REST APIs

Allows 2 apps to communicate with each other. In SDN, apps communicate with SDN controller via NBI (REST) and between SDN and network devices via SBI (NETCONF and RESTCONF).
HTTP → CRUD: POST→Create, GET → Read, PUT,PATCH → Update, DELETE→Delete.
HTTP Request: Verb (GET), URI (scheme/protocol, authority, path), can include additional headers to pass additional information to the server.
IP header, TCP header, Verb, URI, Additional Headers, Data. (Accept additional header can inform the server about the types of data it can send back to the client).
HTTP response: includes a status code (1xx informational, 2xx successful, 3xx redirection, 4xx client error 5xx server error).
102 → processing, 200→ ok, 201 → created, 301→ moved permanently, 403→ unauthorized, 404→ not found, 500 → internal server error.
RESTful architecture constraints:
Uniform interface, client-server, stateless, cacheable or non cacheable, layered system, code on demand.
Client-server: they both change and evolve independently of each other, the client uses APIs to access resources on the server.
Stateless: each API exchange is a separate event,independent of all past exchanges between the client and the server (if authentication is requires, the client must authenticate with the server for each request it makes).
TCP is stateful and UDP is statelss.
Cacheable/ non cacheable: rest apis must support caching of data.
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