

# OGC API - Common

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*Ms. Prajwalita J. Chavan*  
*IIT, Bombay*

# Overview

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# About OGC API - Common

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- **Publication Date:** 2021-08-23
- **Editor:** Charles Heazel
- OGC API - Common Core provides a **common foundation** for OGC Web API standards.
- OGC API - Common is the set of **common practices and shared requirements** that have emerged from the development of Resource Oriented Architectures and Web APIs within the OGC.
- Core Standard provides the fundamental rules for implementing a Web API that conforms to OGC API Standards. It seeks to establish a solid foundation which can **be extended by other resource-specific Web API Standards.**

# Introduction

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- First, this OGC Standard **establishes rules** for the use of **HTTP protocols** and Uniform Resource Identifiers (**URIs**). These requirements seek to provide both API servers and clients a predictable environment for the exchange of HTTP requests and responses. These rules are applicable regardless of the resources being accessed.
- This OGC Standard then enables **discovery operations** directed against a Web API implementation. It identifies the hosted resources, defines conformance classes, and provides both human and machine-readable documentation of the API design. The requirements specified in this standard **SHOULD** be applicable to any Web API implementation.

# HTTP(S) Protocol

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- OGC Standard only refers to the HTTP protocol. This is not meant to exclude the use of HTTPS. This is simply a shorthand notation for **"HTTP or HTTPS"**. In fact, most servers are expected to use HTTPS and not HTTP
- OGC Web API standards **do not prohibit the use of any valid HTTP option**. However, implementers should be aware that optional capabilities that are not in common use could be an **impediment to interoperability**.

# Identifiers

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- **URI**

Uniform Resource Identifier

- **URL**

Uniform Resource Locator

- URI as the **single global identification system** for the Web
- The partial URIs used **to identify Resources** in this document are referred to as the **resource path**

# URI

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```
URI = scheme ":" hier-part [ "?" query ] [ "#" fragment ]
```

```
hier-part    = "//" authority path-abempty  
              / path-absolute  
              / path-rootless  
              / path-empty
```

```
authority    = [ userinfo "@" ] host [ ":" port ]
```

```
path-abempty = *( "/" segment )
```

```
path-absolute = "/" [ segment-nz *( "/" segment ) ]
```

```
path-rootless = segment-nz *( "/" segment )
```

```
path-empty   = 0<pchar>
```

# URI

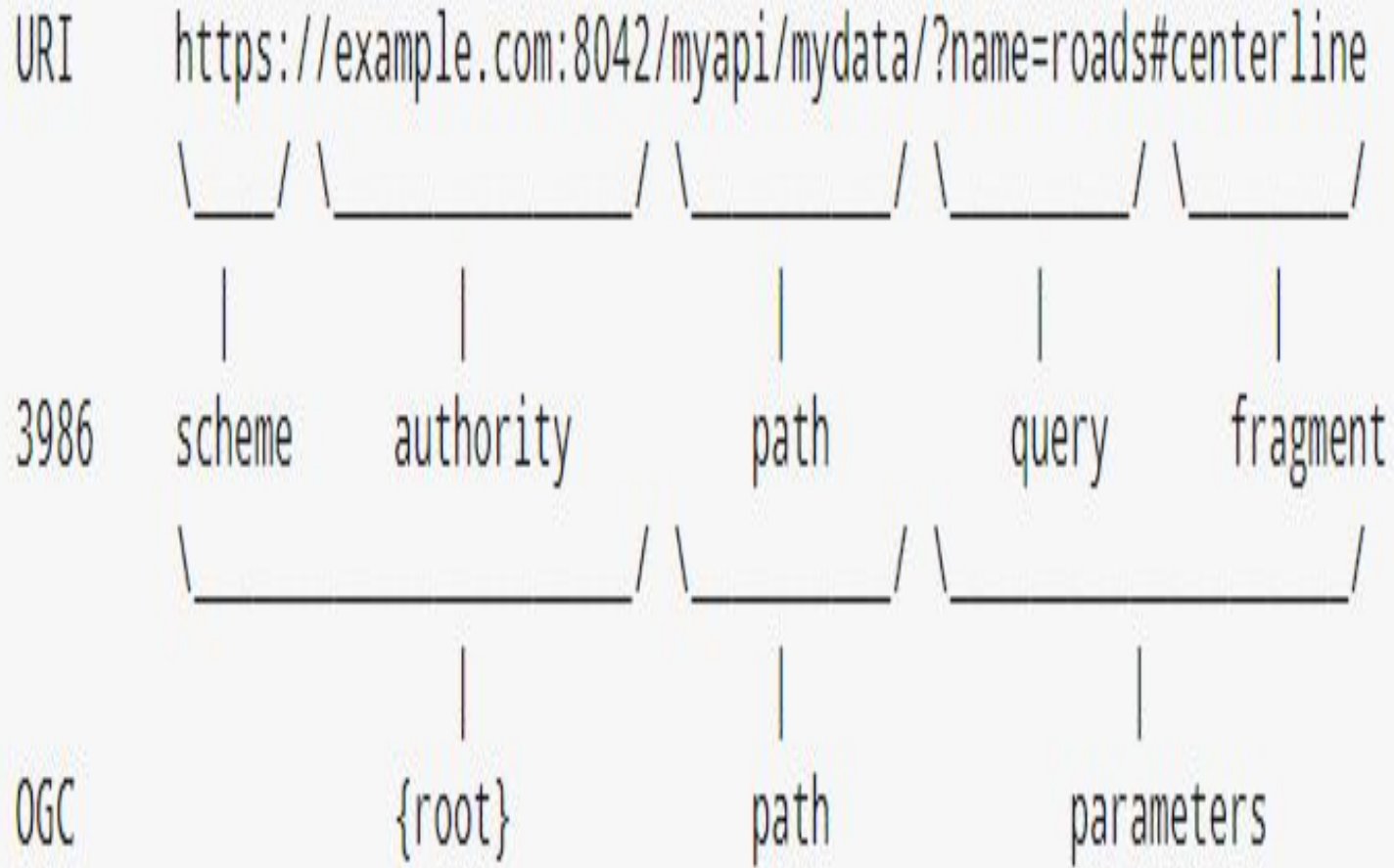
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- **scheme** is assumed to be **HTTP** or **HTTPS**
- **authority** is provided by the API developer
- **{root} = scheme + authority**, designates the scheme, authority, and path to the root node of the API implementation.
- Only the **path-absolute** and **path-rootless** patterns are used
- **Parameters** passed as part of an operation are **encoded in the query**.
- Parameters **passed in HTTP headers or as cookies** are out of scope for this Standard.



# URI

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# Security

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- **HTTP authentication**
- **An API key** (either as a header or as a query parameter)
- **OAuth2's common flows** (implicit, password, application and access code) as defined in RFC6749
- **OpenID Connect Discovery.**

# THANK YOU!

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prajwalita@iitb.ac.in  
prajwalita.chavan@gmail.com

#OGCAPI