Conditions & Route Rules

Google Cloud

Conditions

- Dynamic processing at runtime
- Defines operations on variables
- Results are boolean
- Allows chaining

Conditions

```
<Condition>
   (proxy.pathsuffix MatchesPath "/statuses") and (request.verb = "GET")
</Condition>


<Condition>
   (proxy.pathsuffix MatchesPath "/statuses" or proxy.pathsuffix MatchesPath
"/status") and (request.verb = "GET")
</Condition>
```

Condition Format

`<Condition>{variable.name}{operator}{"value"}</Condition>`

Conditions - Policy Execution

```
<Step>
   <Condition>request.header.accept = "application/json"</Condition>
   <Name>XMLToJSON</Name>
</Step>
```

Conditions - Flow Execution

```xml
<Flow name="GetRequests">
  <Condition>request.verb = "GET"</Condition>
  <Request>
    <Step>
      <Condition>request.path MatchesPath "/statuses/**"</Condition>
      <Name>StatusesRequestPolicy</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
```

Conditions - Flow Execution

```
<Flow name="GetRequests">
  <Condition>request.verb = "GET"</Condition>
  <Request>
    <Step>
      <Condition>request.path MatchesPath "/statuses/**"</Condition>
      <Name>StatusesRequestPolicy</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
```

Conditions - Flow Execution

```
<Flow name="GetRequests">
  <Condition>request.verb = "GET"</Condition>
  <Request>
    <Step>
      <Condition>request.path MatchesPath "/statuses/**"</Condition>
      <Name>StatusesRequestPolicy</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
<Flow name="InvalidRequest404">
  <Request>
    <Step>
      <Name>RaiseFault404NotFound</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
```

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Conditions - Flow Execution

```
<Flow name="GetRequests">
  <Condition>request.verb = "GET"</Condition>
  <Request>
    <Step>
      <Condition>request.path MatchesPath "/statuses/**"</Condition>
      <Name>StatusesRequestPolicy</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
<Flow name="InvalidRequest404">
  <Request>
    <Step>
      <Name>RaiseFault404NotFound</Name>
    </Step>
  </Request>
  <Response/>
</Flow>
```

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Conditions - Target end point route selection

```
<RouteRule name="xmlTarget">
  <Condition>request.header.Content-Type = "text/xml"</Condition>
  <TargetEndpoint>XmlTargetEndpoint</TargetEndpoint>
</RouteRule>

<RouteRule name="default">
  <TargetEndpoint>target</TargetEndpoint>
</RouteRule>
```

Pattern matching in Conditions

- Matches
- JavaRegex
- MatchesPath

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Pattern matching in Conditions - Matches

<Condition>(proxy.pathsuffix Matches "/cat")</Condition>

<Condition>(proxy.pathsuffix Matches "/*at")</Condition>

<Condition>(proxy.pathsuffix Matches "/cat*")</Condition>

<Condition>(proxy.pathsuffix Matches "/c%*at")</Condition>

Pattern matching in Conditions - Matches

```
<Condition>
   (proxy.pathsuffix Matches "/cat")
</Condition>


<Condition>
   (proxy.pathsuffix ~ "/cat")
</Condition>


<Condition>
   (proxy.pathsuffix Like "/cat")
</Condition>
```

Pattern matching in Conditions - JavaRegex

<Condition>(proxy.pathsuffix JavaRegex "/cat")</Condition>

<Condition>(proxy.pathsuffix JavaRegex "/c*t")</Condition>

<Condition>(proxy.pathsuffix JavaRegex "/ca?t")</Condition>

<Condition>(proxy.pathsuffix JavaRegex "/[cbr]at)</Condition>

Pattern matching in Conditions - Matches

```
<Condition>
   (proxy.pathsuffix JavaRegex "/cat")
</Condition>


<Condition>
   (proxy.pathsuffix ~~ "/cat")
</Condition>
```

Pattern matching in Conditions - MatchesPath

<Condition>(proxy.pathsuffix MatchesPath "/animals/*)</Condition>

<Condition>(proxy.pathsuffix MatchesPath "/animals/**)</Condition>

<Condition>(proxy.pathsuffix MatchesPath "/animals/*/wild/**)</Condition>

Pattern matching in Conditions - Matches

```
<Condition>
   (proxy.pathsuffix MatchesPath "/animals/*)
</Condition>


<Condition>
  (proxy.pathsuffix ~/ "/animals/*)
</Condition>


<Condition>
  (proxy.pathsuffix LikePath "/animals/*)
</Condition>
```

Route Rule


```
<ProxyEndpoint name="default">
    <PreFlow/>
    <Flows>
      <Flow name="forecast">
        <Condition>
          proxy.pathsuffix MatchesPath &quot;/forecastrss&quot;
        </Condition>
      </Flow>
    </Flows>
    <PostFlow/>
    <HTTPProxyConnection>
        <VirtualHost>default</VirtualHost>
        <BasePath>/v1/weather</BasePath>
    </HTTPProxyConnection>
    <RouteRule name="default">
        <TargetEndpoint>default</TargetEndpoint>
    </RouteRule>
</ProxyEndpoint>
```
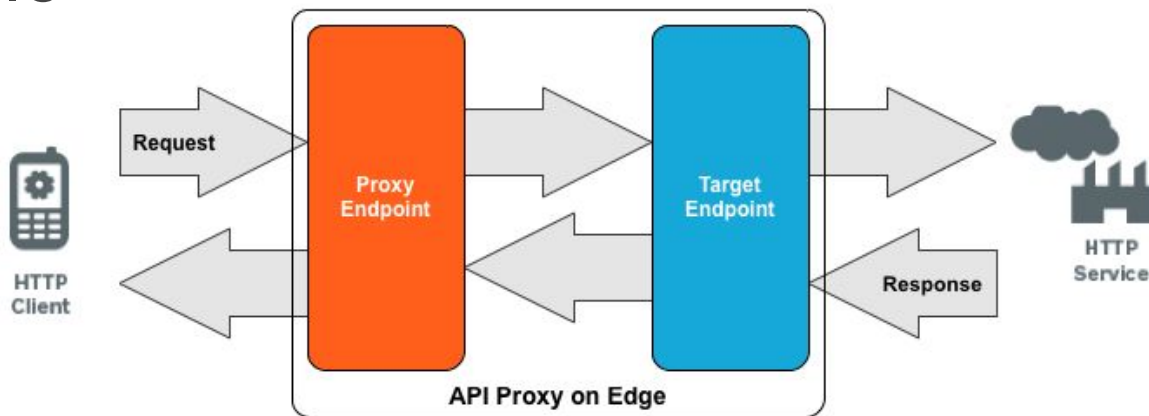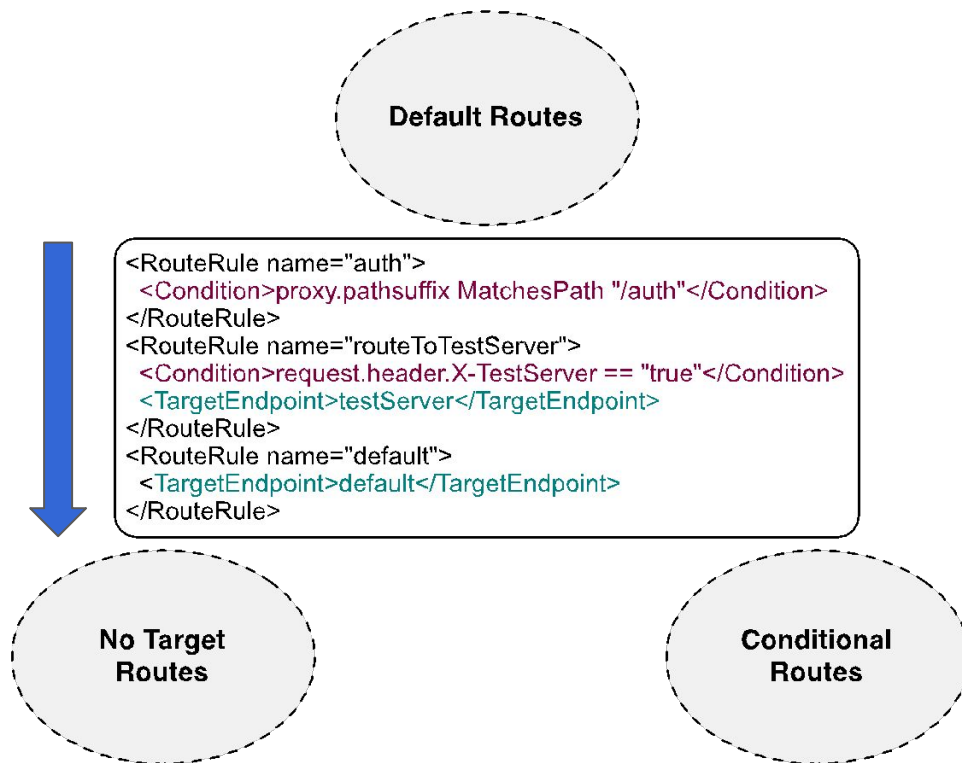
```
<TargetEndpoint name="default">
    <PreFlow/>
    <Flows/>
    <PostFlow/>
    <HTTPTargetConnection>
        <URL>http://weather.yahooapis.com</URL>
    </HTTPTargetConnection>
</TargetEndpoint>
```

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Route Rules


```
Default Routes

<RouteRule name="auth">
  <Condition>proxy.pathsuffix MatchesPath "/auth"</Condition>
</RouteRule>
<RouteRule name="routeToTestServer">
  <Condition>request.header.X-TestServer == "true"</Condition>
  <TargetEndpoint>testServer</TargetEndpoint>
</RouteRule>
<RouteRule name="default">
  <TargetEndpoint>default</TargetEndpoint>
</RouteRule>

No Target Routes          Conditional Routes
```

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Thank You

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