
GitHub Issue

TS 29.500 §6.6 Problem Details

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Problem Details

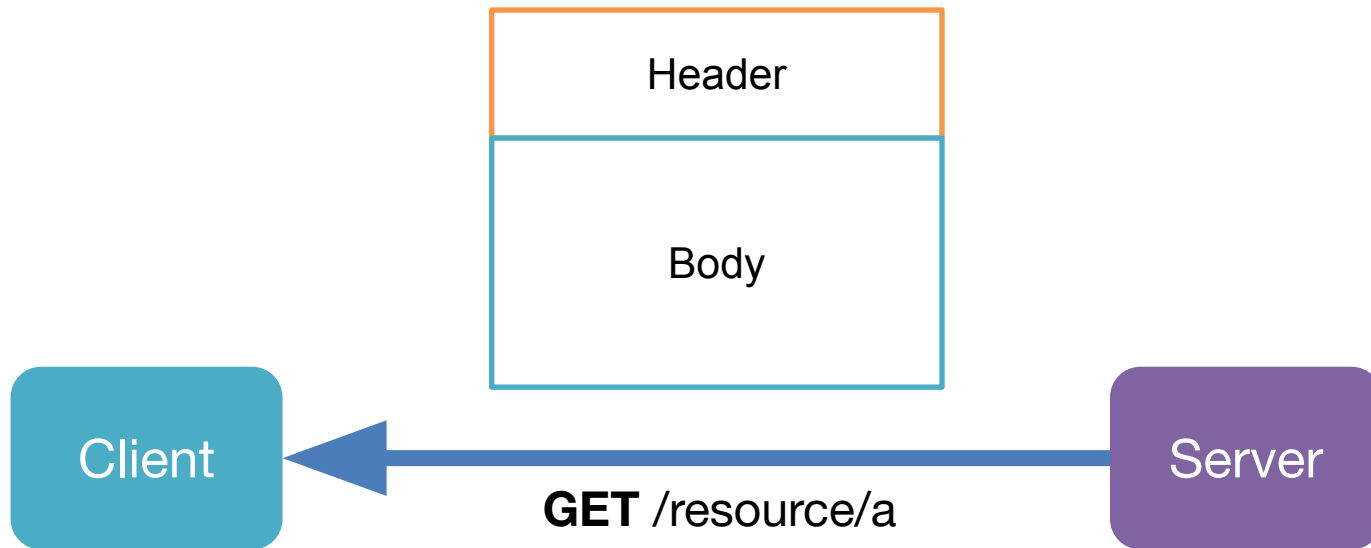
- **Error Handling**

- Return error with media-type 'application/problem+json'
- Defined in TS 29.500 §5.2.7
- Schema defined in CommonData (TS 29.571)

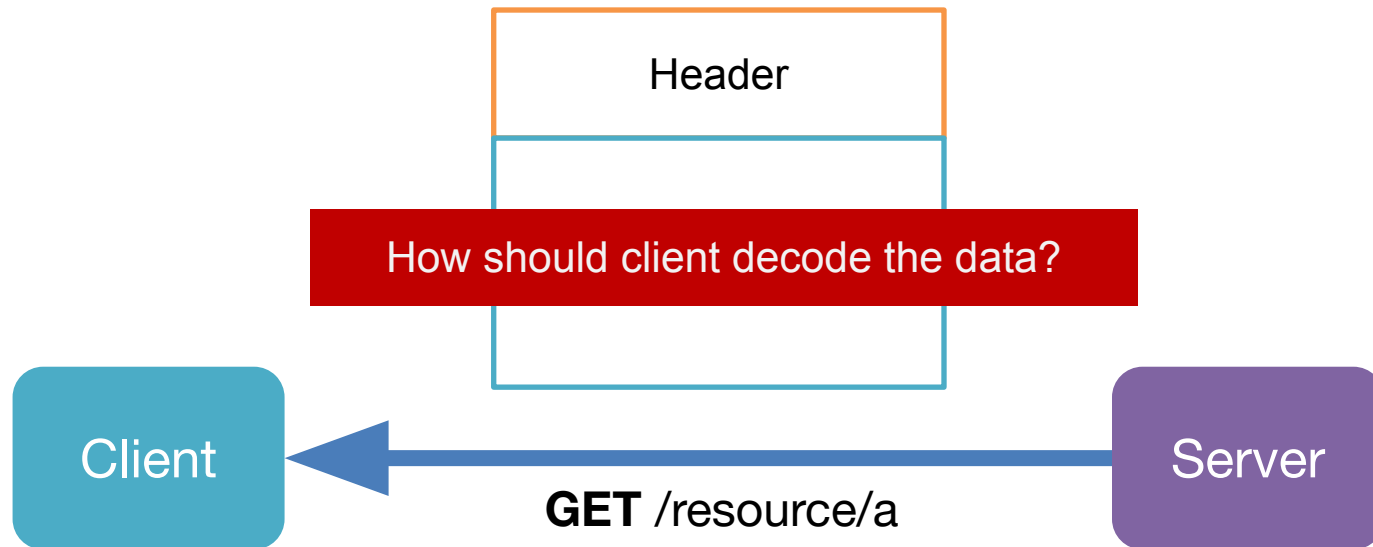
Outline

- **Content Negotiation**
- **Media-Type**
- **`ProblemDetails` Schema (IETF standard)**
- **`ProblemDetails` Schema (3GPP extensions)**

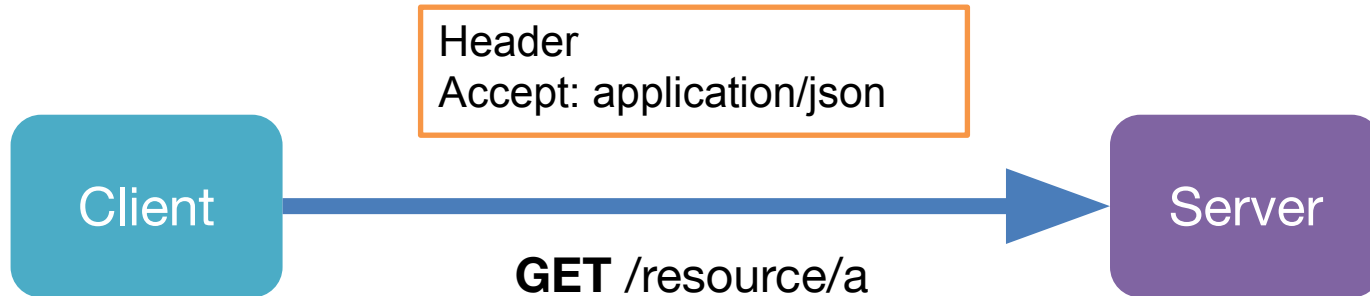
Content Negotiation



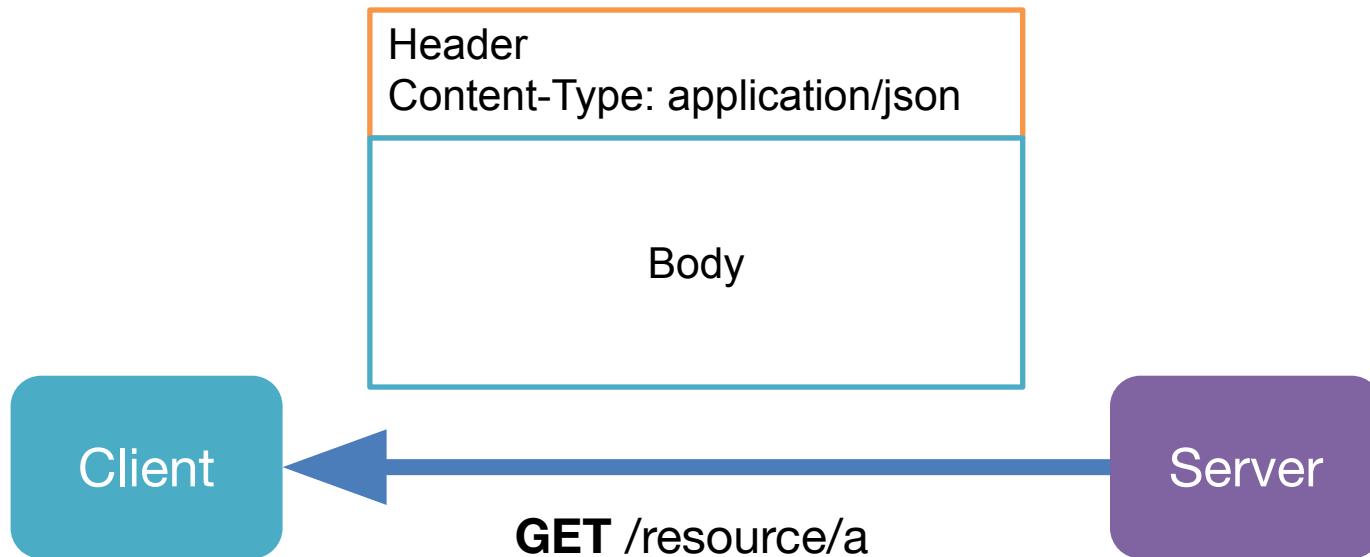
Content Negotiation



Content Negotiation



Content Negotiation



Content Negotiation

- No media-type match



Media-Type

- **Accept: <media-type>**
- **Content-Type: <media-type>**
- **Common media type**
 - application/json, application/xml
 - image/gif
- **All common media type are described in IANA media type registry**

Outline

- Content Negotiation
- Media-Type
- **`ProblemDetails` Schema (IETF standard)**
- **`ProblemDetails` Schema (3GPP extensions)**

Problem Details

- **Defined in IETF RFC 9457**
 - *“machine-readable details of errors in HTTP response content to avoid the need to define new error response formats for HTTP APIs.”*

Problem Details

- *Schema*

```
{  
  "type": string // URI (http, relative, tag)  
  "status": number // HTTP status code  
  "title": string // human-readable summary of the problem  
  "detail": string // human-readable explanation to the problem  
  "instance": string // URI. To reference the occurrence of the problem  
}
```

Problem Details

```
POST /purchase HTTP/1.1
Host: store.example.com
Content-Type: application/json
Accept: application/json, application/problem+json
```

```
{
  "item": 123456,
  "quantity": 2
}
```

```
HTTP/1.1 403 Forbidden
Content-Type: application/problem+json
Content-Language: en
```

```
{
  "type": "https://example.com/probs/out-of-credit",
  "title": "You do not have enough credit.",
  "detail": "Your current balance is 30, but that costs 50.",
  "instance": "/account/12345/msgs/abc",
  "balance": 30,
  "accounts": ["/account/12345",
               "/account/67890"]
}
```

Problem Details

- Schema (3GPP extensions)

```
{
  "type": string // URI (http, relative, tag)
  "status": number // HTTP status code
  "title": string // human-readable summary of the problem
  "detail": string // human-readable explanation to the problem
  "instance": string // URI. To reference the occurrence of the problem

  "cause": string // machine-readable application error
  "invalidParams": InvalidParam[]
  // A array of `InvalidParam` to identify the
  // invalid body/header/query parameter
  "supportedFeatures": string
  "accessTokenError": AccessTokenErr
  // Error returned in the access token response message
  "accessTokenRequest": AccessTokenReq
  // information related to the access token request
  "nrfId": Fqdn // FQDN of the related NRF
}
```

Problem Details

- Cause (TS 29.500 Table 5.2.7.2-1)

| Protocol or application Error | HTTP status code | Description |
|---------------------------------|------------------|--|
| INVALID_API | 400 Bad Request | The HTTP request contains an unsupported API name or API version in the URI. |
| INVALID_MSG_FORMAT | 400 Bad Request | The HTTP request has an invalid format. |
| INVALID_QUERY_PARAM | 400 Bad Request | The HTTP request contains an unsupported query parameter in the URI. (NOTE 1) |
| MANDATORY_QUERY_PARAM_INCORRECT | 400 Bad Request | A mandatory query parameter, or a conditional query parameter but mandatory required, for an HTTP method was received in the URI with semantically incorrect value. (NOTE 1) |
| OPTIONAL_QUERY_PARAM_INCORRECT | 400 Bad Request | An optional query parameter for an HTTP method was received in the URI with a semantically incorrect value that prevents successful processing of the service request. (NOTE 1) |
| MANDATORY_QUERY_PARAM_MISSING | 400 Bad Request | Query parameter which is defined as mandatory, or as conditional but mandatory required, for an HTTP method is not included in the URI of the request. (NOTE 1) |
| MANDATORY_IE_INCORRECT | 400 Bad Request | A mandatory IE (within the JSON body or within a variable part of an "apiSpecificResourceUriPart" or within an HTTP header), or conditional IE but mandatory required, for an HTTP method was received with a semantically incorrect value. (NOTE 1) |
| OPTIONAL_IE_INCORRECT | 400 Bad Request | An optional IE (within the JSON body or within an HTTP header) for an HTTP method was received with a semantically incorrect value that prevents successful processing of the service request. (NOTE 1) |

Problem Details

- **InvalidParam**

- **“param”**

- Invalid JSON body -> JSON pointer.

- Invalid HTTP header -> “header “ + <name of header>

```
{  
  "param": string  
  "reason": string // human-readable explanation  
}
```