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# 1. Description

Abstracto is a feature rich Discord bot written in Java and uses JDA as the wrapper for the Discord API. This documentation is split into two parts: Technical documentation and user documentation.

# 2. Glossary

# Post target

Describes the channel where Abstracto will send specific messages to. For example, the command ban sends a message containing information about the ban to the banLog post target. Post targets can be configured with the command posttarget and once defined can only be switched to another channel. The bot needs MESSAGE\_WRITE in the channel in order to send the messages.

# **Decayed warnings**

Warnings have a decayed property, which means it can be marked as inactive, while the warning itself is not deleted.

# 3. General information

# **Duration input**

This procedure is done when a command requires a duration as an input, for example mute. In order to define a duration: use a positive number followed by one of the following time units: s, m, h, d or w representing seconds, minutes, hours, days and weeks respectively. Weeks in this case are just a short hand for 7 days.

# **Pagination navigation**

If a pagination is used for the output of a command you can navigate the pages with III and III and III to close the pagination.

# Role as parameter

Whenever a role is a parameter for a command, this can be done by either providing the role ID or mentioning the role.

# **Channel groups**

This concept enables you to group channels together into channel groups and enact certain restrictions or features on this whole group.

# **System configuration**

Some properties can be configured while the bot is running and can be changed for each guild respectively. In the respective features they are noted under Relevant system configuration. In order to change this you need to use the command setConfig with the provided key and the new desired value.

#### **Emotes**

The features have section of the keys of used emotes in the feature, you can change this emote

with the setEmote command.

#### **Feature Modes**

Features can have different modes. This means, a feature behaves differently if the mode is changed. For example: modmail has two modes: log and noLog. In the mode log mod mail threads will be logged into the post target modmailLog while in the noLog mode, this does not happen. This consideration of the modes does depend on the implementation of the features.

# 4. Features

# 4.1. Core

The core feature contains necessary commands in order for Abstracto to function and be configured.

#### **4.1.1. Emotes**

- successReaction reaction emote in case the command completed successfully
- warnReaction reaction emote in case the command did not complete successfully

# 4.1.2. Commands

# Help

- Usage: help [module/command]
- Description: If no parameter is provided, this will list the currently available modules. If the provided parameter matches the name of a module, information about that module is displayed. This information includes a description and the available commands of this module. If the provided parameter matches a command name, information about this command is displayed. The module matching takes precedence over command matching. This information includes the a short description, a more detailed description, aliases (if any), parameters (if any), which roles are allowed to execute the command, or if it is not restricted and which roles are immune against the command.

# Changing the system configuration

- Usage setConfig <key> <value>
- Description: Changes the value of this configuration identified by key to value. Some of these configurations have separate commands, but this works in general.
- Example: setConfig expMin 15 to set the minimum experience to 15

# Resetting the configuration to default values

- Usage resetConfig [key/feature]
- Description: Resets the configuration of the given key or for the complete feature identified by feature. If this is not provided, it will reset the entire server to the default configuration.

# **Changing emotes Abstracto uses**

- Usage: setEmote <key> <emote>
- Description: Sets the emote identified by key used by Abstracto on this server to emote. This allows both built in emotes and custom emotes, but Abstracto must be in the server of the custom emote in order to use them.

# Clearing the cache

- Usage: clearCache
- Description: Clears the internal cache used by Abstracto. This mostly affects template changes directly done in the database.

# **Ping**

- Usage: ping
- Description: Prints the latency of Abstracto to the Discord servers.

#### **Echo**

- Usage: echo <text>
- Description: Echos text in the same channel this command as executed in.

# Changing the prefix

- Usage: setPrefix <prefix>
- Description: Changes the prefix of the bot in this guild to prefix. This can be one or multiple characters.

# Changing a post target

- Usage: posttarget <key> <channel>
- Description: Changes the given post target identified by key to the given channel. All messages using this post target will be send to this channel from now on. If neither key nor channel is given, this will print the currently available post targets and the channels they point to, if set.
- Example: posttarget banLog #general to log the bans in the #general channel.

# Changing admin mode

- Usage: setAdminMode <true/false>
- Description: Changes the admin modes on this server to the given value. Admin mode means, that **all** commands in the current server, can only be executed by members who have the ADMINISTRATOR permission.

# Listing the features

- Usage: features
- Description: Lists the available features and whether or not they are enabled in this server.

#### **Enabling a feature**

• Usage: enableFeature <key>

- Description: Enables the feature identified by key in this server. If the feature dependents on other features, they will be enabled as well.
- Example: enableFeature moderation to enable the moderation feature

# Disabling a feature

- Usage: disableFeature <key>
- Description: Disables the feature identified by key in this server. If the feature is required for other features, they will be disabled as well.
- Example: disableFeature moderation to disable the moderation feature

# Creating a channel group

- Usage: createChannelGroup <key>
- Description: Creates a new channel group identified by key.
- Aliases: +ChGroup

# Adding a channel to a channel group

- Usage: addToChannelGroup <groupName> <channel>
- Description: Adds the channel to the channel group identified by the groupName. It is not possible for a channel to be in a group twice.
- Aliases: addTChGrp, chGrpCh+
- Example: addToChannelGroup group1 #general to add the channel #general to the group group1

# Removing a channel from a channel group

- Usage: removeFromChannelGroup <groupName> <channel>
- Description: Removes the channel from the channel group identified by groupName.
- Aliases: rmChChgrp, chGrpCh-
- Example: removeFromChannelGroup group1 #general to remove the channel #general from the group group1

# Deleting a channel group

- Usage: deleteChannelGroup <key>
- Description: Deletes the channel group identified by key. This will also remove all associated channels from this group. This command fails, if the group is used in other features and referenced.
- Aliases: -ChGroup

# Disabling a command in a group

- Usage: disableCommand <commandName> <qroupName>
- Description: Disables the command identified by commandName in the channel group groupName. A command is considered disabled in a specified channel, if the command is disabled in all the groups the channel is in.
- Example: disableCommand warn group1 to disable the command warn in the group group1

# Enabling a command in a group

- Usage: enableCommand <commandName> <groupName>
- Description: Enables the command identified by commandName in the channel group groupName. A command is considered enabled in a specified channel, if the command is enabled in any the groups the channel is in.
- Example: enableCommand warn group1 to enable the command warn in the group group1

#### Showing all available channel groups and the respective channels

- Usage: listChannelGroups
- Description: Provides an overview of the currently available channel groups and which channels are in this channel group.
- Aliases: lsChGrp

# Removing role restrictions from a command

- Usage: allow <featureName | commandName>
- Description: Allows everyone to execute all commands in this feature/the command. Which means, any restrictions concerning which role is able to execute a certain command is ignored even if it still shows in the help output.

# Allowing a role to execute a command

- Usage: allowRole <featureName | commandName > <role >
- Description: Allows the provided role to execute all commands in the feature/the command. This command automatically restricts the commands, which means, if it was unrestricted before, after executing this command only the provided role can execute the command.
- Example: allowRole moderation @Staff to allow the role Staff to execute all commands in the moderation feature (where @Staff is a role mention)

# Forbidding a role to execute a command

- Usage: disAllowRole <featureName | commandName> <role>
- Description: Removes the role from the list of allowed roles for all commands in the feature/the command.
- Example: disAllowRole moderation @Staff to forbid the role Staff to execute all commands in the moderation feature (where @Staff is a role mention)

#### Make a role affected by a command

- Usage: makeAffected <featureName | commandName> <role>
- Description: Makes the role affected by all commands in the feature/the command.
- Example: makeAffected ban @Staff in order so the role Staff can be banned via the command (where @Staff is a role mention)

#### Make a role immune against a command

- Usage: makeImmune <featureName | commandName > <role >
- Description: Makes the role immune from all commands in the feature/the command.

• Example: makeImmune ban @Staff in order so the role Staff cannot be banned via the command (where @Staff is a role mention)

#### Enforce the role restrictions of commands

- Usage: restrict <featureName | commandName >
- Description: Causes the role restrictions for a all commands in the feature/the command to be in effect again.

# Enabling a feature mode

- Usage: enableMode <featureName> <mode>
- Description: Enables the mode mode in feature featureName. If the enabled state of the feature featureName is part of the default config, it will no longer be default config that after executing enableMode.

#### Disabling a feature mode

- Usage: disableMode <featureName> <mode>
- Description: Disables the mode mode in feature featureName. If the enabled state of the feature featureName is part of the default config, it will no longer be default config after executing disableMode.

# Listing all feature modes

- usage featureModes [feature]
- Description: Lists all of the currently available feature modes and the feature they are associated with. If feature is given, it only lists the feature modes of this feature. The output also includes whether or not the current mode is enabled and if this value comes from the default configuration.

# Setting up a feature with an interactive wizard

- Usage: setupFeature <featureName>
- Description: Starts an interactive wizard to configure the necessary properties and post targets of a feature. Also includes custom steps. Closes with a summary page to see all changes.

#### Allow the bot to use certain mentions

- Usage: allowMention <mentionType>
- Description: Allows the bot to use certain mentions. 'mentionType' can either be everyone,
  role or user. If @everyone is enabled, this also enables @here mentions. This change takes
  immediate effect and is only for the current server. Per default user and role mentions are
  enabled.

#### Disallow the bot to use certain mentions

- Usage: disallowMention <mentionType>
- Description: Disallows the bot to use certain mentions. 'mentionType' can either be everyone, role or user. If @everyone is disabled, this also disables @here mentions. This change takes immediate effect and is only for the current server. Per default everyone/here

mentions are disabled.

# Setting a custom template for this server

- Usage: setTemplate <templateKey>
- Description: Adds or updates the given template identified by templateKey only for the current server. The content of the template needs to be attached to the message as a file and is required to be a plaintext file. The file can be named anything. The template needs to be in Freemarker format. This change is only in effect for this server and is called a 'customized template'. This will take effect immediately.

# Retrieving the current default template

- Usage: getTemplate <templateKey>
- Description: Loads the current global template identified by templateKey and returns the content as an attached file to the response of the command.

#### Retrieving the current customized template for this server

- Usage: getCustomTemplate <templateKey>
- Description: Loads the current customized tempalte identified by templateKey and returns the content as an attached file to the response of the command. Shows an error message, if there exists no customized template for this server for the provided templateKey.

### Resetting a customized template to the default template

- Usage resetTemplate <templateKey>
- Description: Resets the template identified by templateKey to the default content.

#### Show a link to documentation

- Usage documentation
- Description: Shows links to access the documentation.

What does it mean if a role is immune?

A command can take a member as a target, for example ban. If a role is considered immune, this means, if the member which is the target of the command has the given role, this command will fail. Not all commands support this feature, but only the following:

- Ban
- Kick
- Warn
- Mute

While a role can be made immune for any command, only these commands actually use this information.

# What is a feature mode?

A feature mode is a very specific way in which a feature behaves for a certain decision. These feature modes can be defined for each server and are directly bound to a feature. These feature

modes influence the availability of commands or general behavior of features.

An example of a feature mode is mod mail logging: If the feature mode log of mod mail is disabled, no thread will be logged and the separate command closeNoLog will not be available in the first place, because it will behave the same as the normal close command. If the feature mode is enabled, the messages from the thread are logged in the respective post target and the command will be available.

# 4.2. Moderation

Feature key: moderation

# 4.2.1. Post targets

#### banLog

target of the log message containing information about the ban for both ban and banId. Will still ban if not setup.

#### kickLog

target of the log message containing information about the kick. Will still kick if not setup.

# 4.2.2. Feature modes

# banLogging

if enabled, log bans to the post target banLog. Enabled by default.

# kickLogging

if enabled, log bans to the post target kickLog. Enabled by default.

# 4.2.3. Commands

#### Ban a member

- Usage: ban <member> [reason]
- Description: Bans the given given member with the given optional reason. This sends a logging message to the banLog post target. Banning this way does not delete old messages of the member on the server. If the reason is not provided, a default reason is used.
- Example: ban @Member bad in order to ban Member with the reason bad (the @Member is a user mention)
- Required bot permission: BAN\_MEMBERS

# Ban a user by ID

- Usage: banId <userId> [reason]
- Description: Bans the user by his id with the optional reason. This command can be used in case the user is not part of the server anymore. This will also send a log message to banLog and not delete old messages.
- Example: banId 1234 bad in order to ban the user with ID 1234 with the reason bad

Required bot permission: BAN\_MEMBERS

#### Kick a member

- Usage: kick <member> [reason]
- Description: Kicks the member from the guild with the given reason. If the reason is not provided, a default reason is used.
- Example: kick @Member bad in order to kick Member with the reason bad (the @Member is a user mention)
- Required bot permission: KICK\_MEMBERS

# Change the slow mode in a channel

- Usage: slowmode <duration> [channel]
- Description: This command sets the slow mode in the channel to the given duration. This command uses duration parsing. The channel is optional and if none is provided, the current channel is used.
- Example: slowMode 1h2m3s #general in order to set the slow mode in channel general to 1 hour 2 minutes and 3 seconds (the #general is a user mention)

# Purging messages in a channel

- Usage: purge <messageCount> [member]
- Description: Deletes the last messageCount messages in the current channel. If a member is provided as parameter, only the messages by this member will be deleted. The deletion of this messages will not be logged by the logging mechanism. The messages to be deleted need to be from within the last 2 weeks, but there is no limit on how much messages can be deleted besides that. While the command is ongoing, a status update message will be shown indicating how far the command is. This message will be deleted after the command is done.

# 4.3. Warning

This feature can be used to warn specific users if they did something not allowed by the rules.

Feature key: warnings

# 4.3.1. Post targets

#### warnLog

target of the log message containing information about a created warn, only used if feature mode warnLogging is enabled.

#### decayLog

will be used when all the warnings are decayed by decayAllWarnings and feature mode warnDecayLogging is enabled.

# 4.3.2. Feature modes

# warnLogging

if enabled, each warn is logged to the post target warnLog. Enabled by default.

# automaticWarnDecayLogging

if enabled, warn decays by decayAllWarnings are logged to the post target decayLog. Enabled by default.

# 4.3.3. Commands

#### Warn a user

- Usage: warn <member> [reason]
- Description: Warns the member with the given reason or a default one, if none is provided. This
  command sends a log message to the warnLog post target and notifies the member about the
  warn.
- Example: warn @Member bad in order to warn Member with the reason bad (the @Member is a user mention)

# Listing the warnings of users

- Usage: warnings [member]
- Description: If no member is provided displays all the warnings on the server. If a member is provided, will only display the warnings of the user. This uses a paginated output, which means multiple pages in case there are more warnings to display. This will also display the date the warning was decayed if applicable.

#### **Showing your warnings**

- Usage: myWarnings
- Description: Displays the amount of warnings of the user executing on the server. This will show both active and total warnings.

# Decaying all warnings regardless of the date

- Usage: decayAllWarnings
- Description: This will cause all warnings of this server which are not decayed yet to be decayed instantly.

# Deleting a warning

- Usage: deleteWarning <warnId>
- Description: Deletes the warning identified by warnId completely from the database.

# 4.4. Automatic warn decay

This feature enables warnings to be decayed after a configurable amount of days. This feature directly depends on the feature warnings.

# 4.4.1. Relevant system configuration

decayDays The amount of days after which a warning gets decayed. Default: 90

# 4.4.2. Post targets

#### decayLog

target of the log message containing the information in case a warning is decayed.

# 4.4.3. Feature modes

# automaticWarnDecayLogging

if enabled, automatic warn decays are logged to the decayLog post target. Enabled by default.

# 4.4.4. Commands

# Decaying all warnings if necessary

- Usage: decayWarnings
- Description: Triggers the decay of the warnings instantly, which means, every not decayed warning on this server older than the configured amount of days will be decayed and the decay will be logged.

# 4.5. Muting

This feature provides the capability to mute users, which effectively means it applies a role which prevents them from sending messages and speaking in voice chat. The role used to mute member will not be created and needs to be provided. There is no validation if the provided role actually mutes members. If the user leaves the guild and rejoins, the mute role will be re-applied.

Feature key muting

# 4.5.1. Post targets

#### muteLog

target of log message containing the information in case a member was muted and when the mute ended automatically.

# 4.5.2. Feature modes

# muteLogging

if enabled, each mute is to be logged to the post target muteLog. Enabled by default.

#### unMuteLogging

if enabled, each un mute which happens 'naturally' (after the defined time period is over) will be logged to the muteLog post target. Enabled by default.

#### manualUnMuteLogging

if enabled, each un mute which happens via the command unmute will be logged to the muteLog post target. Enabled by default.

# **4.5.3. Commands**

#### Muting a user

- Usage: mute <member> <duration> [reason]
- Description: Applies the mute role to the given member for the given duration. If reason is not provided, a default reason will be used for logging in the muteLog post target. This will automatically un-mute the user after the duration has passed. If the un-mute happens automatically, this will also be logged in the muteLog post target. This command sends a notification to the user about the mute and kicks the user from the voice channel, if any.
- Example: mute @Member 1h2m3s bad in order to mute the member Member for 1 hour 2 minutes and 3 seconds with the reason bad (the @Member is a user mention)

#### **Un-Muting a user**

- Usage: unMute <member>
- Description: Removes the mute role from the given member. This does **not** log the un-mute.

# Configuring which role to use for muting

- Usage: setMuteRole <role>
- Description: Sets the role to be used as the role when applying a mute. This role needs to be
  muting, which means, if you want it to be effective, this role needs to deny MESSAGE\_WRITE.
  Abstracto does not validate nor require the role to actually mute. Only one role can be used
  as a mute role.

# 4.6. Logging

This feature provides a range of utilities to monitor the server. The logging includes:

Feature key logging

# 4.6.1. Post targets

#### deleteLog

target for the messages containing information about a deleted message.

#### editLog

target for the messages containing information about an edited message.

#### joinLog

target for the messages containing information about an user joining the server.

# leaveLog

target or the messages containing information about an user leaving the server.

# **Deleted message logging**

When a message is deleted, the content of the message and the possible attachments of said message will be logged.

# **Edited message logging**

When a message is edited, the previous content of the message and the new content of the message will be logged. This does not work if the message was sent before the bot was started.

# Member joining logging

When a member joins the guild, a message indicating this is send.

# Member leaving logging

When a member leaves the guild, a message indicating this is send.

# 4.7. User notes

# Feature key userNotes

This feature provides the ability to store specific notes for members in the database. These notes can then be retrieved and deleted and consist of only text.

#### **4.7.1. Commands**

# Creating a user note

- Usage: userNote <user> <text>
- Description: Creates a single user note for the specified user.

# Deleting a user note

- Usage: deleteNote <id>
- Description: Deletes the user note identified by its ID. The ID can be retrieved by the command userNotes.

# **Retrieving user notes**

- Usage: userNotes [user]
- Description: If user is not provided, this will list the user notes of the whole server, if user is provided, this will only list user notes from this particular user.

# 4.8. Invite filter

# Feature key inviteFilter

This feature provides the ability to automatically delete invites not allowed on the server. These illegal invites can be tracked in a specific feature mode, in order to analyze if allowing them would make sense. Another feature mode can send a notification to a post target in case an invite link has been deleted.

# 4.8.1. Post targets

#### inviteDeleteLog

target for notifications about deleted invite links - if the feature mode filterNotifications is enabled.

# 4.8.2. Feature modes

#### trackUses

if enabled, each filtered invite will be tracked in the database. Disabled by default.

#### filterNotifications

if enabled, sends a notification to the inviteDeleteLog post target in case a message was deleted because of an invite. This notification contains the detected invite link(s), the author and a link to where the message was. Enabled by default.

# 4.8.3. Commands

#### Allowing an invite

- Usage: allowInvite <invite>
- Description: Adds the invite to the list of invites, which are allowed on the server. The invite can either be the full invite URL or only the last part. If the invite is already allowed, this command will do nothing.

# Disallowing an invite

- Usage: disAllowInvite <invite>
- Description: Removes the invite from the list of invites, which are allowed on the server. The invite can either be the full invite URL or only the last part. In case the given invite is not allowed, this command will throw an error.

# Showing the tracked filtered invites

- Usage: showTrackedInviteLinks [amount]
- Description: Shows the invites which were used and deleted on the server ordered by the amount of times they were deleted. The amount can be used to define how many invite links to display. The default is the top 5.
- Mode Restriction: This command is only available when the feature mode trackUses is enabled.

# Remove all or individual invites from the tracked filtered invites

- Usage: removeTrackedInviteLinks [invite]
- Description: Removes the stored statistic for the given invite. In case invite is not given, it will delete all tracked filtered invites from the server.
- Mode Restriction: This command is only available when the feature mode trackUses is enabled.

# 4.9. Mod mail

This feature enables users to contact the moderation of the server in a private manner. This can be initiated by messaging the Abstracto bot. The messages, in the channel which is created to contain the mod mail thread, are not automatically sent to the user, but only when using the commands reply or anonReply. Any other message is ignored with the intention of enabling discussions within the channel. In case the message of a message sent to the user needs to be updated or deleted, you can do simply by editing/deleting the message containing the command.

Feature key: modmail

# 4.9.1. Necessary bot permissions

MANAGE CHANNEL to create the channels representing the mod mail threads

# 4.9.2. Workflow

- · User messages the Abstracto bot
- If Abstracto is active in multiple servers with mod mail enabled, the user is prompted to which server he wants to open a mod mail thread for.
- A channel in the mod mail category is created for the user and notification is sent that a new mod mail thread has been opened
- User can send messages in the private channel and they get relayed to this created text channel.
- Moderators can answer in the thread with the respective commands
- · Moderators close the thread
- The interactions between the user and the moderators gets logged in the mod mail logging channel

# 4.9.3. Relevant system configuration

# modmailCategory

The category on the server which is used to hold the text channels representing the threads

# modMailClosingText

The text being used when notifying the user when a thread is closed.

# 4.9.4. Post targets

#### modmailPing

Will be used to send the notification when a new thread is opened.

#### modmailLog

Will be used to log the interactions when a thread is closed.

# 4.9.5. Feature modes

#### log

If this is enabled, the messages should be logged into the modmailLog post target when the thread is closed (by the respective commands). This is required for the command closeNoLog to be available. Enabled by default.

### threadMessage

If this is enabled, every message which is send via the commands reply and anonReply will also be sent to the thread in order to have a visualizer how the message looks and to have a clear indication which messages were sent. Enabled by default.

#### 4.9.6. **Emotes**

• readReaction to indicate to the user that the message sent was processed

#### 4.9.7. Commands

# Opening a mod mail thread for a user

- Usage: contact <member>
- Description: Creates a new mod mail thread with the member. Does not send a notification about the new thread.

# Adding a role to the roles responsible for managing mod mail threads

- Usage: setModMailRole <role>
- Description: Adds this role to the roles responsible for mod mail threads, which means: this role will be pinged when a new thread is created and this role is automatically added to the roles allowed to execute all commands related to mod mail.

# Removing a role from the roles responsible for managing mod mail threads

- Usage: removeModMailRole <role>
- Description: Removes this role from the roles responsible for mod mail threads, which means: this role will no longer be pinged when a new thread is created and this role will also be removed from the roles allowed to execute all commands related to mod mail.

# Changing the category in which the text channels are created

- Usage: setModMailCategory <categoryId>
- Description: Sets the category which Abstracto uses to create the text channels containing the mod mail threads. The existing threads will not be migrated automatically.



The following commands are only available within a mod mail thread.

# Replying to a mod mail thread

- Usage reply [text]
- Description: Sends text to the user if provided. text is optional, because its also possible to only send a picture.

# Replying anonymously to a mod mail thread

- Usage: anonReply [text]
- Description: Sends text to the user without showing how is the author. Instead the avatar and name of Abstracto will be used.

# Enabling notifications of messages sent by the user

- Usage: subscribe
- Description: Subscribes you to the current thread, and will ping you when a new message from the member arrives.

# Disabling notifications of messages sent by the user

- Usage: unSubscribe
- Description: Removes your subscription from the current thread, and you will no longer be notified when a message from the member arrives.

# Closing the mod mail thread

- Usage: close [note]
- Description: Closes the thread, deletes the text channel containing the thread and logs the interactions between the member and the moderators in the modmailLog post target. (only if modmail\_logging is enabled) When closing a thread, a closing header with general information will be send and the note will be displayed there. When a thread is closed this way the user is notified of this.

# Closing the mod mail thread without notifying the user

- Usage: closeSilently [note]
- Description: Closes the thread, deletes the text channel containing the thread and logs the interactions between the member and the moderators in the modmailLog post target. (only if modmail\_logging is enabled) When closing a thread, a closing header with general information will be send and the note will be displayed there.

# Close a thread without logging

- Usage: closeNoLog
- Description: Closes the thread without notifying the user and without logging the messages.
- Mode Restriction: This command is only available when the feature mode log is enabled.

# 4.10. Experience tracking

This feature contains the ability to track experience of users on the server and award roles based on the level they reach. The experience is awarded once per minute and is calculated by '\text{minExp}, \text{maxExp}) \* \text{expScale}'. Only one role is awarded at a time and the past unlocked roles are not given to the members.

# 4.10.1. Necessary bot permissions

MANAGE\_ROLES in order to award members with roles

# 4.10.2. Relevant system configuration

minExp The lower bound of the awarded base experience. Default: 10.

maxExp The upper bound of the awarded base experience Default: 25.

expScale The multiplier applied after the experience amount was determined. Default: 1.0.

#### **4.10.3.** Commands

# Changing the experience scale of the server

- Usage: expScale <value>
- Description: Changes the value of expScale on this server to value.

# Showing the leader board of the server

- Usage: leaderboard [page]
- Description: Shows the leader board of the server in a paginated format. This does not use the interactive pagination. If no parameter is provided, it will show the top 10 members and their message count, level, experience and rank. Additionally, the same information for the user executing is shown, regardless whether or not the user is already shown on the given leader board page. If a page is provided, it will display the leader board of the ranks page \* 10 until (page + 1) \* 10 instead. If page is beyond the member count, the last members are shown.

# Setting a role to be awarded at a certain level

- Usage: setExpRole <level> <role>
- Description: Sets role to be awarded at the given level. If the role was previously assigned, this will cause to remove this assignment and recalculate the roles for all users previously having this role. This command will provide a status message indicating this process. This will not award this role to users which qualify for this, a syncRoles is necessary for this.
- Example: setExpRole 50 @HighLevel in order to award the role HighLevel at level 50 (the @HighLevel is a role mention)

# Syncing the roles of the members with the configuration

- Usage: syncRoles
- Description: Recalculates the appropriate levels for all users on the server and awards the
  roles appropriate for the level. There will be a message indicating the current status of the
  progress and it is highly advised to not execute this command while another instance is still
  processing. This command can run for a longer period of time, depending on the amount of
  members in the guild.

# Remove a role from being awarded at a certain level

- Usage: unSetExpRole <role>
- Description: Removes this role from the experience tracking, removes the role from all members previously owning it and recalculates their new role according to the configuration. This will provide a status update message displaying the process.

# Disable experience gain for a certain role

- Usage: disableExpForRole <role>
- Description: Disables any experience gain for members with this role. They will not gain any experience until the role is removed or it is possible for the role to gain experience again. If a member has **any** role of the ones for which experience is disabled, the member will not gain experience.

# Enable experience gain for a certain role

- Usage: enableExpForRole <role>
- Description: Enables experience gain for members with this role again.

# List roles for which experience gain is disabled

- Usage: listDisabledExperienceRoles
- Description: Lists the roles for which experience gain is disabled on this server.
- Aliases: lsDisEpRoles

# Disable experience gain for specific member

- Usage: disableExpGain <member>
- Description: Disables the ability to gain experience for this certain member.

# Enable experience gain for specific member

- Usage: enableExpGain <member>
- Description: Enables the ability to gain experience for this certain member.

# 4.11. Assignable roles

This feature enables creating and maintaining so-called 'assignable role places'. These places are messages at which reactions are added, and when a member reacts, a configured role, is assigned to the user. These places can consist of multiple messages (reactions are limited to 20 per message) and assignable roles can be added/removed. A place can be disabled, which causes any reaction to be removed and no role to be assigned. There are several configurations possible for each individual assignable role place. \* inline: tries to display the embed as compact as possible and when this is disabled, every assignable role is displayed in a separate line. Default: false \* autoRemove: if a member adds a reaction to the assignable role place, they are removed immediately afterwards. Default: false \* unique: if a member adds a reaction and has previously selected other roles, these previous roles are removed before the new ones are assigned. Default: false \* active: an inactive assignable role place does not assign any roles and immediately removes any reactions added. Default: true

If there are reactions added by members, which are not used within an assignable role place, the reaction gets removed automatically.

If the emote is deleted, the assignable role place is still functional, but if you set it up again, it fails to do so. You need to remove the emote from the assignable role place via its ID. The ID will be displayed for the emotes which were removed. Deleting the actual role behind an assignable role

causes the assignable role place to become non-functional: the added reaction will remain and reactions can still be added, but nothing will happen.

Feature key: assignableRole

# **4.11.1. Commands**

# Create a new assignable role place

- Usage: createAssignableRolePlace <name> <channel> <text>
- Description: Creates a new assignable role place with the key name. The text will be shown in the description of the first message. When the place is setup, it will be posted in the channel. The created place is active and inline by default.

# Add a role to an assignable role place

- Usage: addRoleToAssignableRolePlace <name> <emote> <text> <role>
- Description: Adds to the assignable role place identified by name an additional assignable role. The reaction to be used will be emote and role will be assigned when a member adds the reaction. It is required that emote is usable by Abstracto and not yet used in the assignable role place. If the assignable role place is currently setup, the assignable role will be directly appended to the assignable role place and is immediately available to be used. If this requires a new post, because the last message already has the maximum amount of reactions, it is required to setup the assignable role place again.

# Create the assignable role place in discord

- Usage: setupAssignableRolePlace <name>
- Description: Posts the messages of the assignable role place identified by name to the configured channel in discord and adds the reactions. This will delete the old messages connected to this assignable role place, if there are any.

# Remove a role from an assignable role place

- Usage: removeRoleFromAssignableRolePlace <name> <emote>
- Description: Removes from the assignable role place identified by name, the emote identified by emote. If the assignable role place is currently in use, this will update the message and remove all reactions using emote.

# Show the current configuration for an assignable role place

- Usage: showAssignableRolePlaceConfig <name>
- Description: This command displays the current configuration of assignable role place identified by name. This information includes the available emotes, which roles they represent and what position they have.

# Test how the assignable role place would look like

- Usage: testAssignableRolePlace <name>
- Description: Posts the assignable role place identified by name in the current channel. This command does not add the reactions, and is purely to check how the messages look.

# Move an assignable role place to another channel

- Usage: moveAssignableRolePlace <name> <newChannel>
- Description: Moves the assignable role place identified by name to be in newChannel. This change takes effect the next time the assignable role place is setup via setupAssignableRolePlace.

# Deactivate the assignable role place

- Usage: deactivateAssignableRolePlace <name>
- Description: Deactivates the assignable role place identified by name. Any further reactions placed by members will be removed immediately and not assign any roles.

# Activate the assignable role place

- Usage: activateAssignableRolePlace <name>
- Description: Activates the assignable role place identified by name and enables the assignment
  of roles.

# Change configuration of assignable role place

- Usage: changeAssignableRolePlaceConfig <name> <key> <newValue>
- Description: Changes the config attribute indicated by key of the place identified by name to newValue. The possible keys are: inline, unique, autoRemove and active respectively and all of these can take true/false as newValue.

# Swap two emotes in an assignable role place

- Usage: swapAssignableRolePosition <name> <firstEmote> <secondEmote>
- Description: Swaps the position of the assignable role places firstEmote and secondEmote in the assignable role place identified by name. This change takes effect the next time the assignable role place is setup via setupAssignableRolePlace.

# Set the position of an assignable role within an assignable role place

- Usage: setAssignableRolePosition <name> <emote> <position>
- Description: Sets the position of the emote within the assignable role place identified by name to position. This change takes effect the next time the assignable role place is setup via setupAssignableRolePlace.

#### Delete an assignable role place

- Usage: deleteAssignableRolePlace <name>
- Description: Completely deletes the assignable role place identified by name. This includes any trace in the database and the current messages, if any.

# Change description text of assignable role place

- Usage editAssignableRolePlaceText <name> <newText>
- Description: Changes the text which is shown in the first message of the assignable role place identified by name to newText. This changes the message immediately.

# 4.12. Statistic

This component will contain multiple features, currently only emote tracking is available.

# 4.13. Emote tracking

This feature is about tracking the usage of emotes from the server and external servers. The intention of this feature is to see what emotes are doing better than others and which emotes might be interesting to add to the server.

Feature key: emoteTracking

# 4.13.1. Feature modes

#### emoteAutoTrack

If this is enabled, emotes which are created within the server, are automatically stored and tracked. If they are renamed/deleted this will also be reflected automatically. Enabled by default.

#### externalEmotes

If this is enabled, every external tracked emote will be counted. It is also possible to track additional external emotes via the trackEmote command. Disabled by default.

#### autoTrackExternal

If this is enabled, every external emote which is used in a message by a server member will be automatically stored and tracked. externalEmotes needs to be enabled in order for this to function properly. Disabled by default.

# **4.13.2.** Commands

# Creating a newly tracked emote

- Usage: trackEmote <emote>
- Description: The enoteName needs to be a valid usage of an emote. If this emote is part of the server, it will now be automatically tracked. If the emote was tracked previously, it will be enabled again. For external emotes to be tracked this way, the feature mode externalEmotes needs to be enabled. The emote can either be a valid usage or the ID of an emote (it can only be an ID if it was previously tracked).

#### Disable tracking for an emote

- Usage: disableEmoteTracking [emote]
- Description: This command will cause the usages of emote to not be counted anymore. The
  emote can either be a valid usage or the ID of an emote. If emote is not given, the tracking for
  all tracked emotes is disabled.

### Show currently tracked emotes

- Usage: showTrackedEmotes [showTrackingDisabled]
- Description: This commands shows the currently tracked emotes of this server. If

'showTrackingDisabled' is true this command will also show the emotes for which the tracking is currently disabled. The shown tracked emotes are split into six groups: static/animated emotes from the server, static/animated emotes which previously existed on the server and static/animated external emotes. The categories for external emotes will not be shown if externalEmotes is disabled. If there are no emotes of a group, there will be no message.

#### Show emote statistics of emotes in the server

- Usage: emoteStats [period]
- Description: This command shows the amount each tracked emote from the server has been used overall. If a period is supplied, it will only show the amount of usages in that time period. If it is not provided, it will show the whole timeline. Beware that the amount of emotes is only tracked per day. For example, if it is 3PM UTC and you use 18h as a timeperiod, it will also show the emote statistics for the day before.

# Show emote statistics of emotes previously in the server

- Usage: deletedEmoteStats [period]
- Description: This command behaves the same way as emoteStats with the difference that it shows the emotes which were previously in the server. This means that the output will only show the name and the ID of the emote.

#### Show emote statistics of external emotes

- Usage: externalEmoteStats [period]
- Description: This command behaves the same way as emoteStats with the difference that it shows emotes which are not from this server. This means that the output will only show the name and the ID of the emote.
- Mode Restriction: This command is only available when the feature mode externalEmotes is enabled.

# Synchronize the server emotes with the database

- Usage: syncTrackedEmotes
- Description: This command cross checks the emotes in the database with the ones currently available in the server. If an emote was deleted in the server, but is still marked as available in the database, it will be marked as deleted. If an emote from the server is not available in the database, it will be created and tracked automatically. A message containing the amount of emotes deleted and created is shown. If the feature mode emoteAutoTrack is enabled, this should only be necessary in case the bot had an outage.

# Delete emote usages

- Usage: purgeEmoteStats <emote> [period]
- Description: This command removes any stored usages of emote. The emote can either be a valid usage or the ID of an emote. If period is given, only usages within this time period will be deleted, if it is not provided, the complete timeline will be deleted.

# Deleting an individual tracked emote

Usage: deleteTrackedEmote <emote>

• Description: Deletes the tracked emote from the database including the usages. The emote can either be a valid usage or the ID of an emote.

#### Reset emote statistics

- Usage: resetEmoteStats
- Description: This will delete all emote usages and tracked emotes in the database.

# Show the image of external tracked emotes

- Usage: showExternalTrackedEmote <emote>
- Description: Shows the ID, name, link to the image and the image directly for emote in an embed.
- Mode Restriction: This command is only available when the feature mode externalEmotes is enabled.

# Export the stored emote usages

- Usage: exportEmoteStats [period]
- Description: Creates a CSV file containing the emote usages and attaches it to a message. Each line in the file is the amount of usages of an emote per day. When an emote has not been used in a day, no line is present. If period is given, only usages from this time period will be exported, if it is not provided, the complete timeline will be exported. If the resulting file size is over the upload limit of the server, this command will not provide the file.

# 4.14. Reminders

Provides the ability to schedule reminders.

Feature key: remind

#### **4.14.1. Commands**

#### Create a reminder

- Usage: remind <duration> <text>
- Description: Creates a reminder with text which will be triggered after duration. This command uses duration parsing. The reminder will ping when the duration has passed and provide the context of the reminder.
- Example: remind 1h2m3s text in order to be reminded in 1 hour 2 minutes and 3 seconds with the reason text

# Cancelling a reminder

- Usage unRemind <reminderId>
- Description: Cancels this reminder reminder and will cause this reminder to not be executed.

#### Listing all active reminders

- Usage: reminders
- Description: Lists all the currently not yet executed reminders and information about each of

them.

# 4.15. Starboard

Provides the ability to track note worthy posts in a separate channel, identified by the post target starboard, because the pins within a channel are limited to 50. This feature works by users reacting to a message with the appropriate emote. By default this is  $\mathbb{I}$ , but can be changed via the emote star. There is a configurable threshold a message needs to reach in order to be posted to starboard. The post in the starboard is continuously updated and depending on the current star count an associated emote is displayed. When the poster of the message reacts to the message with a star, this is not counted. When the post is deleted from the starboard, the original message cannot appear on the starboard again.

Feature key: starboard

# 4.15.1. Emotes

- star to vote on posting something to starboard
- star1 for level 1 of starboard
- star2 for level 2 of starboard
- star3 for level 3 of starboard
- star4 for level 4 of starboard
- starboardBadge1 used as marker for first place in the command starStats
- starboardBadge2 used as marker for first place in the command starStats
- starboardBadge3 used as marker for first place in the command starStats

# 4.15.2. Relevant system configuration

starLvl1 The amount of stars necessary to appear on the starboard. Default: 5

starLvl2 The amount of stars necessary in order for the level 2 emote to be used in the starboard post. Default: 8

starLvl3 The amount of stars necessary in order for the level 3 emote to be used in the starboard post. Default: 13

starLvl4 The amount of stars necessary in order for the level 4 emote to be used in the starboard post. Default: 17

# 4.15.3. Post targets

# starboard

The target used for the messages containing the starboard posts with the current star amount

# **4.15.4.** Commands

# **Showing starboard statistics**

- Usage starStats [member]
- Description: Shows the most starred posts, the member with the most received stars and the
  members rewarding the most stars. If member is provided, this command will show the top
  posts, received stars and given stars for this member. The user is still required to be part of
  the server.

# 4.16. Suggestions

This feature provides the ability for members to post suggestions containing text to the post target suggestions. These suggestions can then be accepted or denied by the moderators.

Feature key: suggestion

# 4.16.1. Post targets

# suggestions

the target of the messages containing the suggestions

#### 4.16.2. Emotes

- suggestionYes for up-voting a suggestion
- suggestionNo for down-voting a suggestion

# **4.16.3.** Commands

# Creating a suggestion

- Usage: suggest <text>
- Description: Posts the text to the suggest post target and places the emotes for up and down voting.

# Accepting a suggestion

- Usage: accept <suggestionId> [note]
- Description: Re-posts the suggestion identified by suggestionId and marks the suggestion as accepted. The optional note will be used in this re-post, if provided.
- Example: accept 1 okay in order to accept the suggestion 1 with the reason okay

# Rejecting a suggestion

- Usage: reject <suggestionId> [note]
- Description: Re-posts the suggestion identified by suggestionId and marks the suggestion as denied. The optional note will be used in this re-post, if provided.
- Example: deny 1 not okay in order to reject the suggestion 1 with the reason not okay

# 4.17. Miscellaneous

This feature provides some utility commands.

Feature key: utility

# **4.17.1. Commands**

# Retrieving the URL of an emote

- Usage: showEmote <emote>
- Description: Posts the name of the emote accompanied with the URL where the image of the emote is stored.

# Displaying the avatar or a member

- Usage: showAvatar [member]
- Description: Displays the avatar of the given member accompanied with a URL to access it directly. If no member is provided, the member executing will be used.

# Displaying information about members

- Usage: userInfo [member]
- Description: Displays information about a member including: username, ID, activity, nickname (if any), date joined the server and date registered on discord.

# Displaying information about the server

- Usage: serverInfo
- Description: Displays information about the server including: ID, server name, owner, member count, creation date, role count, server features and custom emotes of the server.

# Choose one of multiple options

- Usage: choose [options separated by space]
- Description: Selects one of the given options and returns it. The options need to be separated by space. If you want to have a space in an option, the complete option needs to be wrapped by ". For example "this is a test" is one whole option.

# 4.18. Link embeds

# 4.18.1. Emotes

• removeEmbed to remove the embed of a link

This feature enables the automatic embedding of messages containing a message link. If a message contains a link to a discord message this will create an embed containing the the message content. This supports image attachments, but not videos or files. A reaction is placed on the embedded message which can be used to delete this embed. Only the original author and the person creating the embed can delete the embed this way.

# 4.19. Repost detection and tracking

This feature can be used to detect whether an image has been posted before on the server. Images are compared by the hash stored in the database, which makes it very strict. In order to calculate the hash, the image needs to be downloaded. It is possible to show a leaderboard of the most reposting users. Both of these features can be changed via feature modes. If a reaction has been detected a reaction will be added to the post. If a message contains multiple or the detected repost is not the first image in the message a reaction containing digit indicating the position of the repost will be added. For example if the repost is the second image in a message, a reaction representing the digit two will be added.

While it can be configured that the feature is only active in certain channels, the detection whether an image is a repost checks all previously posted images from the server (given they have been posted in a channel where the repost check is active).

Feature key: repostDetection

# 4.19.1. Feature modes

#### download

If this is enabled, the images in the configured channels will be downloaded and the hash is calculated basd on the file content. The images are deleted immediately afterwards. If this is disabled, the proxy URL of the image will be used to calculate the hash. Enabled by default.

#### leaderboard

If this is enabled, the command repostLeaderboard will be available. This command shows the leaderboard of the user with the most reposts. Disabled by default.

### 4.19.2. Emotes

• repostMarker to indicate that a post has been identified as a repost

# **4.19.3. Commands**

# Remove stored image posts and reposts of whole server or specific member

- Usage: purgeImagePosts [member]
- Description: If member is provided, this will delete all stored image hashes (and their reposts) from the database. If member is not provided, this will delete all stored image hashes (and their reposts) from the whole server.

# Remove reposts of whole server or specific member

- Usage: purgeReposts [member]
- Description: If member is provided, this will delete all reposts of the given member. If member is not provided, this will delete all reposts in the whole server.

# Show the leaderboard of reposts

- Usage: repostLeaderboard [page]
- Description: Shows the rank and the amount of reposts for a provided page, if page is not provided, it will show five users with the highest a mount of reposts. page is 1-indexed. It will also show the amount and rank of the user executing.
- Mode Restriction: This command is only available when the feature mode leaderboard is enabled.

# Enable repost check for a channel group

- Usage: enableRepostCheck <groupName>
- Description: Enables the repost checking for all channels in the channel group identified by groupName. This channel group needs to be of type repostCheck.

# Disable repost check for a channel group

- Usage: disableRepostCheck <groupName>
- Description: Disables the repost checking for all channels in the channel group identified by groupName. This channel group needs to be of type repostCheck.

# Show the channels for which repost check has been enabled

- Usage: showRepostCheckChannels
- Description: Shows the channel groups with their respective channels for which the repost check has been enabled. These can only be channel groups of type repostCheck. It can still be enabled if there are now channels in the channel group.

# 4.20. Entertainment commands

This feature basically contains a few commands which can be used for entertainment purposes directly

Feature key: entertainment

# 4.20.1. Relevant system configuration

rouletteBullets The amount of bullets the revolver for roulette can hold. Default: 6 rollDefaultHigh The default sides of the die for roll. Default: 6

#### Play a round of russian roulette

- Usage: roulette
- Description: Decides, based on the configured amount of bullets possible, whether a shot happens. Shows the result as a message.

#### Calculate the love chance between two texts

- Usage: loveCalc <textA> <xtextB>
- Description: Decides, by a random chance, the percentage of love between the two given texts and displays it in a message.

# Ask a magic 8-ball a question

- Usage: 8ball <text>
- Description: Decides the answer for the question, given on a set of pre-defined answers. This happens randomly.

# Roll a virtual die

- Usage: role [max] [min]
- Description: Rolls a virtual die. Per default this is a six sided die. If max is provided, it changes the amount of sides possible and if min is provided, no value below this is possible. If min is larger than max, it is taken as max and vice-versa.