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LAB 20 – KAPOW AND TOTAL AGILITY 7.1

GOAL: Call Kapow from Total Agility and call Total Agility from Kapow.

This lab assumes you are familiar with TotalAgility7 and with Kapow Design Studio and shows

1. Adding a **Kapow Activity** to a **Process Map** or **Business Rule**.
   - **This method replaces both** WebService Activity **and** .NET Activity
2. Adding a **Kapow Action** to a **Form.**
3. Logging in to TotalAgility and Creating a Job with a **Call SOAP Web Service** Step from Kapow

CONTENTS

STEP 1:   Install Kapow Design Studio

Kapow can simply be installed on top of a Total Agility solution without causing any port conflicts.

a) Obtain a **Kapow Katalyst** license for "Design Studio Users" and "MC/KappZone Seats"
b) **Download** Kapow Katalyst 9.x **from http://download.kapowsoftware.com**
c) **Install** Kapow using default settings.

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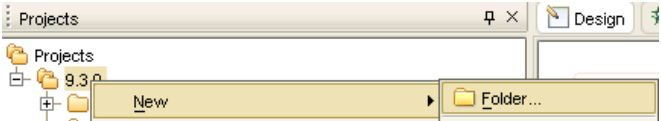d) Start **Management Console** from the **Windows Menu**

 S↑ Start Management Console 9.3.0
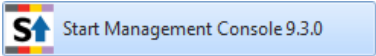
e) Open Management Console **http://localhost:50080/ and enter the license info.**

f) Open Design Studio from the **Windows Menu**

 DS Design Studio 9.3.0
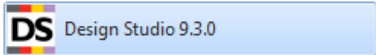
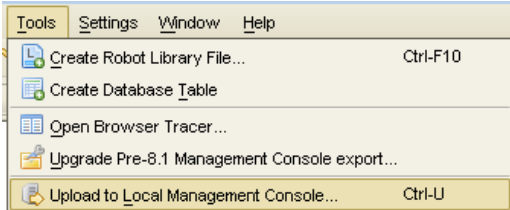g) Create a new Folder and call it **Kapow2KtA**

h) Right-click on the Folder and select **Explore**

i) Copy the 3 robots and type files from http://goo.gl/8JCbH4 into this folder.

j) Upload the robots to the **Local Management Console (CTRL-U)** under the **Tools Menu**

Robot	URL
InterestRate	https://www.bankofamerica.com/home-loans/mortgage/overview.go Returns the current 30-year fixed interest rate.

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VATID	http://ec.europa.eu/taxation_customs/vies/vatResponse.html Returns whether the Value Added Tax ID is valid, along with company name and address You could change this robot to your regional equivalent. **Employer ID Number (EIN)** in the USA http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Employer-ID-Numbers-EINs **Australian Business Number** http://abr.business.gov.au/	
KofaxFacebook	https://www.facebook.com/kofax.inc Creates jobs in Total Agility for each recent post by Kofax on Facebook.	

STEP 2:   Add the Kapow Server to Total Agility Integration Settings

k) Open a browser window and enter the URL: http://host1/TotalAgility/Designer. You will see the TotalAgility Designer **Home Screen.**
Username = **host1\Administrator**
Password = **K0fax**

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l) Select **Integration** and **Kapow**

m) Add a new **Kapow Server Configuration** point at http://localhost:50080/

STEP 3:   Use a Kapow Activity in a Total Agility Process

n) Create a **New Process** "**Get Bank Rate**"

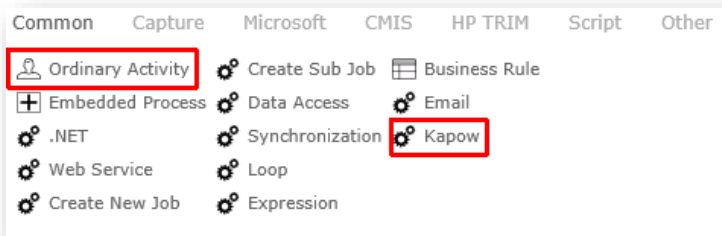o) Add Process Variables "**InterestRate"** as **Double** and "**Term"** as **String**.

p) Make "**Get Rate**" a **Kapow Activity** and "**Show Rate**" an **Ordinary Activity**

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q) Configure the Kapow Activity's return parameters

r) Release your Process
s) create a new Job in http://host1/totalagility/forms/CreateNewJob.form for your process **"Get Bank Rate"**

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t) Open the job from the Work Queue http://host1/totalagility/forms/GeneralWorkqueue.form

Input Variables:

InterestRate	4.125
Term	30-year

[Complete] [Cancel]

STEP 4:   Use a Kapow Activity in a TotalAgility Business Rule

This is identical to creating a process.

a) Create a new Business Rule called "Check VATID", with a single Kapow Activity called "Check VATID"

b) This Business Rule has the following parameters
input: VATID as String
Output: Address as String, Name as String, Valid as Boolean, ErrorMessage as String.

Input/Output Order

Name			Id		Rule Input	Yes No
Type	Bool	▼	Value	True False	Rule Output	Yes No

Rule Input	Rule Output	Name	Id	Type	Value	
☐	✓	Address	ADDRESS	String		×
☐	✓	ErrorMessage	ERRORMESSAGE	String		×
☐	✓	Name	NAME	String		×
☐	✓	Valid	VALID	Bool	False	×
✓	☐	VATID	VATID	String		×

c) Configure the Kapow Activity (This Robot also **formats** the VATID by removing spaces and capitalizing the input VAT number).
"**ATU 62603766**" is a valid VAT ID that you can use for testing

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STEP 5:   Create a Form that uses a Business Rule

Create form for testing the VAT ID Robot in a Business Rule. The user can enter a VATID and it will be interactively checked and formatted. If it is invalid an error message will be displayed.

a)   Create a new Form called "VAT"

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b) Add 3 TextBoxes "VATID", "Name" and "Address". Set "Address" to be **Multiline**

c) Add a Label "error" with the text "Invalid VATID" and change the color to Red.
d) Open the Form Data Tab and add a Boolean Form Variable called "**valid**"

e) Open the **Actions** Tab

f) Create the following Actions

Name	Type	Configuration
BeginConditionNotValid	Begin Condition	**Value:** [valid]=false
BeginConditionValid	Begin Condition	**Value:** [valid]=true
CheckID	Business Rule	Business Rule: Check VATID VATID:txtVAT Valid:valid Name:txtName Address:txtAddrexx
DisplayRule1	Display Rule	**Rule:** [valid]=false **True Outcome** txtName=Hidden txtAddress=Hidden txtError=Enabled **False Outcome** txtName=ReadOnly txtAddress=ReadOnly txtError=Hidden
EndConditionNotValid	End Condition	
EndConditionValid	End Condition	
RedirectToErrorPage	Redirect	**Form** = **Error** SameWindow VATID=txtVAT
SetFocusToVATID	Set Focus	Field: txtVAT
ShowFields	Display Rule	

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g) Add the following Events to the VATID

General   Label   **Events**   Associations

Event Type
TextChanged   ↑ ↓

✓	CheckVatID	✕
✓	BeginConditionNotValid	✕
☐	RedirectToErrorPage	✕
✓	DisplayRule1	✕
✓	SetFocusToVATID	✕
✓	EndConditionNotValid	✕
✓	BeginConditionValid	✕
✓	ShowFields	✕
✓	EndConditionValid	✕

h) Release and close your Form

STEP 6:   Test the Form

i) Open http://host1/totalagility/forms/VAT.form

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To Do ▾   Jobs ▾   Resources ▾   Administration ▾   Business Monitoring ▾

VATID   [   ]

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j) Enter "**ATU 62603766**" and press TAB, or click outside of the TextBox.
   *(The Event is called **TextChanged**, but it is triggered when the cell loses focus)*

VATID	ATU 62603766
Name	Ankerbrot Aktiengesellschaft
Address	Absbergg 35
	A-1100 Wien

k) Enter an invalid VATID and press TAB

VATID	ATU 62603766x

ATU 62603766x is not a registered VATID!

STEP 7: Use a Kapow Action on a Total Agility Form

l) Add a new Kapow Action to the Form called "GETVATInfo"

GetVATInfo	Kapow

m) configure the Kapow Action to use your Kapow Robot

n) Cofigure the Text Label txtVATID to use the Kapow Action

STEP 8: **Call Total Agility SOAP Web Service from a Kapow Robot**

Total Agility provides the following web services.

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http://host1/TotalAgility/Services/Sdk/UserService.svc for logging on and off and managing users.

http://host1/TotalAgility/Services/Sdk/UserService.svc?singleWsdl

http://host1/TotalAgility/Services/Sdk/JobService.svc for manipulating jobs.

http://host1/TotalAgility/Services/Sdk/JobService.svc?singleWsdl

if you open the .**singleWsdl** file in the "**Call SOAP Web Service**" Step in Kapow you can browse the available Operations

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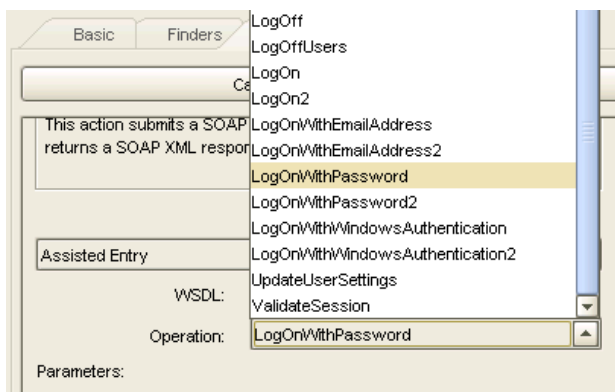
STEP 9:   Create a Simple Process in Total Agility

1. Create a Process in TotalAgility called **ReviewFBPost** that simply has one Ordinary Activity and one Initialization Paramter called **TEXT** of type String and set **Initialization=true**. We will use this to pass the text of a Facebook post into TotalAgility for someone to review.

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2. Set the parameter **TEXT** as an input in the "Review Facebook post" Activity.

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1. You will need to create a user account in Total Agility to login with from Kapow. Click on **Resources**
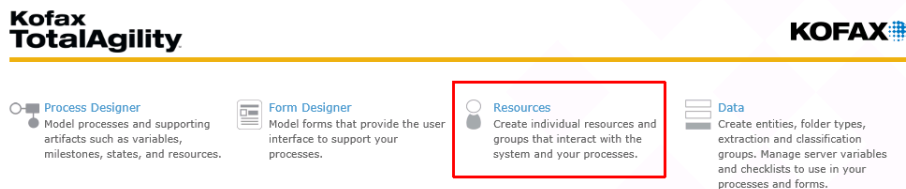
2. Click **Resource**
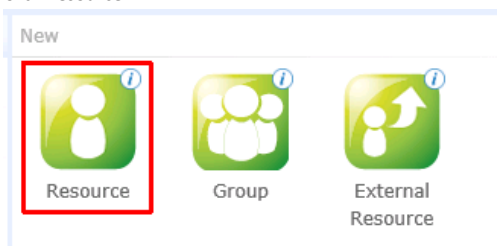
3. Create a user called **Kapow** with password **Kapow1** (this is not a security tutorial ☺)
   You can find this resource later under **Resourc**   **es/Everyone**

4. Create the Robot "KofaxFacebook.robot" in **Kapow Design Studio** (or open it if you loaded it in step 1).

This robot demonstrates XML manipulation and the use of the "Call SOAP Web Service" Step and its two modes "Assisted entry" and "Manual Entry"
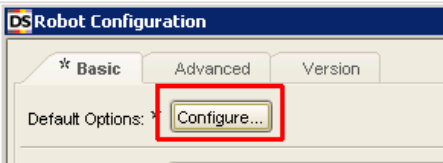
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Assisted Entry helps you build the XML, and *Manual Entry* requires XML as input.
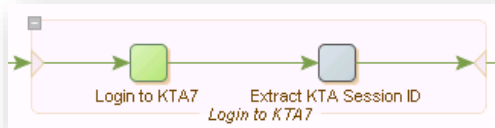
5. Open **File/Configure Robot/Basic/Configure…** and configure your login credentials as you do within a webbrowser to connect to TotalAgility.
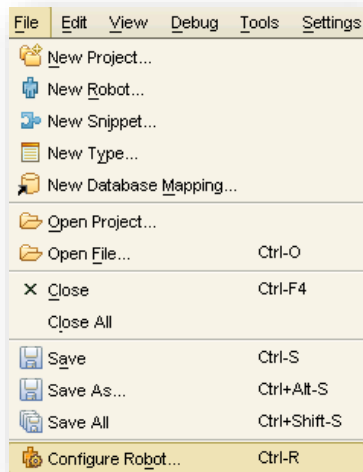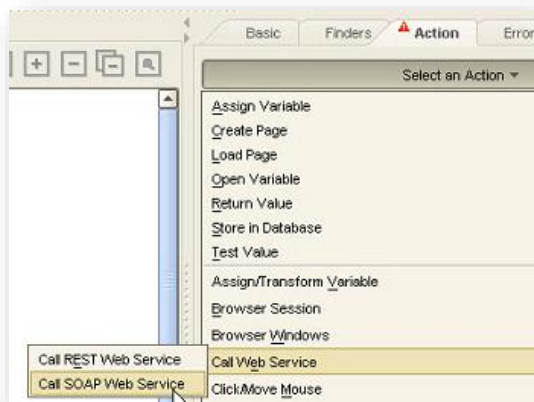
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6. Add a "Call SOAP Web Service" Step to your Robot.

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7. select "**Assisted Entry**", which creates the required XML fragments for you for the SOAP call. "**Manual Entry**" requires you to build the XML manually.
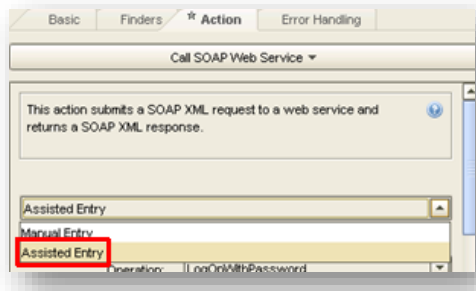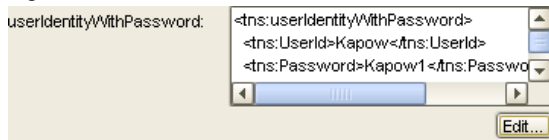

8. Deselect "**Validate Against Schema**" because TotalAgility Web Services do not refer to XML Schemas. http://www.w3schools.com/Schema/default.asp

9. Load the WSDL http://host1/TotalAgility/Services/Sdk/UserService.svc?singleWsdl
10. Select the Operation "LogOnWithPassword"
11. Edit the XML to log on to TotalAgility with user "**Kapow**", who has password "**Kapow1**". Add **7** to LogonProtocol.
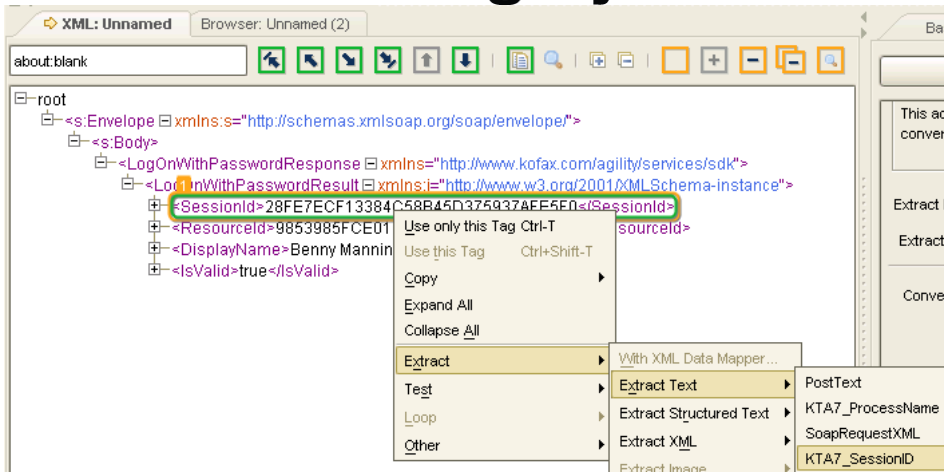


```
<tns:userIdentityWithPassword>
  <tns:UserId>Kapow</tns:UserId>
  <tns:Password>Kapow1</tns:Password>
  <tns:LogOnProtocol>7</tns:LogOnProtocol>
  <tns:UnconditionalLogOn>true</tns:UnconditionalLogOn>
</tns:userIdentityWithPassword>
```

12. Click on the Endpoint on the workflow

13. The Web Service returns with an XML response that shows in the Kapow Browser Window. Extract the SessionID into a global Short String variable "**KTA7_SessionID**".

> You have now logged into Total Agility 7 and can start to make things happen!

STEP 11:   How to find the XML required for a SOAP Request using Kapow

*The following is the SOAP Request required to call **CreateJob** in TotalAgility and pass in the **sessionID**, **TEXT**, and **StartDate**. (Note that the values of the parameters are missing)*

Below are steps to find this XML and put it into a Kapow XML variable for manipulation using the Kapow Debugger's logger.
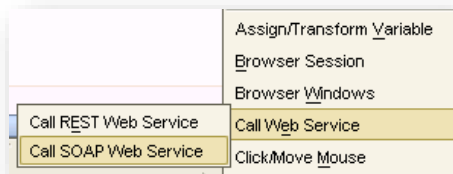
Commented [DW2]: Kapow. Is this a good way to do this?

```xml
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <!--KAPOW HERE-->
    <CreateJob xmlns="http://www.kofax.com/agility/services/sdk">
      <sessionId/>
      <processIdentity>
        <Id xsi:nil="true"/>
        <Version>0</Version>
        <Name/>
      </processIdentity>
      <jobInitialization>
        <InputVariables>
          <InputVariable>
            <Id>TEXT</Id>
            <Value xsi:type="xsd:string"/>
          </InputVariable>
        </InputVariables>
        <StartDate xsi:nil="true"/>
      </jobInitialization>
    </CreateJob>
  </soap:Body>
</soap:Envelope>
```
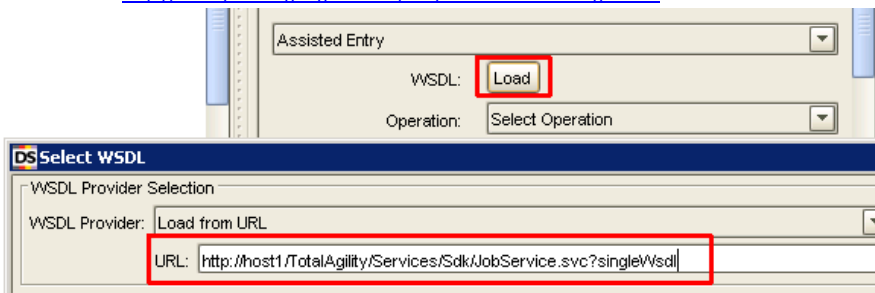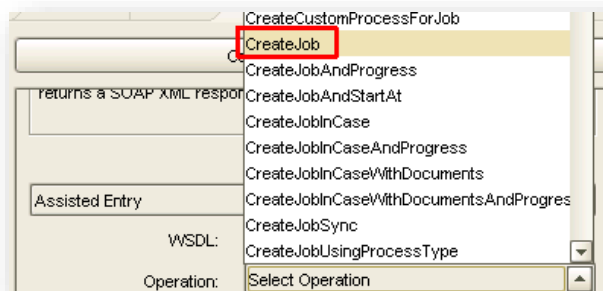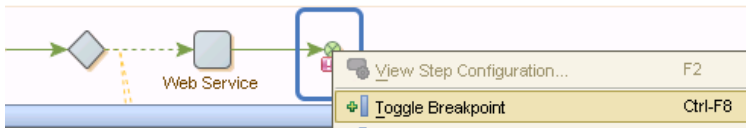
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Open SOAPXML — Set sessionId — Set KTA7 Process Name
Create SOAP request

1. Add a "Call SOAP Web Service" Step to a Kapow Robot.

Assign/Transform Variable
Browser Session
Browser Windows
Call REST Web Service | Call Web Service
Call SOAP Web Service | Click/Move Mouse

2. Load the WSDL http://host1/TotalAgility/Services/Sdk/JobService.svc?singleWsdl

Assisted Entry
WSDL: Load
Operation: Select Operation

DS Select WSDL
WSDL Provider Selection
WSDL Provider: Load from URL
URL: http://host1/TotalAgility/Services/Sdk/JobService.svc?singleWsdl

3. Select "**CreateJob**" as the **Operation.**

CreateCustomProcessForJob
CreateJob
CreateJobAndProgress
CreateJobAndStartAt
CreateJobInCase
CreateJobInCaseAndProgress
CreateJobInCaseWithDocuments
CreateJobInCaseWithDocumentsAndProgres
CreateJobSync
CreateJobUsingProcessType
returns a SOAP XML respor
Assisted Entry
WSDL:
Operation: Select Operation

4. Kapow creates the following parameters that the Web Service Requires

processIndentity	`<tns:processIdentity>`
	`  <tns:Id>Id</tns:Id>`
	`  <tns:Version>0.0</tns:Version>`
	`  <tns:Name>Name</tns:Name>`
	`</tns:processIdentity>`

jobInitialization	`<tns:jobInitialization>`
	`  <!--Two elements below are array items.-->`
	`  <!--Add more or remove when needed.-->`
	`  <tns:InputVariables>`
	`    <tns:Id>Id</tns:Id>`
	`    <tns:Value></tns:Value>`
	`  </tns:InputVariables>`
	`  <tns:InputVariables>`
	`    <tns:Id>Id</tns:Id>`
	`    <tns:Value></tns:Value>`
	`  </tns:InputVariables>`
	`  <tns:StartDate></tns:StartDate>`
	`</tns:jobInitialization>`

5. Deselect "**Validate Against Schema**" because TotalAgility Web Services do not refer to XML Schemas.
   http://www.w3schools.com/Schema/default.asp

   Validate Against Schema: * ☐

   Commented [DW3]: Charlie, can you confirm this please!

6. **Toggle a Breakpoint** after the Web Service Step (CTRL-F8).

7. Switch to **Debug Mode** (CTRL-D)

8. **Run** the Robot (F9)
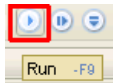
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9. View the Logger. Here you will find the SOAP Request. **<u>Copy</u>** it to the clipboard.

10. Switch back to **Design Mode** (also CTRL-D)

11. Create an XML Variable "SoapRequestXML" and **<u>paste</u>** in the default value of the XML that is in your clipboard.
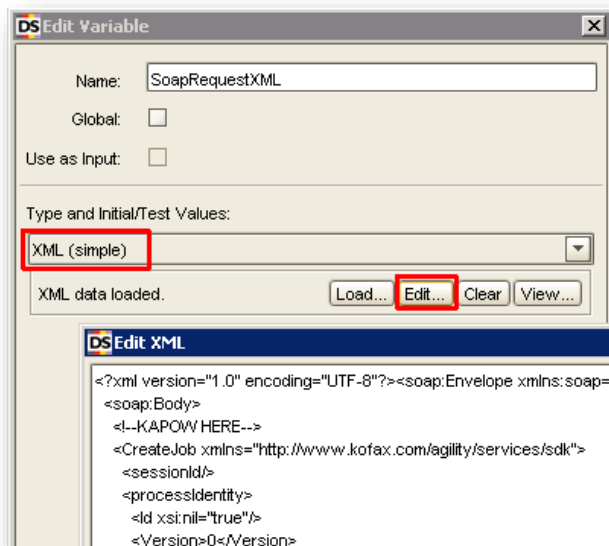
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Now we will fill the SOAP XML Request with the correct parameters and use it in the SOAP Request Step.

12. Add an "Open Variable" Step using the Variable **SoapRequestXML**
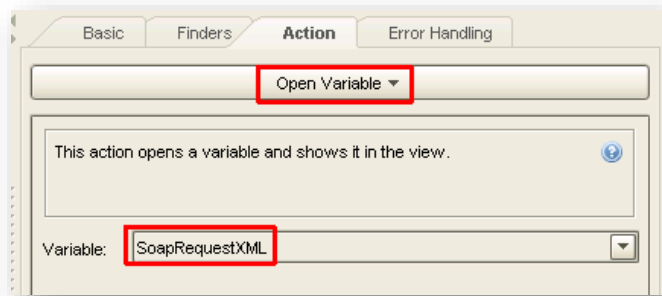
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13. Insert the variable **KTA_SessionID** into the XML
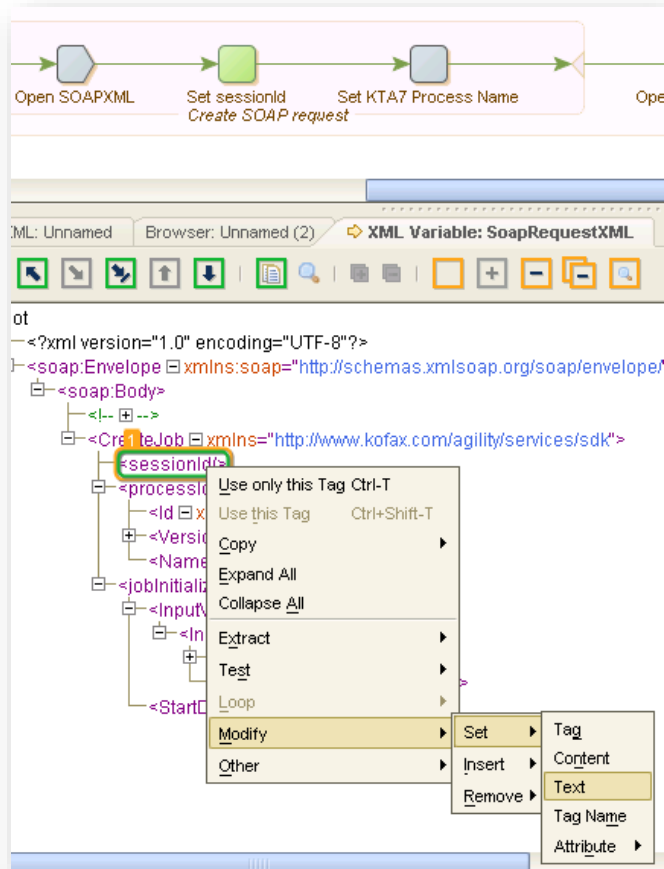
14. Change the Text to type **Variable**
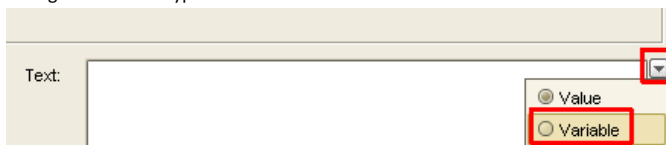
15. Use the Variable **KTA7_SessionID**.
(*You only need to change the Encoding to CDATA if you don't want Kapow to encode the following 5*

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special characters **&<>"'**)

Specify the text of the tag.

Text:	KTA7_SessionID
Encoding:	Ampersand

16. Similary, Set the **processIndentity** name to **ReviewFBPost**, which is the name of the process in TotalAgility.

17. The following steps loop through the posts on Facebook and are not interesting here

18. You will need to open the XML variable again, because the Browser window is look at Facebook

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19. Insert the text of the Facebook Post into the XML.

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20. We now have the SOAP Request message correctly filled with the **SessionID, Process Name** and initialization parameter **TEXT.**

Create a Total Agility Job from a Kapow Robot

21. Configure the "Call SOAP Web Service" action.
    Web Service URL: http://host1/TotalAgility/Services/Sdk/JobService.svc
    The **SOAP Action** is the Base URL of the webservice and the name of the action.
    SOAP Action: http://www.kofax.com/agility/services/sdk/IJobService/CreateJob
    Set the **Output** to **Output Result as XML Page** so that you can see the response from TotalAgility

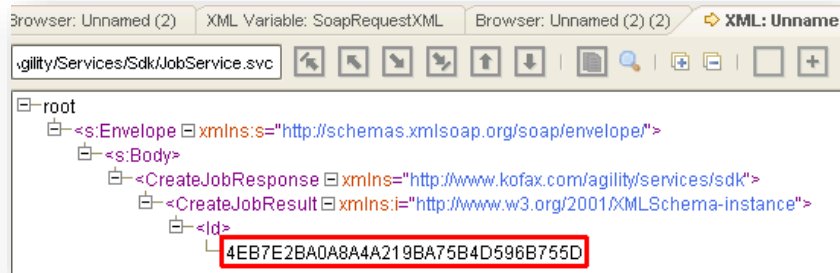> **Commented [DW4]:** Charlie, do you have a comment about SOAP 1.1 or SOAP 1.2?

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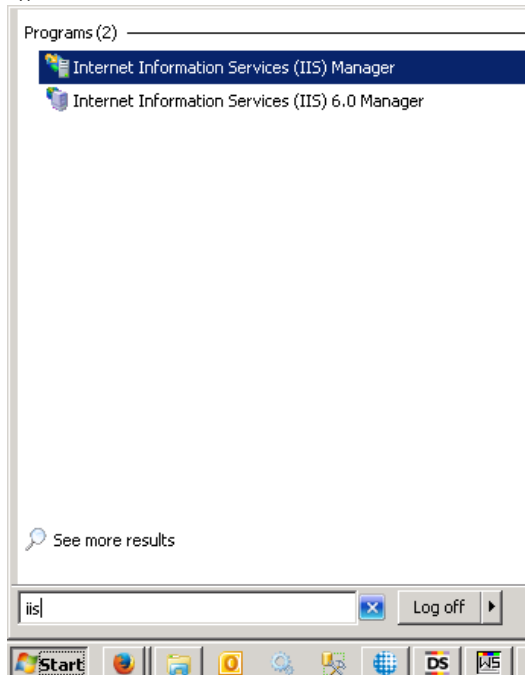22. Click to the end of the Robot
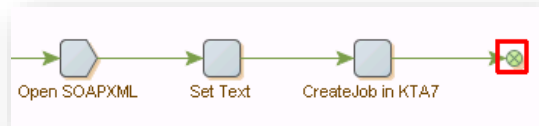
23. You can see the response from TotalAgility 7: the job has been successfully created and you have received the **JobID**.
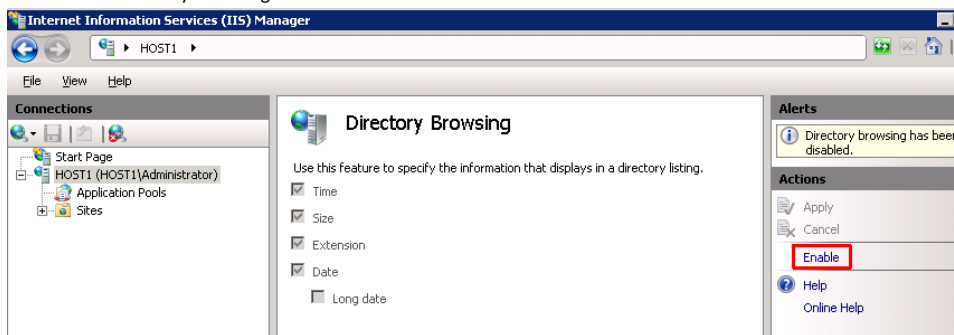

Enable Directory Browsing in IIS

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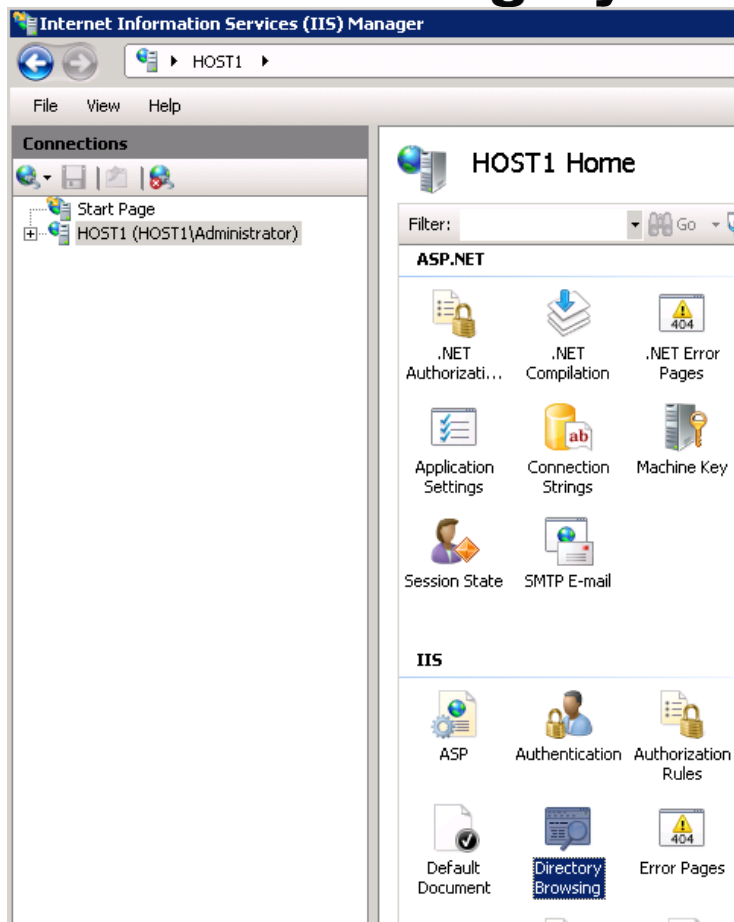
Type "IIS" into windows Search

Start IIS

Double Click Directory Browsing.

You can now go to

You can now go to and view all SOAP Services available within Total Agility. http://host1/TotalAgility/Services/Sdk/

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STEP 1:   Upload Documents from Kapow via the File System

This will only work of the KTA7 server and the Kapow Server both have access to the same file system. This cannot work in a cloud environment

STEP 2:   Upload Documents from Kapow via Binary Stream

You will need to do this in a cloud environment.

This method is more secure and better than the file system method as there is direct document transfer, avoiding the file system and potential document loss of manipulation by a 3rd party.