

[Hummingbird](#) / RouterMethods

Protocol

# RouterMethods

Conform to RouterMethods to add standard router verb (get, post ...) methods

```
protocol RouterMethods<Context>
```

## Topics

### Associated Types

associatedtype Context : RequestContext

**Required**

### Instance Methods

```
func add(middleware: any MiddlewareProtocol<Request, Response, Context>) -> Self
```

add middleware

**Required**

```
func addMiddleware(buildMiddlewareStack: () -> some Middleware Protocol<Request, Response, Context>) -> Self
```

Add middleware stack to router

```
func addRoutes(RouteCollection<Context>, atPath: RouterPath) -> Self
```

## Add route collection to router

```
func delete(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

DELETE path for async closure returning type conforming to ResponseGenerator

```
func get(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

GET path for async closure returning type conforming to ResponseGenerator

```
func group(RouterPath) -> RouterGroup<Context>
```

Return a group inside the current group

```
func group<TargetContext>(RouterPath, context: TargetContext.Type) -> RouterGroup<TargetContext>
```

Return a group inside the current group that transforms the RequestContext

```
func group<TargetContext>(RouterPath, context: TargetContext.Type) -> RouterGroup<TargetContext>
```

Return a group inside the current group that transforms the RequestContext

```
func head(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

HEAD path for async closure returning type conforming to ResponseGenerator

```
func on<Responder>(RouterPath, method: HTTPRequest.Method, responder : Responder) -> Self
```

Add responder to call when path and method are matched

### Required

```
func on(RouterPath, method: HTTPRequest.Method, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

Add path for async closure

```
func patch(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

PATCH path for async closure returning type conforming to ResponseGenerator

```
func post(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

POST path for async closure returning type conforming to ResponseGenerator

```
func put(RouterPath, use: (Request, Context) async throws -> some ResponseGenerator) -> Self
```

PUT path for async closure returning type conforming to ResponseGenerator

```
func ws(RouterPath, shouldUpgrade: (Request, Context) async throws -> RouterShouldUpgrade, onUpgrade: WebSocketDataHandler<WebSocket RouterContext<Context>>) -> Self
```

Add path to router that support WebSocket upgrade

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## Relationships

### Conforming Types

RouteCollection, Router, RouterGroup

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## See Also

### Router

```
class Router
```

Create rules for routing requests and then create Responder that will follow these rules.

```
struct RouterGroup
```

Used to group together routes under a single path. Additional middleware can be added to the endpoint and each route can add a suffix to the endpoint path

```
class RouteCollection
```

## Collection of routes

`struct RouterOptions`

Router Options

`protocol HTTPResponder`

Protocol for object that produces a response given a request

`protocol HTTPResponderBuilder`

A type that has a single method to build a HTTPResponder

`struct CallbackResponder`

Responder that calls supplied closure

`struct RouterResponder`

`struct EndpointPath`

Endpoint path storage

`struct RouterPath`

Split router path into components

`struct RequestID`

Generate Unique ID for each request

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