sd_bus_add_node_enumerator

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sd_bus_add_node_enumerator

Add a node enumerator for a D-Bus object path prefix

#include <systemd/sd-bus.h>

typedef int (*

sd_bus_node_enumerator_t

)

sd_bus *

bus

const char *

prefix

void *

userdata

char ***

ret_nodes

sd_bus_error *

ret_error

int

sd_bus_add_node_enumerator

sd_bus *

bus

sd_bus_slot **

slot

const char *

path

sd_bus_node_enumerator_t

callback

void *

userdata

Description

`sd_bus_add_node_enumerator()` adds a D-Bus node enumerator for the given path prefix. The given callback is called to enumerate all the available objects with the given path prefix when required (e.g. when `org.freedesktop.DBus.Introspectable.Introspect` or `org.freedesktop.DBus.ObjectManager.GetManagedObjects` are called on a D-Bus service managed by sd-bus).

`callback` is called with the path and userdata pointer registered with `sd_bus_add_node_enumerator()`. When called, it should store all the child object paths of the given path prefix in `ret_nodes` with a NULL terminator item. The callback should return a non-negative value on success. If an error

occurs, it can either return a negative integer, set `ret_error` to a non-empty error or do both. Any errors returned by the callback are encoded as D-Bus errors and sent back to the caller. Errors in `ret_error` take priority over negative return values.

Note that a node enumerator callback will only ever be called for a single path prefix and hence, for normal operation, `prefix` can be ignored. Also, a node enumerator is only used to enumerate the available child objects under a given prefix. To install a handler for a set of dynamic child objects, use `sd_bus_add_fallback_vtable(3)`.

When `sd_bus_add_node_enumerator()` succeeds, a slot is created internally. If the output parameter <slot> is `NULL`, a "floating" slot object is created, see `sd_bus_slot_set_floating(3)`. Otherwise, a pointer to the slot object is returned. In that case, the reference to the slot object should be dropped when the node enumerator is not needed anymore, see `sd_bus_slot_unref(3)`.

Return Value

On success, `sd_bus_add_node_enumerator()` returns a non-negative integer. On failure, it returns a negative errno-style error code.

Errors

Returned errors may indicate the following problems:

`-EINVAL`
One of the required parameters is `NULL` or `path` is not a valid object path.

`-ENOPKG`
The bus cannot be resolved.

`-ECHILD`
The bus was created in a different process, library or module instance.

`-ENOMEM`
Memory allocation failed.

History

`sd_bus_node_enumerator_t()` and `sd_bus_add_node_enumerator()` were added in version 221.

See Also

`sd-bus(3)`, `busctl(1)`, `sd_bus_add_fallback_vtable(3)`, `sd_bus_slot_unref(3)`

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