
discord-ext-slash

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Go ahead and begin with the [Quickstart](#). It contains a barebones example to get you started. For a more comprehensive demo of various features, take a look at [demo_bot.py](#).

QUICKSTART

1.1 Installation

Install with pip like any other package.

```
pip install -U discord-ext-slash
```

Note: This installs as an extension to `discord.py`.

1.2 Module

Support slash commands.

1.2.1 Example Usage

```
from discord.ext import slash
client = slash.SlashBot(
    # normal arguments to commands.Bot()
    command_prefix='.', description="whatever",
    # special option: modify all global commands to be
    # actually guild commands for this guild instead,
    # for the purposes of testing. Remove this argument
    # or set it to None to make global commands be
    # properly global - note that they take 1 hour to
    # propagate. Useful because commands have to be
    # re-registered if their API definitions are changed.
    debug_guild=staging_guild_id
)

msg_opt = slash.Option(
    # description of option, shown when filling in
    description='Message to send',
    # this means that the slash command will not be invoked
    # if this argument is not specified
    required=True)

@client.slash_cmd() # global slash command
async def repeat( # command name
```

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```
ctx: slash.Context, # there MUST be one argument annotated with Context
message: msg_opt
):
    """Make the bot repeat what you say""" # description of command
    # respond to the interaction, must be done within 3 seconds
    await ctx.respond(message) # string (or str()able) message

client.run(token)
```

1.2.2 Notes

- `Context` emulates `discord.ext.commands.Context`, but only to a certain extent. Notably, `ctx.message` does not exist, because slash commands can be run completely without the involvement of messages. However, channel and author information is still available.
- All descriptions are **required**.
- You must grant the bot `applications.commands` permissions in the OAuth2 section of the developer dashboard.

See the [docs](#).

API REFERENCE

2.1 Decorators

`@discord.ext.slash.cmd`

Decorator that transforms a function into a *Command*.

`@discord.ext.slash.group`

Decorator that transforms a function into a *Group*.

`@discord.ext.slash.permit` (*target*: *Union[discord.role.Role, discord.abc.User, discord.object.Object]*, *perm*: *bool*, *guild_id*: *Optional[int] = Ellipsis*, *type*: *Optional[discord.ext.slash.ApplicationCommandPermissionType] = None*)

Decorator **on top of a command** that adds a permissions overwrite.

2.2 Classes

2.2.1 The Bot

class `discord.ext.slash.SlashBot` (**args*, ***kwargs*)

A bot that supports slash commands.

Constructor arguments in addition to those provided to `discord.ext.commands.Bot` are as follows:

Parameters

- **debug_guild** (*int*) – While testing your bot, it may be useful to have instant command updates for global commands. Setting this to a guild ID will redirect all global commands to commands specific to that guild. Once in production, set this to `None` or do not set it at all.
- **resolve_not_fetch** (*bool*) – If `True` (the default), Discord objects passed in arguments will be resolved from the slash commands API, not retrieved or fetched.
- **fetch_if_not_get** (*bool*) – If `False` (the default), Discord objects passed in arguments will not be fetched from the API if retrieving them from cache fails.

app_info: `discord.AppInfo`

Cached output of `application_info()`. Might not be present until `on_ready()` has fired at least once.

slash: `set[Command]`

All top-level *Command* and *Group* objects currently registered **in code**.

@slash_cmd (***kwargs*)
Create a *Command* with the decorated coroutine and ***kwargs* and add it to *slash*.

@slash_group (***kwargs*)
Create a *Group* with the decorated coroutine and ***kwargs* and add it to *slash*.

add_slash (*func*, ***kwargs*)
Non-decorator version of *slash_cmd()*.

add_slash_group (*func*, ***kwargs*)
Non-decorator version of *slash_group()*.

add_slash_cog (*cog: type*)
Add all attributes of *cog* that are *Command* or *Group* instances.

Parameters **cog** (*type*) – The cog to read attributes from.

async application_info ()
Equivalent to *discord.Client.application_info()*, but caches its output in *app_info*.

async register_commands (*guild_id: Optional[int] = None*)
Update commands on the API.

Parameters **guild_id** (*int*) – Only update commands specific to this guild.

async register_permissions (*guild_id: Optional[int] = None*)
Update command permissions on the API.

Parameters **guild_id** (*int*) – Only update permissions for this guild. Note: All commands will still be updated, but only permissions related to this guild will be updated.

2.2.2 Interaction Context

class *discord.ext.slash.Context* (**args*, ***kwargs*)
Object representing an interaction.

id: *int*
The interaction ID.

guild: *Union[discord.Guild, discord.Object]*
The guild where the interaction took place. Can be an *Object* with just the ID if the client is not in the guild.

channel: *Union[discord.TextChannel, discord.Object]*
The channel where the command was run. Can be an *Object* with just the ID if the client is not in the guild.

author: *discord.Member*
The user who ran the command. If *guild* is an *Object*, a lot of *Member* methods that require the guild will break and should not be relied on.

command: *Command*
The command that was run.

options: *Mapping[str, Any]*
The options passed to the command (including this context). More useful in groups and checks.

me: *Optional[discord.Member]*
The bot, as a *Member* in that context. Can be *None* if the client is not in the guild.

client: *SlashBot*
The bot.

webhook: `Optional[discord.Webhook]`

Webhook used for sending followup messages. None until interaction response has been sent

property bot

The bot. Alias for `client`.

async respond(*content*=", *", *embed*: `Optional[discord.embeds.Embed]` = `None`, *embeds*: `Optional[Iterable[discord.embeds.Embed]]` = `None`, *allowed_mentions*: `Optional[discord.mentions.AllowedMentions]` = `None`, *file*: `Optional[discord.file.File]` = `None`, *ephemeral*: `bool` = `False`, *deferred*: `bool` = `False`, *flags*: `Optional[Union[discord.ext.slash.CallbackFlags, int]]` = `None`, *rtype*: `discord.ext.slash.InteractionResponseType` = `<InteractionResponseType.CHANNEL_MESSAGE_WITH_SOURCE: 4>`)

Respond to the interaction. If called again, edits the response.

Parameters

- **content** (`str`) – The content of the message.
- **embed** (`discord.Embed`) – Shorthand for `respond(embeds=[embed])`
- **embeds** (`Iterable[discord.Embed]`) – Up to 10 embeds (any more will be silently discarded)
- **allowed_mentions** (`discord.AllowedMentions`) – Mirrors normal `allowed_mentions` in `send()`
- **file** (`discord.File`) – Mirrors normal `file` in `send()`
- **ephemeral** (`bool`) – Shortcut to setting `flags |= CallbackFlags.EPHEMERAL`. If other flags are present, they are preserved.
- **deferred** (`bool`) – Shortcut to setting `rtype = DEFERRED_CHANNEL_MESSAGE_WITH_SOURCE`. Overrides `rtype` unconditionally if True.
- **flags** (`Union[CallbackFlags, int]`) – Message flags, ORed together
- **rtype** (`InteractionResponseType`) – The type of response to send. See that class's documentation.

Raises

- **TypeError** – if both `embed` and `embeds` are specified.
- **ValueError** – if sending channel message without content.

async delete()

Delete the original interaction response message.

async send(**args*, ***kwargs*)

Send a message in the channel where the the command was run. Equivalent to `send()` for `Context.channel`.

Only method that works after the interaction token has expired. Only works if client is present there as a bot user too.

`discord.ext.slash.Interaction`

alias of `discord.ext.slash.Context`

2.2.3 Slash Commands

class discord.ext.slash.**Command**(*coro: Coroutine, **kwargs*)

Represents a slash command.

The following constructor argument does not map to an attribute:

Parameters **check** (*Coroutine*) – A coroutine to run before calling the command. If it returns `False` (not `falsy`, `False`), then the command is not run.

The following attributes are set by constructor arguments:

coro: **Coroutine**

(Required) Original callback for the command.

id: **Optional[int]**

ID of registered command. Can be `None` when not yet registered, or if not a top-level command.

name: **str**

Command name. Defaults to `coro.__name__`.

description: **str**

Description shown in command list. Default `coro.__doc__`.

guild_id: **Optional[int] = None**

If present, this command only exists in this guild.

parent: **Optional[Group] = None**

Parent (sub)command group.

default_permission: **bool = True**

If `False`, this command is disabled by default when the bot is added to a new guild. It must be re-enabled per user or role using permissions.

Raises

- **TypeError** – if `coro` has a required argument (other than `self`) without an annotation.
- **ValueError** – if no `description` is specified and `coro` has no docstring.
- **ValueError** – if no arguments to `coro` are annotated with `Context` or a subclass.

The following attributes are *not* set by constructor arguments:

options: **Mapping[str, Option]**

Options for this command. Set by inspecting the function annotations.

permissions: **CommandPermissionsDict**

Permission overrides for this command. A dict of guild IDs to dicts of: role or user or member objects (partial or real) to boolean enable/disable values to grant/deny permissions.

default: **bool = False**

If `True`, invoking the base parent of this command translates into invoking this subcommand. (Not settable in arguments.)

@check

Set this command's check to this coroutine.

property **qualname**

Fully qualified name of command, including group names.

```
add_perm(target: Union[discord.role.Role, discord.abc.User, discord.object.Object],
          perm: bool, guild_id: Optional[int] = Ellipsis, type: Optional[discord.ext.slash.ApplicationCommandPermissionType] = None)
Add a permission override.
```

Parameters

- **target** (`Union[discord.Role, PartialRole, discord.Member, discord.User, PartialMember, discord.Object]`) – The role or user to assign this permission to.
- **perm** (`bool`) – True to grant permission, False to deny it
- **guild_id** (`Optional[int]`) – The guild ID to set the permission for, or None to apply this to the defaults that all guilds inherit for this command. If specified, overrides `target.guild.id`. Must be specified if `target` is a `Object` or a guildless `User`.
- **type** (`ApplicationCommandPermissionType`) – The type of permission grant this is, `ROLE` or `USER`. Must be specified if `target` is a `Object`.

Generally there are four ways of calling this:

- `add_perm(target, perm)` will infer `guild_id` and `type` from `target.guild.id` and the type of `target` (respectively).
- `add_perm(target, perm, guild_id)` will infer the type, but manually set the guild ID (e.g. with a `User` and not a `Member`).
- `add_perm(discord.Object(id), perm, guild_id, type)` will manually set the guild ID and type since all you have is an ID.
- `add_perm(..., guild_id=None)` will do any of the above but apply the permissions to the defaults that all specific-guild permissions will inherit from, instead of applying to any particular guild.

Raises

- **ValueError** – if `type` is unspecified but cannot be inferred.
- **ValueError** – if `guild_id` is unspecified but cannot be inferred.

```
class discord.ext.slash.Group(coro: Coroutine, **kwargs)
```

Represents a group of slash commands. Attributes and constructor arguments are the same as `Command` unless documented below.

Parameters `coro` (`Coroutine`) – (Required) Callback invoked when a subcommand of this group is called. (This is not a check! Register a check using `check()`.)

```
slash: Mapping[str, Union[Group, Command]]
```

Subcommands of this group.

```
@slash_cmd(**kwargs)
```

See `SlashBot.slash_cmd()`.

```
@slash_group(**kwargs)
```

See `SlashBot.slash_group()`.

```
add_slash(func, **kwargs)
```

See `SlashBot.add_slash()`.

```
add_slash_group(func, **kwargs)
```

See `SlashBot.add_slash_group()`.

2.2.4 Data Classes

```
class discord.ext.slash.Option (description: str, type: discord.ext.slash.ApplicationCommandOptionType = <ApplicationCommandOptionType.STRING: 3>, **kwargs)
```

An argument to a *Command*. This must be passed as an annotation to the corresponding argument.

Constructor arguments map directly to attributes, besides the one below which has a different type signature:

Parameters **choices** (*Optional*[*Iterable*[*Union*[*str*, *Mapping*[*str*, *str*], *Choice*]]]) – Strings are converted into *Choice* objects with the same name and value. *dict* objects are passed as kwargs to the *Choice* constructor.

description: *str*

The description of the option, displayed to users.

type: *ApplicationCommandOptionType* = :attr:`ApplicationCommandOptionType.STRING`

The argument type.

name: *Optional*[*str*] = *None*

The name of the option, if different from its argument name.

required: *bool* = *False*

If *True*, this option must be specified for a valid command invocation.

choices: *Optional*[*list*[*Choice*]]

Only these values are allowed for this option.

```
class discord.ext.slash.Choice (name: str, value: str)
```

Represents one choice for an option value.

Constructor arguments map directly to attributes.

name: *str*

The description of the choice, displayed to users.

value: *str*

The actual value fed into the application.

2.2.5 Miscellaneous

```
class discord.ext.slash.SlashWarning
```

discord.ext.slash-specific warning type.

```
discord.ext.slash.CommandPermissionsDict
```

alias of *Dict*[*Optional*[*int*], *Dict*[*Tuple*[*int*, *discord.ext.slash.ApplicationCommandPermissionType*], *bool*]]

2.2.6 Partial Objects

Objects resolved from the slash commands API often do not contain all the information that discord.py prefers (most notably guild information).

```
class discord.ext.slash.PartialObject (id)
```

Bases: *discord.object.Object*

Subclasses of this have their *.:attr:guild* as a *Object*, so their guild-related functionality may break.

guild: *discord.Object*

```

class discord.ext.slash.PartialTextChannel (*, state, guild, data)
    Bases: discord.channel.TextChannel, discord.ext.slash.PartialObject

    A partial TextChannel.

class discord.ext.slash.PartialCategoryChannel (*, state, guild, data)
    Bases: discord.channel.CategoryChannel, discord.ext.slash.PartialObject

    A partial CategoryChannel.

class discord.ext.slash.PartialVoiceChannel (*, state, guild, data)
    Bases: discord.channel.VoiceChannel, discord.ext.slash.PartialObject

    A partial VoiceChannel.

class discord.ext.slash.PartialMember (*, data, guild, state)
    Bases: discord.member.Member, discord.ext.slash.PartialObject

    A partial Member.

class discord.ext.slash.PartialRole (*, guild, state, data)
    Bases: discord.role.Role, discord.ext.slash.PartialObject

    A partial Role.

```

2.3 Enums

```

class discord.ext.slash.ApplicationCommandOptionType (value)

```

Possible *CommandOption* types. Default is *STRING*.

SUB_COMMAND

Marks a sub-*Command*, only used internally.

SUB_COMMAND_GROUP

Marks a *Group*, only used internally.

The type signatures of the below attributes mark the type that the argument value is passed as. For example, options of type *STRING* are passed as *str*.

STRING: *str*

INTEGER: *int*

BOOLEAN: *bool*

USER: *Union[discord.Member, discord.User, PartialMember, discord.Object]*

CHANNEL: *Union[discord.TextChannel, discord.CategoryChannel, discord.VoiceChannel, PartialChannel]*

ROLE: *Union[discord.Role, PartialRole, discord.Object]*

MENTIONABLE: *Union[discord.Member, discord.User, PartialMember, discord.Role, PartialRole]*

NUMBER: *float*

```

class discord.ext.slash.ApplicationCommandPermissionType (value)

```

Possible types of permission grants. For use in *Command.add_perm()* and *permit()*.

ROLE

Specifies that this permission grant is to a role.

USER

Specifies that this permission grant is to a user.

class discord.ext.slash.**InteractionResponseType** (*value*)

Possible ways to respond to an interaction. For use in `Context.respond()`.

PONG

Only used to ACK a Ping, never valid here. Included only for completeness.

CHANNEL_MESSAGE_WITH_SOURCE

Show user input and send a message. Default.

DEFERRED_CHANNEL_MESSAGE_WITH_SOURCE

Show user input and display a “waiting for bot” system message. Send a response with this type and edit the response later if you need to do some asynchronous fetch or something.

class discord.ext.slash.**CallbackFlags** (*value*)

Flags to pass to the `flags` argument of `Context.respond()`.

EPHEMERAL

Only the user receiving the message can see it

discord.ext.slash.**MessageFlags**

alias of `discord.ext.slash.CallbackFlags`

2.4 Events

discord.ext.slash.**on_interaction_create** (*event: dict*)

Triggered by Discord interactions. For internal use.

discord.ext.slash.**on_slash_permissions** ()

Triggered immediately after `SlashBot.register_commands()` to give an opportunity to register dynamic permissions in code before pushing to the API. If overriding using `@:meth:discord.Client.event`, you must await `-SlashBot.register_permissions()` at the end of the event handler. See `/stop` in `demo_bot.py` for an example.

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