

NAME

Net::DBus::BaseObject – base class for exporting objects to the bus

SYNOPSIS

```
# We're going to be a DBus object
use base qw(Net::DBus::BaseObject);

# Export a 'Greeting' signal taking a stringl string parameter
dbus_signal("Greeting", ["string"]);

# Export 'Hello' as a method accepting a single string
# parameter, and returning a single string value
dbus_method("Hello", ["string"], ["string"]);

sub new {
    my $class = shift;
    my $service = shift;
    my $self = $class->SUPER::new($service, "/org/demo/HelloWorld");

    bless $self, $class;

    return $self;
}

sub _dispatch_object {
    my $self = shift;
    my $connection = shift;
    my $message = shift;

    if (....$message refers to a object's method ... ) {
        ...dispatch this object's interfaces/methods...
        return $reply;
    }
}
```

DESCRIPTION

This is the base of all objects which are exported to the message bus. It provides the core support for type introspection required for objects exported to the message bus. When sub-classing this object, the `_dispatch` object should be implemented to handle processing of incoming messages. The `Net::DBus::Exporter` module is used to declare which methods (and signals) are being exported to the message bus.

All packages inheriting from this, will automatically have the interface `org.freedesktop.DBus.Introspectable` registered with `Net::DBus::Exporter`, and the `Introspect` method within this exported.

Application developers will rarely want to use this class directly, instead either `Net::DBus::Object` or `Net::DBus::ProxyObject` are the common choices. This class will only be used if wanting to write a new approach to dispatching incoming method calls.

METHODS

```
my $object = Net::DBus::BaseObject->new($service, $path)
```

This creates a new DBus object with an path of `$path` registered within the service `$service`. The `$path` parameter should be a string complying with the usual DBus requirements for object paths, while the `$service` parameter should be an instance of `Net::DBus::Service`. The latter is typically obtained by calling the `export_service` method on the `Net::DBus` object.

```
my $object = Net::DBus::BaseObject->new($parentobj, $subpath)
```

This creates a new DBus child object with an path of `$subpath` relative to its parent `$parentobj`. The `$subpath` parameter should be a string complying with the usual DBus requirements for object paths, while the `$parentobj` parameter should be an instance of `Net::DBus::BaseObject`.

```
$object->disconnect();
```

This method disconnects the object from the bus, such that it will no longer receive messages sent by other clients. Any child objects will be recursively disconnected too. After an object has been disconnected, it is possible for Perl to garbage collect the object instance. It will also make it possible to connect a newly created object to the same path.

```
my $bool = $object->is_connected
```

Returns a true value if the object is connected to the bus, and thus capable of being accessed by remote clients. Returns false if the object is disconnected & thus ready for garbage collection. All objects start off in the connected state, and will only transition if the `disconnect` method is called.

```
my $service = $object->get_service
```

Retrieves the `Net::DBus::Service` object within which this object is exported.

```
my $path = $object->get_object_path
```

Retrieves the path under which this object is exported

```
$object->emit_signal_in($name, $interface, $client, @args);
```

Emits a signal from the object, with a name of `$name`. If the `$interface` parameter is defined, the signal will be scoped within that interface. If the `$client` parameter is defined, the signal will be unicast to that client on the bus. The signal and the data types of the arguments `@args` must have been registered with `Net::DBus::Exporter` by calling the `dbus_signal` method.

```
$self->emit_signal_to($name, $client, @args);
```

Emits a signal from the object, with a name of `$name`. The signal and the data types of the arguments `@args` must have been registered with `Net::DBus::Exporter` by calling the `dbus_signal` method. The signal will be sent only to the client named by the `$client` parameter.

```
$self->emit_signal($name, @args);
```

Emits a signal from the object, with a name of `$name`. The signal and the data types of the arguments `@args` must have been registered with `Net::DBus::Exporter` by calling the `dbus_signal` method. The signal will be broadcast to all clients on the bus.

```
$object->connect_to_signal_in($name, $interface, $coderef);
```

Connects a callback to a signal emitted by the object. The `$name` parameter is the name of the signal within the object, and `$coderef` is a reference to an anonymous subroutine. When the signal `$name` is emitted by the remote object, the subroutine `$coderef` will be invoked, and passed the parameters from the signal. The `$interface` parameter is used to specify the explicit interface defining the signal to connect to.

```
$object->connect_to_signal($name, $coderef);
```

Connects a callback to a signal emitted by the object. The `$name` parameter is the name of the signal within the object, and `$coderef` is a reference to an anonymous subroutine. When the signal `$name` is emitted by the remote object, the subroutine `$coderef` will be invoked, and passed the parameters from the signal.

```
$reply = $object->_dispatch_object($connection, $message);
```

The `_dispatch_object` method is to be used to handle dispatch of methods implemented by the object. The default implementation is a no-op and should be overridden by subclasses to do whatever processing is required. If the `$message` could be handled then another `Net::DBus::Binding::Message` instance should be returned for the reply. If `undef` is returned, then a generic error will be returned to the caller.

```
$currvalue = $object->_dispatch_property($name); =item $object->_dispatch_property($name, $newvalue);
```

The `_dispatch_property` method is to be used to handle dispatch of property reads and writes.

The `$name` parameter is the name of the property being accessed. If `$newvalue` is supplied then the property is to be updated, otherwise the current value is to be returned. The default implementation will simply raise an error, so must be overridden in subclasses.

AUTHOR

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SEE ALSO

Net::DBus, Net::DBus::Service, Net::DBus::Object, Net::DBus::ProxyObject, Net::DBus::Exporter, Net::DBus::RemoteObject