rodario Documentation

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haliphax

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A simple, redis-backed Python actor framework

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CHAPTER 1

The Registry

class rodario.registry.**Registry**
Actor registry class (singleton wrapper)

static __new__()
Retrieve the singleton instance for Registry.

Return type *rodario.registry._Singleton*

class rodario.registry.**_Singleton**
Singleton for actor registry

__init__()
Initialize the registry.

actors
Retrieve a list of registered actors.

Return type set

exists(*uuid*)
Test whether an actor exists in the registry.

Parameters **uuid** (*str*) – UUID of the actor to check for

Return type bool

get_proxy(*uuid*)
Return an ActorProxy for the given UUID.

Parameters **uuid** (*str*) – The UUID to return a proxy object for

Return type *rodario.actors.ActorProxy*

register(*uuid*)
Register a new actor.

Parameters **uuid** (*str*) – The UUID of the actor to register

unregister(*uuid*)
Unregister an existing actor.

Parameters **uuid** (*str*) – The UUID of the actor to unregister

CHAPTER 2

Actors and Proxies

class rodario.actors.**Actor**(*uuid=None*)
Base Actor class

__init__(*uuid=None*)
Initialize the Actor object.

Parameters **uuid** (*str*) – Optionally-provided UUID

is_alive
Return True if this Actor is still alive.

Return type bool

proxy()
Wrap this Actor in an ActorProxy object.

Return type *rodario.actors.ActorProxy*

start()
Fire up the message handler thread.

stop()
Kill the message handler thread.

class rodario.actors.**ActorProxy**(*actor=None*, *uuid=None*)
Proxy object that fires calls to an actor over redis pubsub

__init__(*actor=None*, *uuid=None*)
Initialize instance of ActorProxy.

Accepts either an Actor object to clone or a UUID, but not both.

Parameters

- **actor** (rodario.actors.Actor) – Actor to clone
- **uuid** (*str*) – UUID of Actor to clone

_proxy(*method_name*, **args*, ***kwargs*)
Proxy a method call to redis pubsub.

This method is not meant to be called directly. Instead, it is used by the proxy's self-generated methods to provide the proxy with the same public API as the actor it represents.

Parameters

- **method_name** (*str*) – The method to proxy
- **args** (*tuple*) – The arguments to pass

- **kwargs** (*dict*) – The keyword arguments to pass

Return type multiprocessing.Queue

proxyid = None
This proxy object's UUID for creating unique channels

class rodario.future.**Future**(*queue*)
Custom response type for proxied method calls

get(**args*, ***kwargs*)
Resolve and return the proxied method call's value.

Return type mixed

ready
Return True if the response value is available.

Return type bool

CHAPTER 3

Decorators

rodario.decorators.**blocking**(*func*)

Block the thread and return the proxied method call's result.

Parameters **func** (*instancemethod*) – The function to wrap

Return type rodario.decorators.BlockingMethod

CHAPTER 4

Exceptions

class rodario.exceptions.**InvalidActorException**
Raised when a referenced actor does not exist

class rodario.exceptions.**InvalidProxyException**
Raised when a proxy is not given a valid object to wrap

class rodario.exceptions.**UUIDInUseException**
Raised during UUID registration if the UUID is already taken

class rodario.exceptions.**RegistrationException**
Raised when actor registration fails

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