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HTTP Verbs

GET : Retrieve data from the server.

POST : Send data to the server to create a resource.

PUT : Send data to the server to update a resource.

PATCH : Send data to the server to update a resource partially.

DELETE : Delete a resource from the server.

TRACE : Returns the full HTTP request received by the server for debugging and diagnostic purposes.

OPTIONS : Returns the HTTP methods supported by the server for the requested URL.

CONNECT : Converts the request connection to a transparent TCP/IP tunnel for secure communication.

PURGE : Invalidates a cached resource.

LOCK : Locks the resource for exclusive use by the client.

UNLOCK : Unlocks the resource previously locked by the client.

MKCOL : Creates a new collection resource.

COPY : Copies the resource identified by the Request-URI to the destination URI.

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HTTP Status Codes

1xx : Informational

2xx : Success

3xx : Redirection

4xx : Client Errors

5xx : Server Errors

Response Headers

Content-Type : Specifies the MIME type of the data in the response body.

Content-Length : Specifies the length of the response body in bytes.

Cache-Control : Specifies the caching behavior of the response.

Location : Specifies the URI of a resource that can be used to retrieve the requested resource.

Server : Specifies the name and version of the server software that generated the response.

Access-Control-Allow-Origin : Specifies which origins are allowed to access the resource.

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API Design

REST : Representational State Transfer, a design pattern for building web services.

SOAP : Simple Object Access Protocol, a messaging protocol for exchanging structured data.

GraphQL : A query language and runtime for building APIs.

API Gateway : A service that manages, protects, and scales APIs.

API Architectures

SOA : Service-Oriented Architecture, an architectural style for building distributed systems.

Microservices : An architectural style for building complex applications as a suite of small, independent services.

Serverless : A cloud computing execution model where the cloud provider manages the infrastructure and automatically allocates resources as needed.

Event-Driven : An architectural style where the flow of data between components is triggered by events.

RESTful API : An architectural style that uses HTTP requests to GET, POST, PUT, and DELETE data.

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API Design Patterns

Adapter Pattern : A pattern that converts the interface of a class into another interface that clients expect.

Decorator Pattern : A pattern that adds behavior to an individual object dynamically.

Proxy Pattern : A pattern that provides a surrogate or placeholder for another object to control access to it.

Chain of Responsibility Pattern : A pattern that delegates commands to a chain of processing objects.

Observer Pattern : A pattern that defines a one-to-many dependency between objects so that when one object changes state, all its dependents are notified and updated automatically.

API Security

OAuth : An open standard for authorization used for protecting APIs.

JWT : JSON Web Tokens, a standard for securely transmitting information between parties as a JSON object.

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SSL/TLS : Secure Sockets Layer/Transport Layer Security, a protocol for establishing a secure connection between a client and a server.

API Key : A secret token used to authenticate API requests.

Rate Limiting : A technique used to limit the number of requests that can be made to an API over a specific period of time.

OpenID Connect : An authentication layer built on top of OAuth that allows users to be authenticated across multiple domains.

Cross-Origin Resource Sharing (CORS) : A mechanism that allows many resources (e.g., fonts, JavaScript, etc.) on a web page to be requested from another domain outside the domain from which the resource originated.

API Security

Postman : A popular tool for testing and debugging APIs.

SoapUI : A tool for testing SOAP and REST web services.

Swagger : A tool for designing, building, and testing APIs.

JMeter : A tool for testing the performance of APIs.

TestRail : A test management tool for planning, executing, and tracking API tests.

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Dredd : A command-line tool for testing API documentation against its backend implementation.

REST Assured : A Java-based library for testing RESTful APIs.

Karate DSL : A testing framework for API testing using Gherkin syntax.

HttpMaster : A tool for testing and debugging APIs.

Assertible : A tool for testing and monitoring APIs with automated tests.

API Development

Node.js : A JavaScript runtime for building server-side applications.

Express : A popular framework for building web applications and APIs with Node.js.

Django : A Python web framework for building web applications and APIs.

Flask : A lightweight Python web framework for building web applications and APIs.

Spring : A Java framework for building enterprise-level web applications and APIs.

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API Implementation Platforms

Firebase : A mobile and web application development platform developed by Google.

Backendless : A mobile and web application development platform that allows developers to build and deploy applications without backend coding.

Parse Server : An open-source version of the Parse backend that can be deployed to any infrastructure.

Amazon API Gateway : A fully managed service that makes it easy for developers to create, publish, maintain, monitor, and secure APIs.

Microsoft Azure API Management : A fully managed service that enables users to publish, secure, transform, maintain, and monitor APIs.

API Performance

Caching : A technique for improving API performance by storing responses in a cache.

Throttling : A technique for limiting the rate of requests to an API to prevent overload.

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API Monitoring

Pingdom : A tool for monitoring the uptime and performance of APIs.

New Relic : A tool for monitoring the performance of APIs and other web applications.

Datadog : A monitoring and analytics platform for cloud-scale applications and APIs.

Sumo Logic : A cloud-based log management and analytics platform for APIs and other applications.

Loggly : A cloud-based log management platform for monitoring APIs and other applications.

API Standards

JSON API : A specification for building APIs that use JSON as the data format.

HAL : Hypertext Application Language, a standard for building hypermedia-driven APIs.

JSON-LD : A format for representing linked data on the web.

OData : Open Data Protocol, a standard for building and consuming RESTful APIs.

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API Standards Organizations

W3C : The World Wide Web Consortium, an international community that develops web standards.

IETF : The Internet Engineering Task Force, an open standards organization that develops and promotes Internet standards.

OASIS : Organization for the Advancement of Structured Information Standards, a nonprofit consortium that drives the development, convergence, and adoption of open standards for the global information society.

RESTful API Modeling Language (RAML) : A YAML-based language for describing RESTful APIs developed by MuleSoft.

JSON API : A specification for building APIs that use JSON as the data format.

API Standards Organizations

Kubernetes : An open-source platform for managing containerized workloads and services.

OpenShift : A container application platform that builds on top of Kubernetes.

Docker Swarm : A native clustering and orchestration solution for Docker.

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API Governance

API Management : The process of creating, publishing, and monitoring APIs in a secure and scalable way.

API Monetization : The process of generating revenue from APIs by charging developers for usage.

API Versioning : The process of managing changes to APIs over time.

API Analytics : The process of collecting and analyzing data on API usage and performance.

API Gateway : A service that manages, protects, and scales APIs.

API Documentation

OpenAPI : A specification for building APIs in YAML or JSON format

API Blueprint : A high-level API description language for building RESTful APIs.

RAML : A YAML-based language for describing RESTful APIs

Swagger UI : A tool for visualizing and interacting with APIs that have been described using the OpenAPI specification.

Slate : A tool for generating beautiful, responsive API documentation.

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API Deployment

Heroku : A cloud platform for deploying, managing, and scaling web applications and APIs.

AWS Elastic Beanstalk : A service for deploying and scaling web applications and APIs on AWS.

Azure App Service : A service for deploying and scaling web applications and APIs on Azure.

Google App Engine : A service for deploying and scaling web applications and APIs on GCP.

Docker : A containerization platform used for packaging and deploying applications.

AWS Lambda : A serverless compute service for running code in response to events.

Azure Functions : A serverless compute service for running code in response to events.

Google Cloud Functions : A serverless compute service for running code in response to events.

Netlify : A cloud platform for deploying and managing static websites and APIs.

Vercel : A cloud platform for deploying and managing static websites and APIs.

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