanHibernate = true;
    readonly b CanSuspend = true;
    readonly s DaemonVersion = '0.9.10';
};
node /org/freedesktop/UPower/Policy {
};
node /org/freedesktop/UPower/Wakeups {
    interface org.freedesktop.UPower.Wakeups {
        properties:
            readonly b HasCapability = true;
    };
};
};
};
};
};
};

```

In a similar fashion, the **introspect** command can be used to learn details about the Notify method:

```

[...]
interface org.freedesktop.Notifications {
    methods:
        GetServerInformation(out s return_name,
                             out s return_vendor,
                             out s return_version,
                             out s return_spec_version);
        GetCapabilities(out as return_caps);
        CloseNotification(in u id);
        Notify(in s app_name,
               in u id,
               in s icon,
               in s summary,
               in s body,
               in as actions,
               in a{sv} hints,
               in i timeout,
               out u return_id);
};
[...]

```

With this information, it's easy to use the **call** command to display a notification

```

$ gdbus call --session \
    --dest org.freedesktop.Notifications \
    --object-path /org/freedesktop/Notifications \
    --method org.freedesktop.Notifications.Notify \
    my_app_name \
    42 \
    gtk-dialog-info \

```

```

    "The Summary" \
    "Here's the body of the notification" \
    [] \
    {} \
    5000
(uint32 12,)

```

Call a method with file handle argument:

```

$ gdbus call --session \
    --dest org.example.foo \
    --object-path /org/example/foo \
    --method SendFDs \
    1 \
    10 \
    10<file.foo

```

Monitoring all objects on a service:

```

$ gdbus monitor --system --dest org.freedesktop.ConsoleKit
Monitoring signals from all objects owned by org.freedesktop.ConsoleKit
The name org.freedesktop.ConsoleKit is owned by :1.15
/org/freedesktop/ConsoleKit/Session2: org.freedesktop.ConsoleKit.Session.ActiveChanged (false,)
/org/freedesktop/ConsoleKit/Seat1: org.freedesktop.ConsoleKit.Seat.ActiveSessionChanged ("")
/org/freedesktop/ConsoleKit/Session2: org.freedesktop.ConsoleKit.Session.ActiveChanged (true,)
/org/freedesktop/ConsoleKit/Seat1: org.freedesktop.ConsoleKit.Seat.ActiveSessionChanged ('/org/freedesktop/ConsoleKit/Seat1')

```

Monitoring a single object on a service:

```

$ gdbus monitor --system --dest org.freedesktop.NetworkManager --object-path /org/freedesktop/NetworkManager/AccessPoint/4141
Monitoring signals on object /org/freedesktop/NetworkManager/AccessPoint/4141 owned by org.freedesktop.NetworkManager
The name org.freedesktop.NetworkManager is owned by :1.5
/org/freedesktop/NetworkManager/AccessPoint/4141: org.freedesktop.NetworkManager.AccessPoint.PropertiesChanged
/org/freedesktop/NetworkManager/AccessPoint/4141: org.freedesktop.NetworkManager.AccessPoint.PropertiesChanged
/org/freedesktop/NetworkManager/AccessPoint/4141: org.freedesktop.NetworkManager.AccessPoint.PropertiesChanged
/org/freedesktop/NetworkManager/AccessPoint/4141: org.freedesktop.NetworkManager.AccessPoint.PropertiesChanged

```

Emitting a signal:

```

$ gdbus emit --session --object-path /foo --signal org.bar.Foo "['foo', 'bar', 'baz']"

```

Emitting a signal to a specific process:

```

$ gdbus emit --session --object-path /bar --signal org.bar.Bar someString --dest :1.42

```

Waiting for a well-known name to be owned on the bus; this will *not* auto-start the service:

```

$ gdbus wait --session org.bar.SomeName

```

Auto-starting then waiting for a well-known name to be owned on the bus:

```

$ gdbus wait --session --activate org.bar.SomeName

```

Auto-starting a different service, then waiting for a well-known name to be owned on the bus. This is useful in situations where *SomeName* is not directly activatable:

```

$ gdbus wait --session --activate org.bar.PrerequisiteName org.bar.SomeName

```

Waiting for a well-known name and giving up after 30 seconds. By default, the timeout is disabled; or set **--timeout** to 0 to disable it:

```
$ gdbus wait --session --timeout 30 org.bar.SomeName
```

BUGS

Please send bug reports to either the distribution bug tracker or the upstream bug tracker at <https://gitlab.gnome.org/GNOME/glib/issues/new>.

SEE ALSO

dbus-send(1)