

The event starts soon!

- **Submit questions** by selecting the Q&A feature on the top right of your screen (the moderator will inform when the feature is open)
- Type your question in the compose box and hit “send”
- To submit anonymously, select “ask Anonymously”
- Not all questions may be published or answered
- Upvote questions you want asked

The Virtual Developer Bench

The Developer Experience Team

26 January 2021





VIRTUAL Developer Bench



Sabre APIs: Back to the Basics

The Developer Experience Team

2021



26 January 2021

On the Call



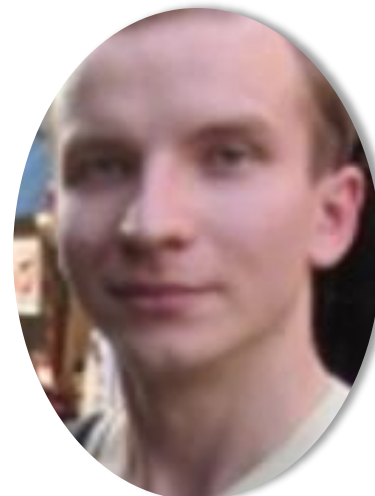
Alex Xavier
Product Marketing



Avery Perkins
Product Marketing



Gonzalo Jorge
Product Management



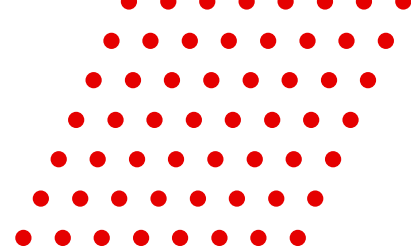
Michal Swatowski
Product Management



Pawel Mrozicki
Product Management

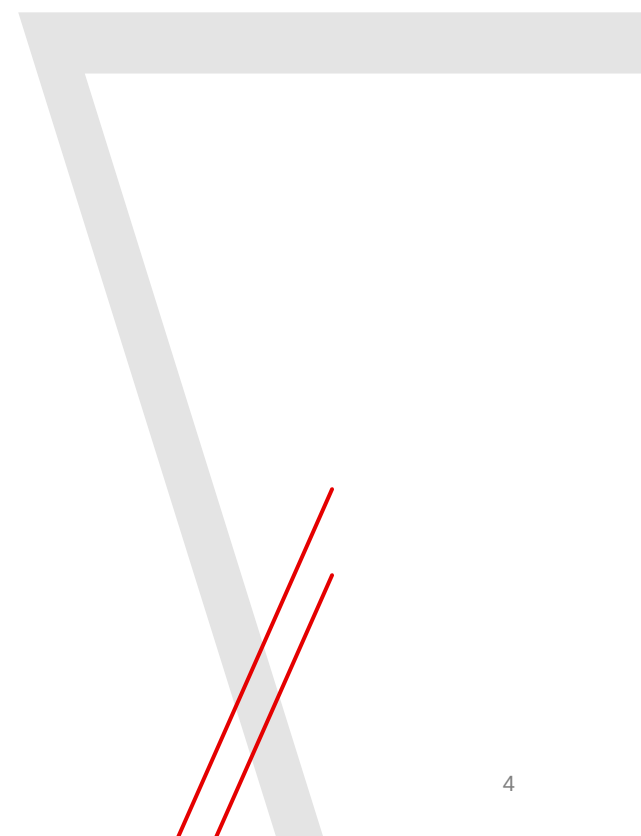


The Virtual Developer Bench



The Virtual Developer Bench is the developer's opportunity to engage *directly* with the Sabre experts who know their product inside and out.

At the end of today's call you will:

- Have a strong understanding of the basics of Sabre APIs
 - Know what steps to take when getting started with Sabre APIs
 - Receive answers to your submitted questions
- 

Mentimeter Survey

Please go to www.menti.com
and use the code: 64 58 69 9

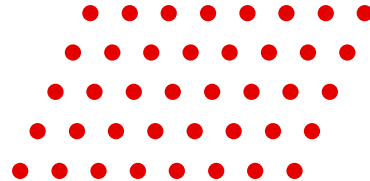
60 seconds



Agenda



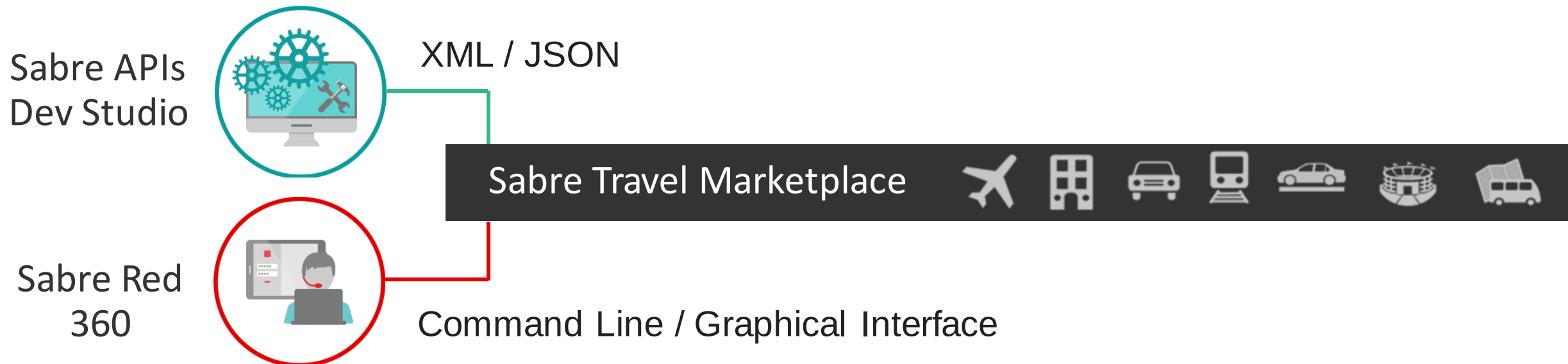
- Intro. Sabre API
- Sabre API Environments
- Credentials
- Authentication Methods
- Session & Session-less tokens
- Usage of ClientID
- Common Errors
- Resources
- Q&A



Simple Introduction to Sabre APIs

Web Service / API: A web service is a method of communication between two systems over a network.

Sabre APIs provides access to Sabre content via standardized connectivity and standards-based message structure.



ENVIRONMENTS



Sabre Environments



CERTIFICATION (TEST)

- A snapshot of real inventory, which is generated every time a [recreate event](#) takes place (March and September)
- Quality tied to supplier's test systems
- Bookings never hit live systems, no need to cancel nor void tickets
- Specific test credit cards can be used, which will generate no actual charges
- Uptime usually +80%

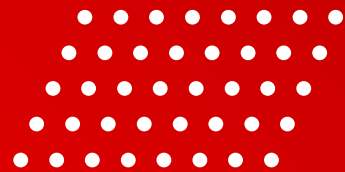
PRODUCTION

- Live inventory and service offering from all suppliers and vendors, which is dynamically updated
- Dynamic schedules and availability
- Test PNRs are real and must be cancelled, all tickets must be voided
- Only real credit cards should be used, where real charges will be triggered
- Uptime +99%, with API Support 24x7x365

Accessing Sabre Environments

	SOAP / XML	REST / JSON
PRODUCTION	https://webservices.havail.sabre.com	https://api.havail.sabre.com
CERTIFICATION	https://sws-crt.cert.havail.sabre.com	https://api-crt.cert.havail.sabre.com

CREDENTIALS



Accessing Sabre | Credentials

Terminology for Sabre Red 360 (SR360), SOAP and REST access

SR360	SOAP / XML	REST / JSON
EPR	Username	user id
Password	Password	client secret
PCC	Organization	group
N/A	Domain	domain



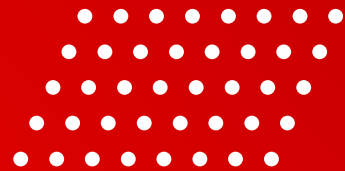
Accessing Sabre APIs | Initial Provisioning

Upon Sabre API provisioning, you'll get provided with:

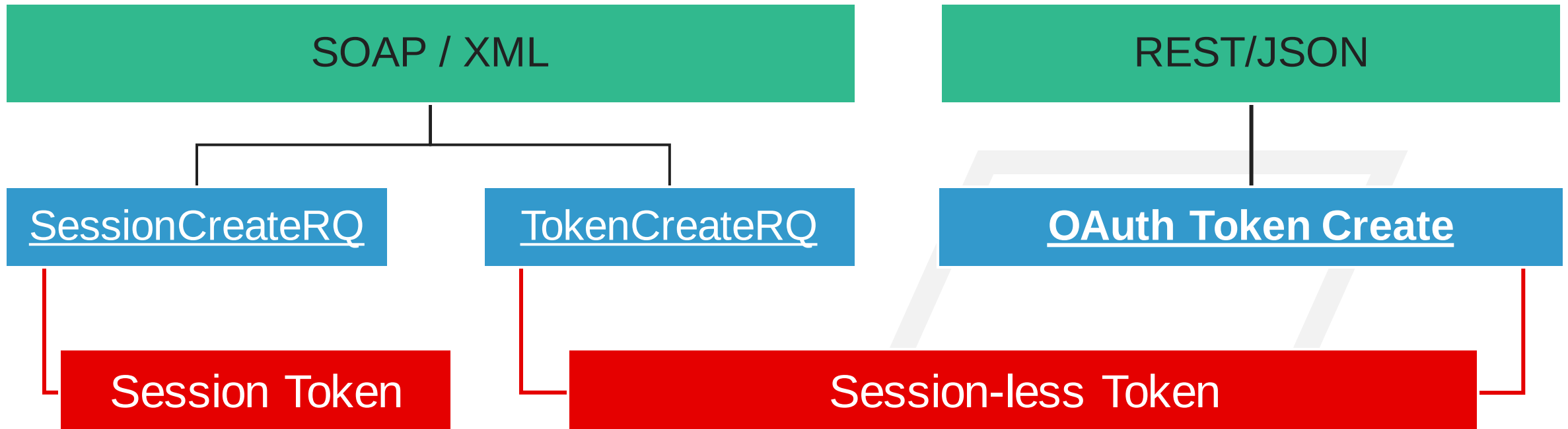
- EPR (Employee Profile Record)
- Temporary Password *
- PCC (Pseudo-City-Code)

Note: Temporary Password need to be replaced with a permanent one before attempting to consume Sabre APIs – see [reference](#) on how to manage passwords.*

AUTHENTICATION METHODS



Authentication Methods



Session versus Session-less Tokens

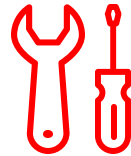
	Session Token	Sessionless Token
API	SessionCreateRQ	TokenCreateRQ or OAuth Token Create (/auth/token)
Number	Limited	Unlimited
TTL	15 minutes	7 days
Keep-Alive	OTA_PingRQ	Not Required
Close	SessionCloseRQ	Not Required
Weekly Maintenance (NORM OAA)	Yes	Not Required
Applied to	SOAP APIs	REST APIs & Some SOAP APIs
Multithread	No	Yes
Best Practices	1. Implement session pool manager. 2. Keep-alive loop for idle session every 14 mins. 3. IGNORE on each session returned to pool. 4. Sessions created before 10:00 Saturday CT are subject to Sabre's weekly maintenance. 5. Recreate all pooled sessions during 10:00-24:00 Saturday CT.	1. A single token per PCC to serve all requests on the PCC. 2. Recreate a new one before expired of 7 days, e.g. every 6 days.

Why should I use Stateless Tokens?



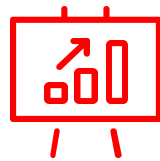
COST EFFECTIVE

As stateless tokens do not consume TA sessions from TAM Pool, there are no constraints in terms of utilization, nor additional costs



EASIER TO MANAGE

Since they last longer and allow multiple concurrent API calls, just ensuring to have a very few tokens available is good enough, no need to ever cancel a stateless token



IMPROVED PERFORMANCE

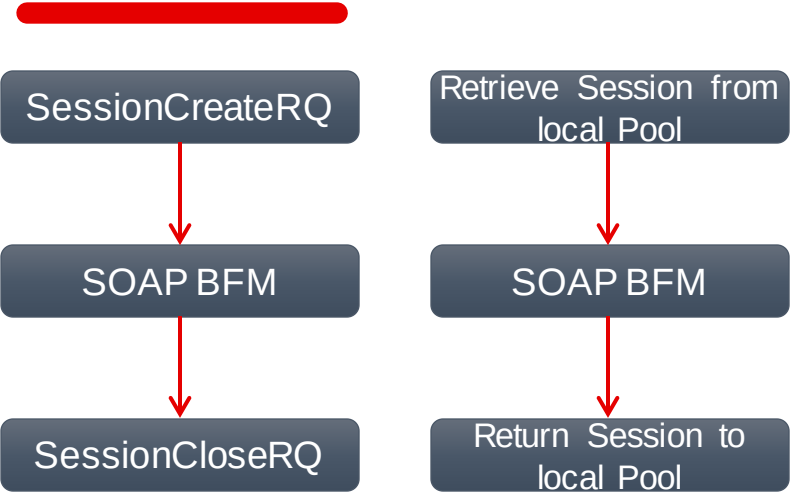
Using stateless tokens contributes to reduce overall processing time for any API request/response event



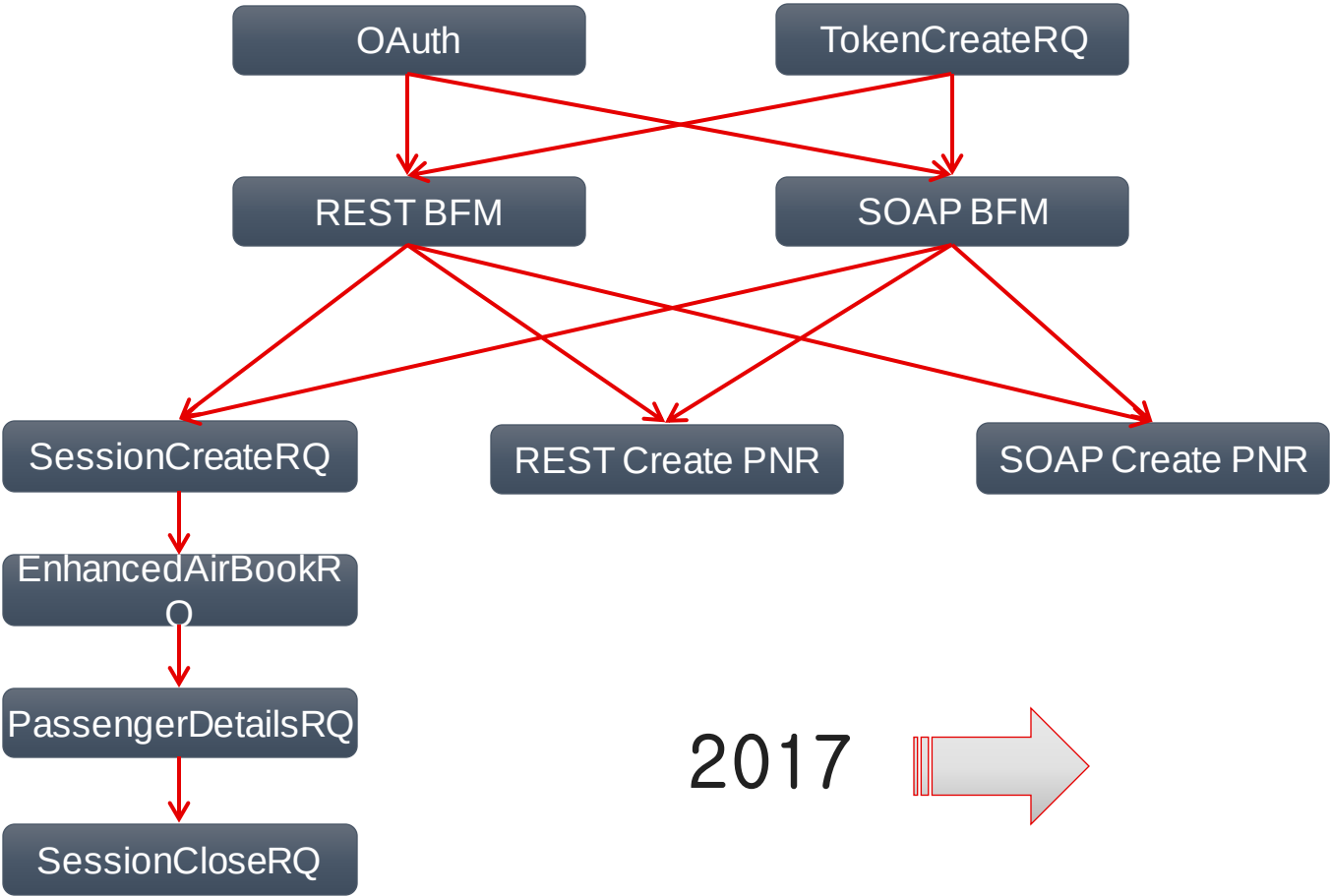
INDEPENDENT FROM SABRE'S WEEKLY MAINTENANCE

Stateless tokens are not affected by [Sabre's weekly maintenance](#), there's no need to regenerate stateless tokens every Sunday

Session-less Tokens



← 2016

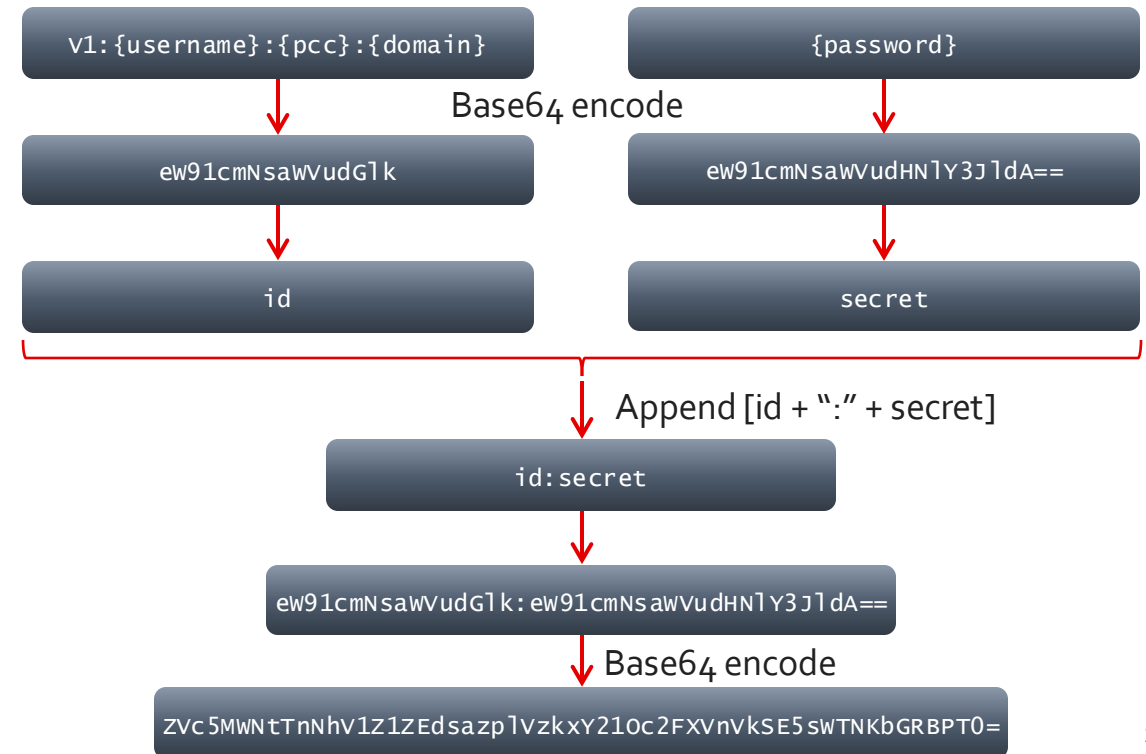


2017 →

Authentication Methods + Credentials

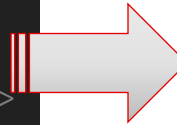
	SOAP / XML	REST / JSON
Session-based	SessionCreateRQ	N/A
Session-less	TokenCreateRQ	POST /auth/token

```
<Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
  <UsernameToken>
    <Username>{{username}}</Username>
    <Password>{{password}}</Password>
    <Organization>{{pcc}}</Organization>
    <Domain>DEFAULT</Domain>
  </UsernameToken>
</Security>
```



SessionCreateRQ v1.0.0

```
<SOAP-ENV:Envelope xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <MessageHeader
xmlns="http://www.ebxml.org/namespaces/messageHeader">
      <From>
        <PartyId>Agency</PartyId>
      </From>
      <To>
        <PartyId>Sabre_API</PartyId>
      </To>
      <ConversationId>2021.01.DevStudio</ConversationId>
      <Action>SessionCreateRQ</Action>
    </MessageHeader>
    <Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
      <UsernameToken>
        <Username>{{username}}</Username>
        <Password>{{password}}</Password>
        <Organization>{{pcc}}</Organization>
        <Domain>DEFAULT</Domain>
      </UsernameToken>
    </Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <SessionCreateRQ Version="1.0.0"
xmlns="http://www.opentravel.org/OTA/2002/11"/>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```



```
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
  <soap-env:Header>
    <eb:MessageHeader xmlns:eb="http://www.ebxml.org/namespac
es/messageHeader" eb:version="1.0" soap-env:mustUnderstand="1">
      ...
    </eb:MessageHeader>
    <wsse:Security xmlns:wsse="http://schemas.xmlsoap.org/ws/200
2/12/secext">
      <wsse:BinarySecurityToken valueType="String" EncodingType="
wsse:Base64Binary">Shared/IDL:IceSess\SessMgr:1\0.IDL/Common/
!ICESMS\ACPCRTC!ICESMSLB\CRT.LB!1611584450244!1510!261!1</
wsse:BinarySecurityToken>
    </wsse:Security>
  </soap-env:Header>
  <soap-env:Body>
    <SessionCreateRS xmlns="http://www.opentravel.org/OTA/2002/
11" version="1" status="Approved">
      <ConversationId>2021.01.DevStudio</ConversationId>
    </SessionCreateRS>
  </soap-env:Body>
</soap-env:Envelope>
```

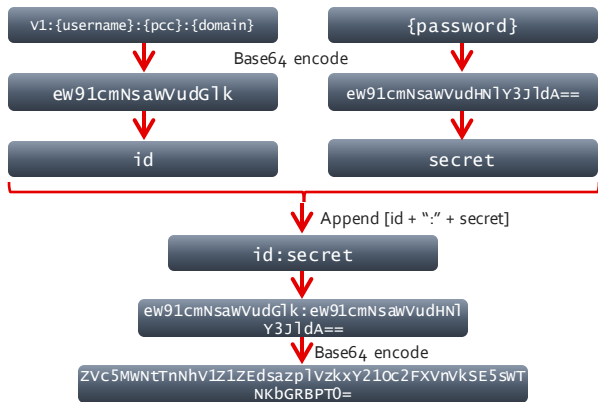

TokenCreateRQ v1.0.0

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <MessageHeader xmlns="http://www.ebxml.org/namespaces/messageHeader">
      <From>
        <PartyId>Agency</PartyId>
      </From>
      <To>
        <PartyId>Sabre_API</PartyId>
      </To>
      <ConversationId>2021.01.DevStudio</ConversationId>
      <Action>TokenCreateRQ</Action>
    </MessageHeader>
    <Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
      <UsernameToken>
        <Username>{{username}}</Username>
        <Password>{{password}}</Password>
        <Organization>{{pcc}}</Organization>
        <Domain>DEFAULT</Domain>
      </UsernameToken>
    </Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <TokenCreateRQ Version="1.0.0" xmlns="http://webservices.sabre.com"/>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

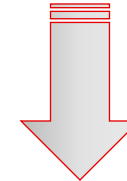


```
<?xml version="1.0" encoding="UTF-8"?>
<soap-env:Envelope xmlns:soap-env="http://schemas.xmlsoap.org/soap/envelope/">
  <soap-env:Header>
    <eb:MessageHeader xmlns:eb="http://www.ebxml.org/namespaces/messageHeader" eb:version="1.0" soap-env:mustUnderstand="1">
      ...
    </eb:MessageHeader>
    <wsse:Security xmlns:wsse="http://schemas.xmlsoap.org/ws/2002/12/secext">
      <wsse:BinarySecurityToken valueType="String" EncodingType="wsse:Base64Binary">T1RLAQJCEepd5R5Xxcj8g7hwIjguWBgb+BBzCVN7/N9q4lfamZov8TH0AADAIJZWpcDf20BWfVahP87/wVkmUJwgXX29/Cgq0FsDQd0MNS4jPWY9D/q48WJ2p7AmUdr8qccyQK3kmbP39ZmKrF5MsEuL7GEhokmEERBXVh9f8T+EEe19a7Y7orJHFW5naYIm9/x58HPh6gTRZfQ+TLBsFFd6Xeyy1LgrXZ943RPkIfOt6wf8V2KipM370NXhB0HhuRf6womFQnh0CGxfxZKt0pCFCEtvxbT3D0mGrZqt mL+4x4oPwv6T3hDKkpcj</wsse:BinarySecurityToken>
    </wsse:Security>
  </soap-env:Header>
  <soap-env:Body>
    <sws:TokenCreateRS xmlns:sws="http://webservices.sabre.com" Version="1.0.0">
      <sws:Success/>
    </sws:TokenCreateRS>
  </soap-env:Body>
</soap-env:Envelope>
```

OAuth Token Create /v2



```
curl --location --request POST 'https://api-crt.cert.havail.sabre.com/v2/auth/token' \
--header 'Content-Type: application/x-www-form-urlencoded' \
--header 'Authorization: Basic ZVc5MWNTtNnhV1Z1ZEEdsazp1VzkxY210c2FXVnVkSE5sWTNKbGRBPT0=' \
--data-raw 'grant_type=client_credentials'
```

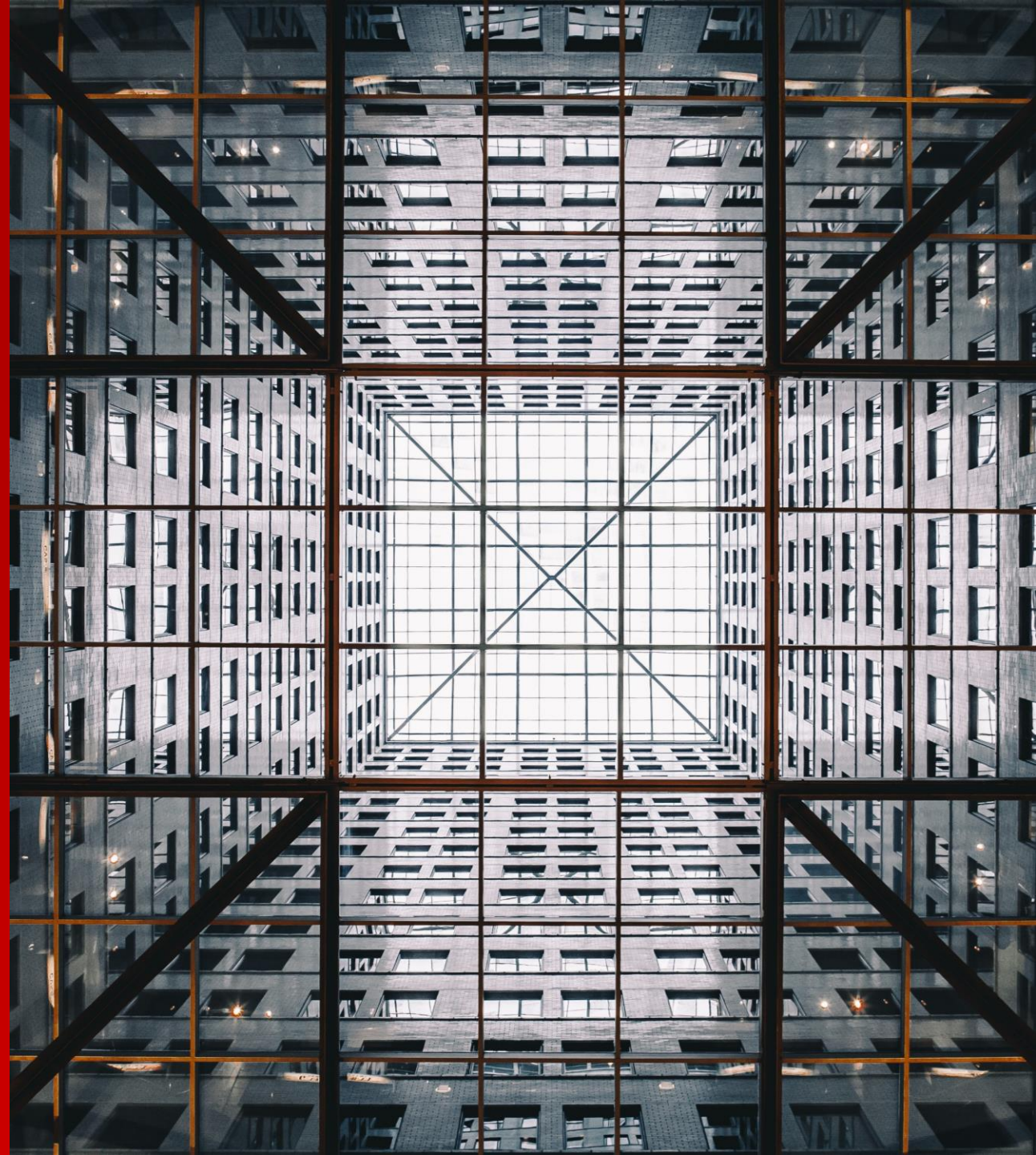
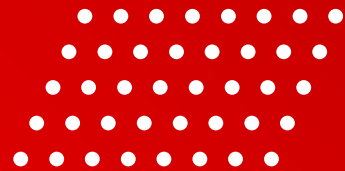


```
{
  "access_token": "T1RLAQJfwH9qh8gK1Q0nfJHzftpACMlLeRBbdaAea+c5lncfqp+Rd6VAAADAPR902SzoTZqquqyjbAuUSMp6i31cnErkvPVz+1N3xvN+rwutmqfG9miO6V0rUYeL+6xbUHPArSs80Z2/oqDHOsagNc/CnrvSNijlfhH4Q/x/uZeyM67FE0A0njfFBoS/aMbw5inzEboqenhhuR5xp518+mgyZ+g4cwVgbb+uZults+Ry796PbzDJsrWdXfnIWst2HZLabWXJnJQN2JbsqO5fiRZBwsnOMc7OPYsRtYxIXR/C9xRKZ5xhnwtRfcjW",
  "token_type": "bearer",
  "expires_in": 604800
}
```

LIVE DEMO

The background is a solid red color. In the upper right, there are several thick red lines forming a geometric shape, possibly a stylized 'L' or a corner. A thin white line intersects one of these thick lines. In the lower right, there is a pattern of small white dots arranged in a grid-like fashion, tilted slightly. A white horizontal line is positioned below the text 'LIVE DEMO'.

USAGE OF CLIENTID



ClientID | New!

During 2021 Sabre will start rolling the additional authentication qualifier: [ClientID](#).

- **What is this ClientID?**

The Client ID (previously known as a Customer App ID) is an additional parameter which allows Sabre API users to identify traffic executed by specific application.

This is a unique signature generated by Sabre for internal and external applications consuming Sabre APIs.

- **What's the benefit of using ClientIDs?**

Client IDs allow Sabre to track and analyze the usage of Sabre APIs by individual applications. As more analytic solutions are implemented to better monitor & report on our Sabre API traffic, we expect more reporting/analytics will become available to our Sabre API customer community.



ClientID | New! (cont.)

During 2021 Sabre will start rolling the additional authentication qualifier: [ClientID](#).

- **How do I use it?**

The ClientID -plus a corresponding Client Secret- needs to be specified at time of initial Sabre API authentication.

Upon successful authentication, the newly generated token will carryover the unique ClientID through all subsequent API calls.

- **How do I get access to it?**

Sabre will provision users with a **ClientID** + **Client Secret** key pair upon request during 2021.

A general rollout plan will be communicated in the coming weeks.

If interested in being an early adopter, please contact your Sabre Account Manager.



Authentication Methods + Credentials

	SOAP / XML	REST / JSON
Session-based	SessionCreateRQ	N/A
Session-less	TokenCreateRQ	POST /auth/token

```
<Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
  <UsernameToken>
    <Username>{{username}}</Username>
    <Password>{{password}}</Password>
    <Organization>{{pcc}}</Organization>
    <Domain>DEFAULT</Domain>
    <ClientId>{{client_id}}</ClientId>
    <ClientSecret>{{client_secret}}</ClientSecret>
  </UsernameToken>
</Security>
```

{clientID}:{client secret}

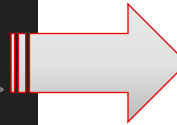
↓ Base64 encode

M0NERy1URVMUQVBQ0dnTMjZBVetN

```
grant_type=password&username={{username}}-{{pcc}}-AA&password={{password}}
```

SessionCreateRQ v2.0.0 + ClientID

```
<SOAP-ENV:Envelope xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <MessageHeader xmlns="http://www.ebxml.org/namespaces/messa
geHeader">
      <From>
        <PartyId>Agency</PartyId>
      </From>
      <To>
        <PartyId>Sabre_API</PartyId>
      </To>
      <ConversationId>2021.01.DevStudio</ConversationId>
      <Action>SessionCreateRQ</Action>
    </MessageHeader>
    <Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
      <UsernameToken>
        <Username>{{username}}</Username>
        <Password>{{password}}</Password>
        <Organization>{{pcc}}</Organization>
        <Domain>DEFAULT</Domain>
        <ClientId>{{client_id}}</ClientId>
        <ClientSecret>{{client_secret}}</ClientSecret>
      </UsernameToken>
    </Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <SessionCreateRQ Version="2.0.0" xmlns="http://www.opentravel.or
g/OTA/2002/11"/>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```



```
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
  <soap-env:Header>
    <eb:MessageHeader xmlns:eb="http://www.ebxml.org/namespac
es/messageHeader" eb:version="1.0" soap-env:mustUnderstand="1">
      ...
    </eb:MessageHeader>
    <wsse:Security xmlns:wsse="http://schemas.xmlsoap.org/ws/200
2/12/secext">
      <wsse:BinarySecurityToken valueType="String" EncodingType="
wsse:Base64Binary">Shared/IDL:IceSess\SessMgr:1\0.IDL/Common/
!ICESMS\ACPCRTC!ICESMSLB\CRT.LB!1611584450244!1510!261!1</
wsse:BinarySecurityToken>
    </wsse:Security>
  </soap-env:Header>
  <soap-env:Body>
    <SessionCreateRS xmlns="http://www.opentravel.org/OTA/2002/
11" version="1" status="Approved">
      <ConversationId>2021.01.DevStudio</ConversationId>
    </SessionCreateRS>
  </soap-env:Body>
</soap-env:Envelope>
```

TokenCreateRQ v2.0.0 + ClientID

```
<SOAP-ENV:Envelope xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header>
    <MessageHeader xmlns="http://www.ebxml.org/namespaces/mess
ageHeader">
      <From>
        <PartyId>Agency</PartyId>
      </From>
      <To>
        <PartyId>Sabre_API</PartyId>
      </To>
      <ConversationId>2021.01.DevStudio</ConversationId>
      <Action>TokenCreateRQ</Action>
    </MessageHeader>
    <Security xmlns="http://schemas.xmlsoap.org/ws/2002/12/secext">
      <UsernameToken>
        <Username>{{username}}</Username>
        <Password>{{password}}</Password>
        <Organization>{{pcc}}</Organization>
        <Domain>DEFAULT</Domain>
        <ClientId>{{client_id}}</ClientId>
        <ClientSecret>{{client_secret}}</ClientSecret>
      </UsernameToken>
    </Security>
  </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <TokenCreateRQ Version="2.0.0" xmlns="http://webservices.sabre.c
om"/>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```



```
<?xml version="1.0" encoding="UTF-8"?>
<soap-env:Envelope xmlns:soap-
env="http://schemas.xmlsoap.org/soap/envelope/">
  <soap-env:Header>
    <eb:MessageHeader xmlns:eb="http://www.ebxml.org/namespaces/mes
sageHeader" eb:version="1.0" soap-env:mustUnderstand="1">
      ...
    </eb:MessageHeader>
    <wsse:Security xmlns:wsse="http://schemas.xmlsoap.org/ws/2002/12/se
cext">
      <wsse:BinarySecurityToken valueType="String" EncodingType="wsse:Ba
se64Binary">T1RLAQJCEepd5R5Xxcj8g7hwljguWBgb+BBzCVN7/N9q4lfamZov
8TH0AADAIJZWpcDf20BWfVahP87/wVkmUJwgXX29/Cgq0FsDQd0MNS4jPWY
9D/q48WJ2p7AmUdr8qccyQK3kmbP39ZmKrF5MsEuL7GEhokmEERBXVh9f8T+
EEe19a7Y7orJHFw5naYIm9/x58HPH6gTRZFQ+TLBsFFd6Xeyy1LgrXZ943RPkIf0t
6wf8V2KipM370NXhB0HhuRf6womFQnh0CGxfxZKt0pCFCeTvxbT3D0mGrZqt
mL+4x4oPww6T3hDKkpcj</wsse:BinarySecurityToken>
    </wsse:Security>
  </soap-env:Header>
  <soap-env:Body>
    <sws:TokenCreateRS xmlns:sws="http://webservices.sabre.com" Version=
"1.0.0">
      <sws:Success/>
    </sws:TokenCreateRS>
  </soap-env:Body>
</soap-env:Envelope>
```

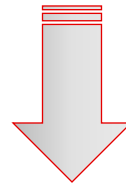

OAuth Token Create /v3 + ClientID

{clientID}:{client secret}

↓ Base64 encode

M0NERy1URVMUQVBQOdNtMjZBVetN

```
curl --location --request POST 'https://api-crt.cert.havail.sabre.com/v3/auth/token' \  
--header 'Content-Type: application/x-www-form-urlencoded' \  
--header 'Authorization: Basic M0NERy1URVMUQVBQOdNtMjZBVetN' \  
--data-raw 'grant_type=password&username={{username}}-{{pcc}}-AA&password={{password}}'
```

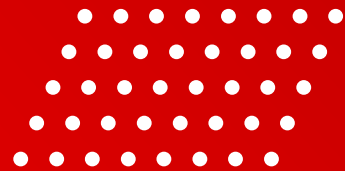


```
{  
  "access_token": "T1RLAQJfwH9qh8gK1Q0nfJHzftpACMlLeRBbdaAea+c5lncfqo+Rd6VAAADAPR902SzoTZqquqyjbAuUSMp6i31cnErkvPV  
z+1N3xvN+rwutmqfG9miO6V0rUYeL+6xbUHPArSs80Z2/oqDHOsagNc/CnrvSNlJlfhH4Q/x/uZeyM67FE0A0njfFBoS/aMbw5inzEboqenhhuR  
5xp518+mgyZ+g4cwVgbb+uZults+Ry796PbZDJsRwDXfnIWst2HZLabWXJnJQN2JdbwO5fiRZBwsnOMc7OPYsRtYxIXR/C9xRKZ5xhnwtRfcjW",  
  "token_type": "bearer",  
  "expires_in": 604800  
}
```

LIVE DEMO

The background is a solid red color. In the upper right, there are several thick red lines forming a geometric shape, possibly a stylized 'L' or a corner. A thin white line intersects one of these thick lines. In the lower right, there is a pattern of small white dots arranged in a grid-like fashion, tilted slightly. A white horizontal line is positioned below the text 'LIVE DEMO'.

COMMON ERRORS



Common error messages

SABRE DEV STUDIO: <https://developer.sabre.com/guides/travel-agency/developer-guides/errors>

← → ↺

developer.sabre.com/guides/travel-agency/developer-guides/errors

🔍 ☆ ABP ⚙️ 📄 👤 ⋮

☰ Sabre

Dev Studio

Sign in

Overview

Quickstart

Concepts

Developer Guides

API Style Guides

API Versioning

Environments

Errors

Known .NET Bugs When Importing WSDLs

Manage a Token

Optimize Workflows

PCI Mandate

Password Management for Sabre APIs

REST API Postman Requests

REST API Token Credentials

SOAP API Common Schemas

SOAP API Request Format

Sabre API Client IDs

Sabre RPC Protocol 1.0 Specification

Home > Guides > Overview > Developer Guides > Errors

Errors

Code to common errors to prevent a traveler's workflow from being interrupted.

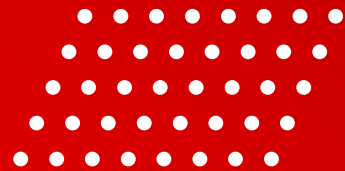
REST APIs

REST APIs: Verify your token credentials were set-up correctly.

#	HTTP Status Code	Message	Text	Resolution
1	400	Bad Request	Invalid format for request	1. Verify that your request includes valid parameters or values. 2. Verify that the grant_type in the request payload.
2	400		ERR.2SG.CLIENT.INVALID_REQUEST	Verify that your request includes valid parameters or values. Check API documentation.

Feedback

RESOURCES





Sabre Dev Studio Documentation

- Sabre API Environments & Recreate Calendar:
<https://developer.sabre.com/guides/travel-agency/developer-guides/environments>
- Initial Credential Provision & Password Management:
<https://developer.sabre.com/guides/travel-agency/developer-guides/password-management>
- SessionCreateRQ service:
https://developer.sabre.com/docs/soap_apis/session_management/create_session
- TokenCreateRQ service:
https://developer.sabre.com/docs/soap_apis/session_management/create_access_token
- OAuth Token Create service:
https://developer.sabre.com/docs/rest_apis/session_management/token_create_api

Sabre Dev Studio Documentation (cont.)

- Token credentials:

<https://developer.sabre.com/guides/travel-agency/how-to/rest-apis-token-credentials>

- Tips to manage tokens:

<https://developer.sabre.com/guides/travel-agency/how-to/manage-token>

- Sabre APIs Connection Management best practices:

<http://files.developer.sabre.com/doc/developmentpatterns/Sabre-APIs-Connection-Management-Best-Practices.pdf>

- Sabre's weekly session maintenance:

http://files.developer.sabre.com/doc/developmentpatterns/NORMOAA_Pattern_2015-2-20.pdf

- OTA_PingRQ service:

https://developer.sabre.com/docs/soap_apis/session_management/refresh_session

- SessionCloseRQ service:

https://developer.sabre.com/docs/soap_apis/session_management/close_session





Sabre Dev Studio Documentation (cont.)

- Sabre API ClientID:

<https://developer.sabre.com/guides/travel-agency/developer-guides/sabre-api-client-ids>

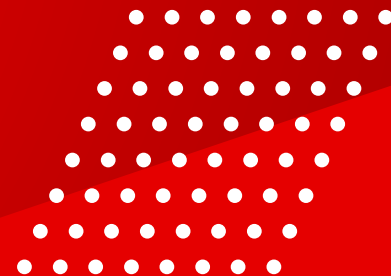
- Sabre APIs common errors:

<https://developer.sabre.com/guides/travel-agency/developer-guides/errors>

- Postman Sabre API full collection:

<https://github.com/SabreDevStudio/postman-collections/tree/master/Sabre-APIs>

Q&A



Mentimeter Survey

Please go to www.menti.com and
use the code: 82 46 21 8

60 seconds

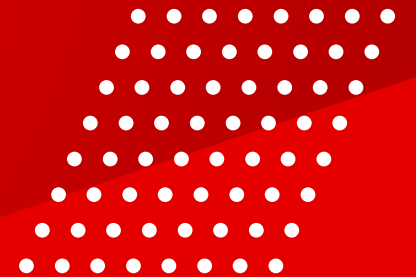


FEEDBACK



Have a suggestion for the next Virtual Developer Bench? Looking to provide feedback?

Contact us at VirtualDeveloperBench@sabre.com!



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