

Acumatica

Virtual DevCon

2020

June 17 & 18

Web Services

Contract-Based REST Overview

Samuel-Olivier Lavigueur

Software Developer

Acumatica

Agenda

- Endpoints
- Requests
- Parameters
- Licenses
- Customization
- Additional Resources
- Questions

Web Service Endpoints

Web Service Endpoint Screen

Web Service Endpoints ☆



VIEW ENDPOINT SERVICE ▾

VIEW MAINTENANCE SERVICE

EXTEND ENDPOINT

VALIDATE ENDPOINT

* Endpoint Name:

* Endpoint Version:

+ INSERT

- ENDPOINT
 - Account
 - AccountByPeriodInquiry
 - AccountBySubaccountInquiry
 - AccountDetailsInquiry
 - AccountGroup
 - AccountLocation
 - AccountSummaryInquiry
 - Activity
 - Adjustment
 - AllocationRule
 - AttributeDefinition
 - Bill
 - BusinessAccount
 - Carrier
 - Case
 - CashSale
 - ChangeOrder

ENTITY PROPERTIES **FIELDS**

POPULATE EXTEND ENTITY VALIDATE ENTITY

Field Name	Mapped Object	Mapped Field	Field Type
Amount	Document Summary	Amount	DecimalValue
ApprovedForPayment	Financial Details -> Default Payment Info	Approved for Payment	BooleanValue
Balance	Document Summary	Balance (CuryDocBal)	DecimalValue
BranchID	Financial Details -> Link to GL	Branch	StringValue
CashAccount	Financial Details -> Default Payment Info	Cash Account	StringValue
CurrencyID	Document Summary	Currency	StringValue
Date	Document Summary	Date	DateTimeValue
Description	Document Summary	Description	StringValue
DueDate	Document Summary	Due Date	DateTimeValue
Hold	Document Summary	Hold	BooleanValue
LocationID	Document Summary	Location	StringValue
PostPeriod	Document Summary	Post Period	StringValue
Project	Document Summary	Project	StringValue

Requests

Request types

Post :

- Login
- Logout
- Action

Put :

- Creating a Record
- Updating a Record

Get :

- Retrieving a Record
- Retrieving the Status of an Action

Request URL Format

Base URL : <https://<Acumatica ERP Instance URL>/Entity/>

Login : {{BaseUrl}}+ Auth/Login

Logout : “ + Auth/Logout

Put : “ +<Endpoint name>/<Endpoint version>/<EntityName>

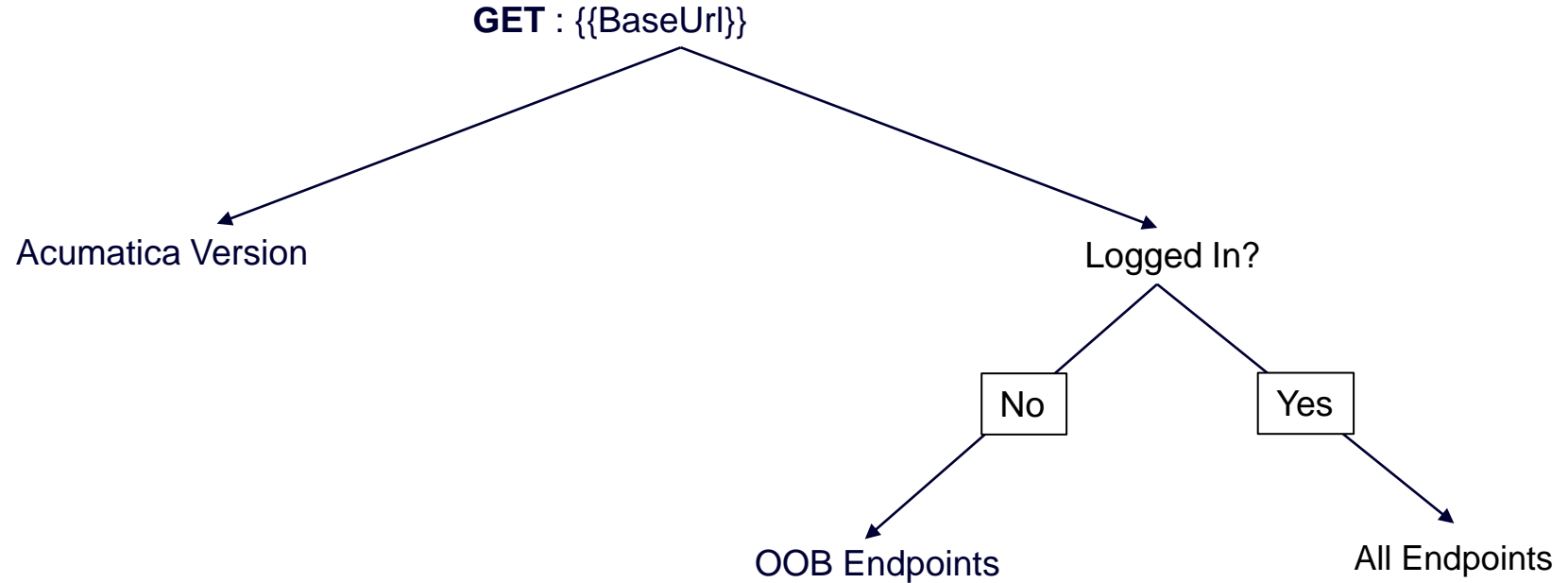
Action : “ + “ ” / “ ” / “ ” /<ActionName>

Get : {
“ + “ ” / “ ” / “ ” /<Keyfield1>
“ + “ ” / “ ” / “ ” /<Keyfield1>/<KeyField2>

OAuth Token Request

- Authorization code
- Implicit
- Resource owner password credentials

Bonus Request



Base URL : <https://<Acumatica ERP Instance URL>/Entity/>

Parameters

Request Parameters

- \$Filter =OrderType eq 'SO' and OrderNbr eq 'SO005048'
- \$Top & \$Skip =5
- \$Expand =Details
- \$Select =OrderType,OrderNbr,Description
- \$Custom =<ViewName>.<FieldName>
=Document.LastModifiedDateTime

Header Parameter

Make sure the record exist

└─> If-Match : true

└─> "Entity is not found"

Make sure the does not record exist

└─> If-None-Match : true

└─> "Entity already exists"

Demo: Request with Postman

License

License Limitations

Three limitations:

- Maximum number of web service API user
- Maximum number of concurrent web service API requests
- Maximum number of web service API request per minute

License API Errors

- Error code 429
- Most Common Error “API Login Limit”

What to do:

Wait for the session to expire

Restart the application

Where to check:

License monitoring console screen

Customization

Field not in the Endpoint

- Extend the Endpoint (Add the field)
- **GET** : \$Custom Parameter
 <ViewName>.<FieldName>
- **PUT** : Custom Field Collection

```
"custom": {  
  "<ViewName>": {  
    "<FieldName>": {  
      "type": "<FieldType>",  
      "value": "<Value>"  
    }  
  }  
}
```

```
"custom": {  
  "Document": {  
    "LastModifiedDate": {  
      "type": "CustomDateTimeField",  
      "value": "2019-12-13T14:53:26.593"  
    }  
  }  
}
```

User Defined Fields

Works the same way...

FieldName : Attribute+<AttributeID>

AttributeColor

Sales Orders ☆ NOTES

← SAVE & CLOSE ↶ ↷ + 🗑️ 📄 K < > >| QUICK PROCESS ACTIONS ▾ IF

DOCUMENT USER-DEFINED FIELDS

Color:

DOCUMENT DETAILS TAX DETAILS COMMISSIONS FINANCIAL SETTINGS PAYMENT SETTINGS SHIPPING SETTING

🔄 + ✎ ✕ ALLOCATIONS ADD INVOICE ADD STOCK ITEM PO LINK INVENTORY SUMMARY 📄

		*Branch	*Inventory ID	Free Item	Warehouse	Line Description	*UOM
--	--	---------	---------------	-----------	-----------	------------------	------

Extending an Endpoint

Web Service Endpoints ☆

1. [Icon] [Refresh] [Add] [Delete] VIEW ENDPOINT SERVICE ▾ 2. VIEW MAINTENANCE SERVICE 3. EXTEND ENDPOINT VALIDATE ENDPOINT

* Endpoint Name: Default * Endpoint Version: 18.200.001

+ INSERT [Icon]

ENDPOINT

- Account
- AccountByPeriodInquiry
- AccountBySubaccountInquiry
- AccountDetailsInquiry
- AccountGroup

ENDPOINT PROPERTIES

Extend Current Endpoint

* Base Endpoint Name: Default

4. * Base Endpoint Version: 18.200.001

* Endpoint Name:

* Endpoint Version:

OK CANCEL

Demo: Extending an Endpoint

Additional Resources

Additional Resources

Acumatica Help website

<https://help.acumatica.com/>

Developer Training

<https://www.acumatica.com/acumatica-developer-training/>

Acumatica Community on Stack Overflow

<https://stackoverflow.com/questions/tagged/acumatica>

Test Project for the Contract Based Rest using the Default Endpoint

<https://github.com/Acumatica/AcumaticaRESTAPIClientForCSharp>

Questions?



Thank You

Samuel-Olivier Lavigueur

slavigueur@acumatica.com