
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 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: Union[str, Type[discord.ext.slash.ChoiceEnum]],  
                                type: discord.ext.slash.ApplicationCommandOptionType = <Ap-  
                                plicationCommandOptionType.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 ones below which have different type signatures:

Parameters

- **description** (*Union[str, Type[ChoiceEnum]]*) – Annotating a parameter with `EnumClass` has the same effect as with `Option(description=EnumClass)`.
- **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.
- **channel_types** (*Optional[Iterable[Union[int, discord.ChannelType]]]*) – Pass either the raw integers or the enum values.
- **channel_type** (*Optional[Union[int, discord.ChannelType]]*) – A shortcut to `channel_types=[channel_type]`.

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.

channel_types: Optional[set[discord.ChannelType]]

Sets `type` to `ApplicationCommandOptionType.CHANNEL`, additionally restricted to a set of specific channel types.

min_value: Union[int, float, None]

For numerical options, this is the minimum value allowable. If `type` is not a numerical type, it is inferred from the type of this argument. Otherwise, this argument is cast to the type corresponding to `type`.

max_value: Union[int, float, None]

Same as `min_value` but maximum. If both `min_value` and `max_value` are specified, and `type` is non-numeric, `type` is inferred from this argument, not `min_value`.

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, 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 Command Option 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

class discord.ext.slash.ChoiceEnum(value)
    Callback parameters annotated with subclasses of this class will use the enums as choices. See the /numbers command in the demo bot for an example.
```

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.
```

`discord.ext.slash.on_before_slash_command_invoke(ctx: Context)`

Triggered immediately before a slash command is invoked, for logging etc.

`discord.ext.slash.on_after_slash_command_invoke(ctx: Context)`

Triggered immediately after a *successful* slash command invocation. Failed invocations will trigger `discord.on_command_error()` instead.

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