

Connect your Lotus Notes app to the Activity Stream with XPages

Frank van der Linden

Agenda

- Introduction
- Social Business
- oAuth and OpenSocial
- Let's connect to the Activity Stream
- Post to the Activity Stream
- Delete from the Activity Stream
- Q&A
- Usefull links

Who is Frank van der Linden

- I live in Utrecht in the Netherlands.
- My role is XPages/Domino/Web developer at e-office since 2000.
So I started with Lotus Notes 4.5.x.
- I develop XPages application since the introduction of XPages in Lotus Notes 8.5.0.
- In my spare time I do a lot of running and then I mean a lot.
- And I am married and have 2 daughters



And he works at e-office

- Celebrated in 2011 it's 20ste anniversary
- First Lotus Business Partner in the Netherlands
- E-office is IBM Premier Business Partner, Microsoft Gold Partner and RIM Alliance Elite partner



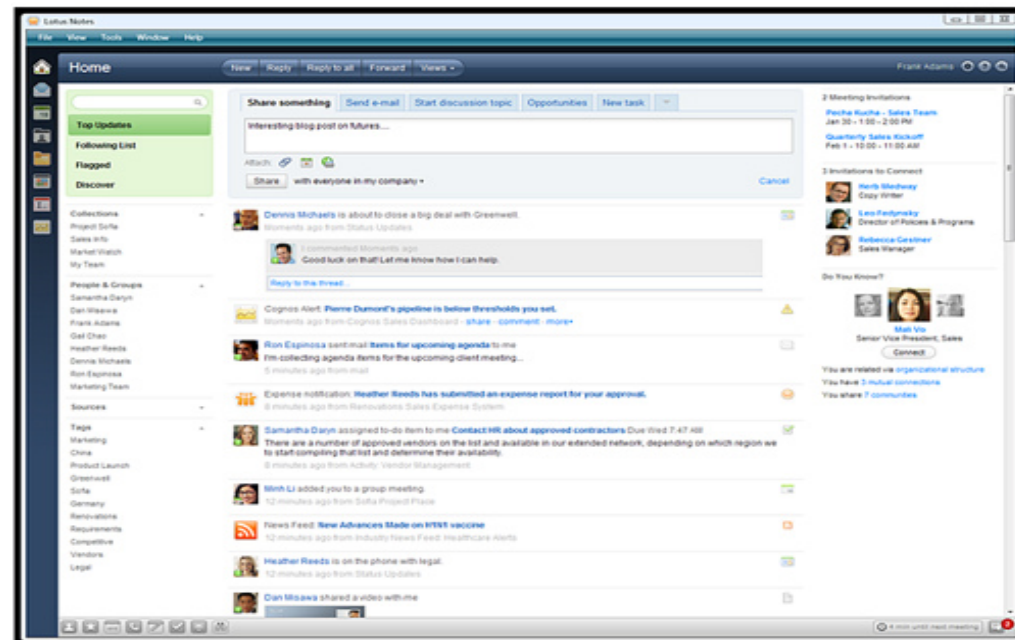
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Social Business Toolkit

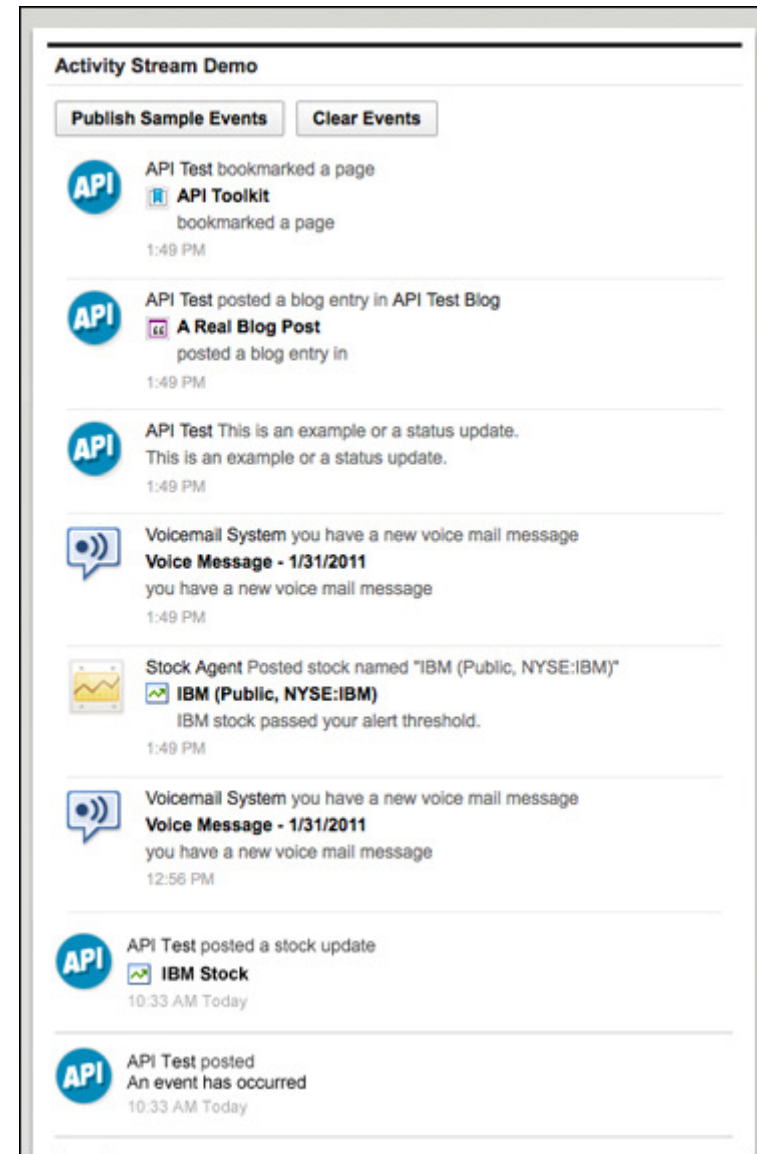
- Manage all your daily business in one stream
- Also your mail and to-do's
- Easy to connect by providing API's
- It will be integrated in IBM Connections Next and Lotus Notes Next

e-office



Activity Stream - intro

- It is part of the Social business Toolkit
- It is the stream of all information
- API's to connect to the stream
- It will part of IBM Connections Next and Lotus Notes Social Edition.
- oAuth authentication.
- Support of OpenSocial gadget specification.



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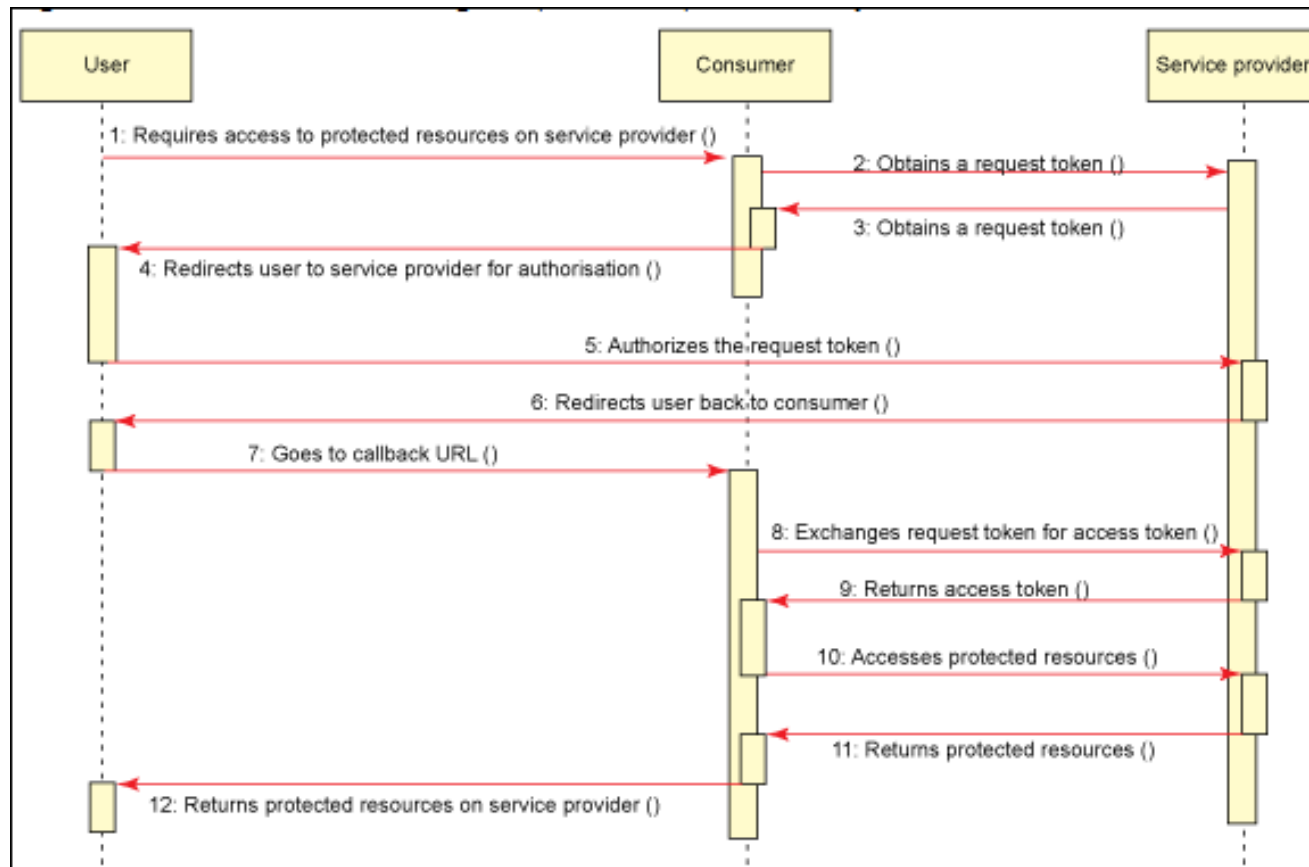
What is OAuth

- OAuth (Open Authorization) is an open standard for authorization
- It allows users to share their resources stored on one site with another site without having to hand out their credentials
- OAuth allows users to hand out tokens instead of credentials to their data hosted by a given service provider.

Source: <http://en.wikipedia.org/wiki/OAuth>



oAuth, the 3 leg dance



oAuth in the real world



OpenSocial

- Public specification that defines a component hosting environment (container)
- Based on HTML and Javascript, as well as the Google gadgets framework
- OpenSocial adopted support for Activity Streams format
- OpenSocial API and OAuth support

Source: <http://en.wikipedia.org/wiki/OpenSocial>



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Get started – get access to Greenhouse

- If you don't have an account for Greenhouse, go get it (<https://greenhouse.lotus.com>)



Get started – Register your app

- OAuth is used, so you need to register your app. (<https://greenhouse.lotus.com/vulcan/security/provider/appList?serviceProvider=vulcanToolkit>)

Application Details

My applications

Add New Application

Manage authorization

Application Info

*Application Name myXPagesSBT

Description test app

OAuth Callback URL


API Key c997df70-dc32-461f-8df2-8c71fe1ec23a

Secret Key -FyyUvFCosGEJfSjnFMcRPeXr3_OBXgWsGLHi44b
ArDXX5tdOPzCvsfs05RKQjN7vp70tK-IBM7tbyFohGeeQ

Update Return

Get started – Get the databases

- Get the Extension Library of OpenNTF, the 8.5.3 code stream
- Install the Extension Library on Designer and Domino server
- Deploy the Social Enabler database to your Domino server

 XPagesSBT	22-12-2011 7:42	IBM Lotus Notes d...	1.440 KB
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- Deploy the WebsecurityStore database to the root of your Domino server

 WebSecurityStore	22-12-2011 7:42	IBM Lotus Notes d...	756 KB
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- And sign both databases with the correct ID.

Get started – Go to the Websecurity store

- The startpoint is KeysApplications.xsp

OAuth Client - Manage Consumer and Access Tokens

Application Keys

User Keys

User Credentials

This page is used to register the OAuth consumer keys as provided by third party servers.

Previous 1 Next

Application Id	Service Name	Updated By
<input type="checkbox"/> EntwicklerCampDemo	Greenhouse	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> myXPagesSBT	Greenhouse	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> XPagesSBT	Dropbox	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> XPagesSBT	Facebook	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> XPagesSBT	LotusLive	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> XPagesSBT	Yammer	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> XPagesSBT1	Twitter	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> YBS	Evernote	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> YBS	Greenhouse	CN=Frank van der Linden/OU=EOF/O=EOG
<input type="checkbox"/> YBS	LinkedIn	CN=Frank van der Linden/OU=EOF/O=EOG

Add Token

Delete Selected Tokens

Get started – Fill in the oAuth keys

Application Token

Edit Token
Enter here the data for your application token

*Application Id:

myXPagesSBT

*Service Name:

Greenhouse

*Consumer Key:

c997df70-dc32-461f-8df2-8c71fe1ec23a

Consumer Key Type:

HMAC-SHA1

*Consumer Secret:

-FyyUvFCosGEJfSjnFMcRPeXr3_OBXgWsGLHi44b2ArDXX5tdOPzCvsfs05RKQjN7vp70tK-IBM7tbyFohGeeQ

Request Token Uri:

https://greenhouse.lotus.com:443/vulcan/security/provider/requestToken

Authorization Uri:

https://greenhouse.lotus.com:443/vulcan/security/provider/authorize

Access Token Uri:

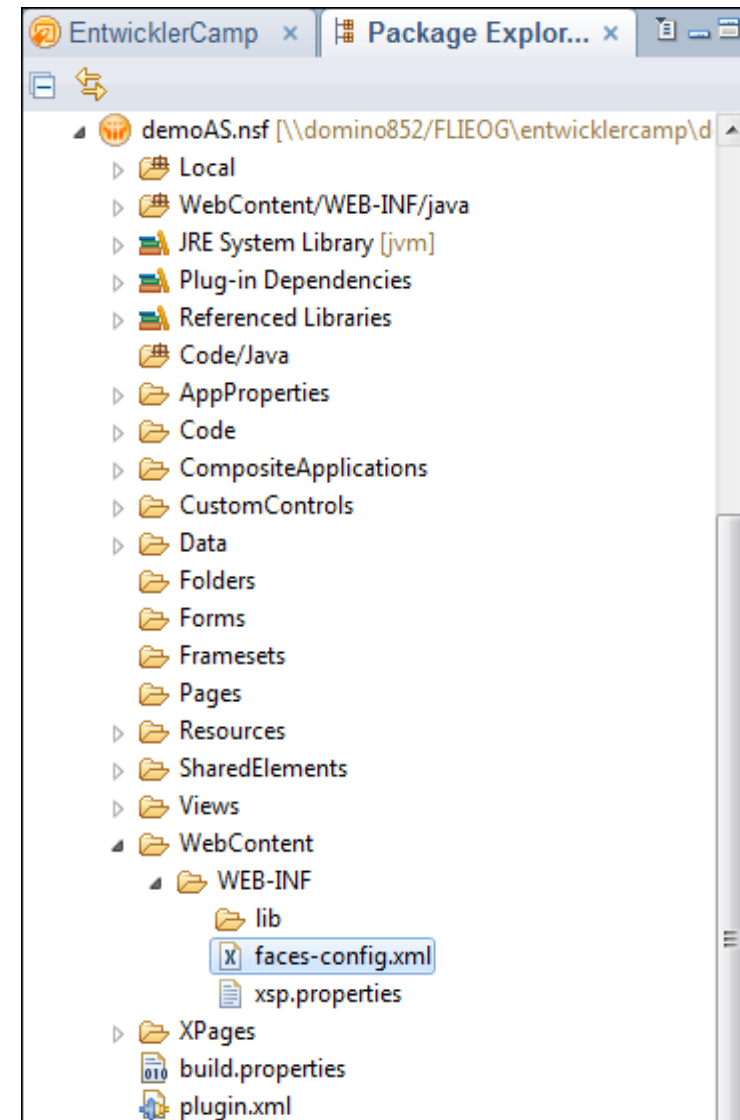
https://greenhouse.lotus.com:443/vulcan/security/provider/accessToken

▶ Security Fields

- <https://greenhouse.lotus.com:443/vulcan/security/provider/requestToken>
<https://greenhouse.lotus.com:443/vulcan/security/provider/authorize>
<https://greenhouse.lotus.com:443/vulcan/security/provider/accessToken>

In to the code – Faces-config.xml

- This file lists bean resources and navigation rules
- It is located in the WEB-INF folder in the package explorer.



Faces-config.xml - NSFStore

- NSFStore managed bean is used for the location of the websecurity database
- It will be used by other Managed beans to store oAuth data.

```
<!--  
    Token store physical implementation This store uses an NSF database to  
    store both the access and the consumer tokens.  
-->  
<managed-bean>  
    <managed-bean-name>NSFStore</managed-bean-name>  
    <managed-bean-class>com.ibm.xsp.extlib.sbt.security.oauth_10a.store.OAuthNSFTokenStore</managed-bean-class>  
    <managed-bean-scope>application</managed-bean-scope>  
    <managed-property>  
        <property-name>database</property-name>  
        <value>WebSecurityStore.nsf</value>  
    </managed-property>  
</managed-bean>
```

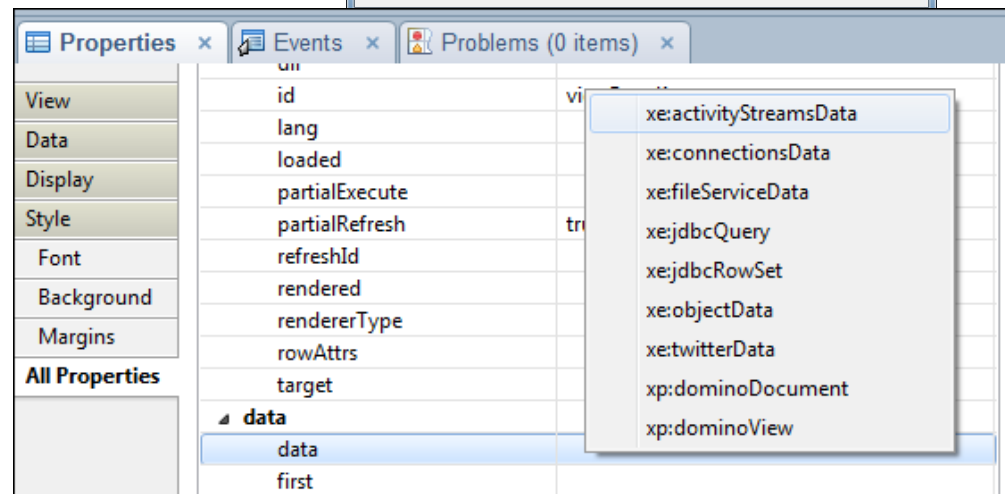
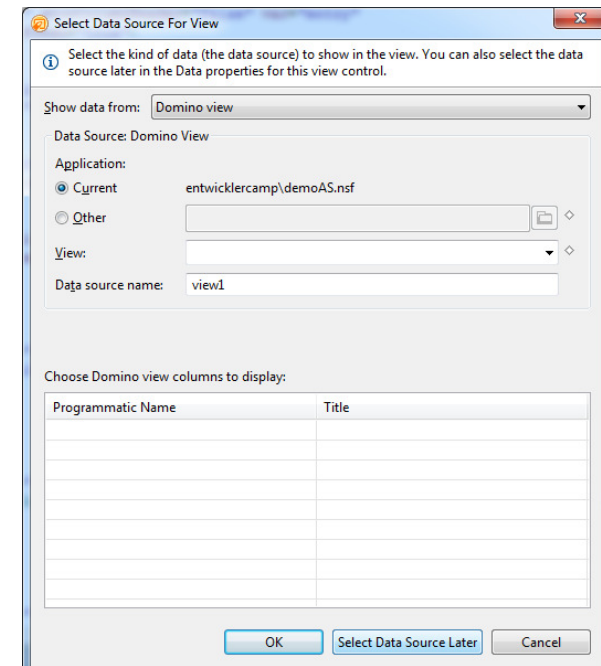
Faces-config.xml – greenHouse managed bean

- greenHouse managed bean is used to specify the OAuthEndpoint, and were to store.
- AppId is the id, who is used as Application name in the SBT application registration page

```
<!--
    Greenhouse for activity streams
-->
<managed-bean>
  <managed-bean-name>greenHouse</managed-bean-name>
  <managed-bean-class>com.ibm.xsp.extlib.sbt.services.client.endpoints.OAuthEndpointBean</managed-bean-class>
  <managed-bean-scope>application</managed-bean-scope>
  <!-- Endpoint URL -->
  <managed-property>
    <property-name>url</property-name>
    <value>https://greenhouse.lotus.com</value>
  </managed-property>
  <managed-property>
    <property-name>serviceName</property-name>
    <value>Greenhouse</value>
  </managed-property>
  <!-- OAuth parameters -->
  <managed-property>
    <property-name>appId</property-name>
    <value>myXPagesSBT</value>
  </managed-property>
  <managed-property>
    <property-name>tokenStore</property-name>
    <value>NSFStore</value>
  </managed-property>
  <managed-property>
    <property-name>proxyEnabled</property-name>
    <value>true</value>
  </managed-property>
</managed-bean>
```

How to get the entries of the Activity Stream

- Create a XPage, and name it 'ActivityStream'
- Drop a viewpanel on this XPage
- Select Datasource later
- Goto the all properties and select as datasource the ActivityStreamData.



How to get the entries of the Activity Stream

- The service URL: vulcan/shindig/rest/activitystreams
- Endpoint: greenHouse, as stated in the Faces-config.xml
- Give the datasource a variable name, so you can connect to it in your ViewPanel
- Specify in your ViewPanel as value the variable name of the datasource
- And give the ViewPanel also a variable name

```
<xp:viewPanel rows="30" id="viewPanel1" showColumnHeader="false" var="entry"
value="activityStreams1" partialRefresh="true">
  <xp:this.data>
    <xe:activityStreamsData
      serviceUrl="/vulcan/shindig/rest/activitystreams"
      endpoint="greenHouse" var="activityStreams1">
    </xe:activityStreamsData>
  </xp:this.data>
```

Get the actual data out of the stream

- Add column to the ViewPanel
- Set of the viewcolumn value to "";
- Add an computed text and add toJson(entry,false)

```
<xp:viewColumn value="" id="viewColumn1">
  <xp:viewColumnHeader value="" id="viewColumnHeader1"></xp:viewColumnHeader>
  <xp:text escape="true" id="computedField3"
    value="#{javascript:toJson(entry,false)}">
  </xp:text>
</xp:viewColumn>
```

- If you preview the Xpage, you will get plain JSON

```
{ "id": "urn:lsid:ibm.com:activities-129d50bd-ddc2-49ea-a17c-11e7e68b219e", "generator": { }, "verb": "post", "standardLinks": { "alternate": [ { "inlin
definition": "http://170.224.163.230\\VEESamples\\WblogViewer.xml" } ], "href": "", "type": "applicationVgadget-instance+json" } ], "target": { "id":
22T07:02:17Z", "body": "posted a blog entry in ", "provider": { "id": "urn:lsid:ibm.com:news", "displayName": "news", "link": "https://ghvm620.lotus.c
summary": "posted a blog entry in ", "link": "https://greenhouse.lotus.com\\vulcan\\object\\0719b86f-084f-4c88-a1fc-1a0d017bdd95", "link": "ht
actor": { "image": { "duration": "1200", "url": "images\\avatars\\vapiTest.png", "height": "50", "width": "50", "id": "", "displayName": "API Test" } }
```

- (accessing the Activity Stream for the 1st time, you will need to grant access your application to the Social Business Toolkit)

JSON - some usefull properties

- Title: `entry.title`
- Posted date: new
`java.util.Date(parseInt(entry.postedTime))`
- ID: `entry.id`
- Image: `entry.actor.image.url`
- Body: `entry.body`
- JSON of the links to the source:
`entry.standardLinks.alternate[0].inline`

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Post to the Activity Stream

- Create a 'classic' Form, with 2 fields

The screenshot shows the Domino Designer interface. On the left is a project explorer for 'Demo Activity Stream' with a file tree containing: Forms (demo), Views, Folders, XPages, Custom Controls, Framesets, Pages, Shared Elements, Code, Data, Resources, Composite Applications, and Application Properties. The main workspace displays a table with two columns: 'Name' and 'Alias'. The table contains one row with the value 'demo' under the 'Name' column. Below the table, a form design is visible with three rows of fields:

Subject	Subject T
Body	Body T
BodyPlainText T	

Post to the Activity Stream

- Create a gadget.xml file in the resources

```
<?xml version="1.0" encoding="UTF-8"?>
<Module>
  <ModulePrefs title="XPage">
  </ModulePrefs>
  <UserPref name="contextualData" display_name="contextualData" datatype="hidden" default_value="{ }">
  </UserPref>
  <Content type="html" view="default">
    <![CDATA[
      <script type="text/javascript">

        function byId_MODULE_ID__(id) {
          return dojo.byId(id + "__MODULE_ID__");
        }

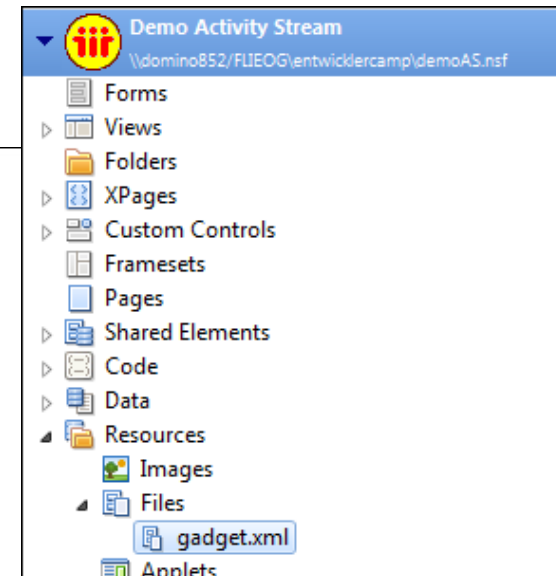
        function onload_MODULE_ID__() {
          var xPageUrl = getData_MODULE_ID__();
          byId_MODULE_ID__("xPage").src = xPageUrl;
        }

        function getData_MODULE_ID__() {
          var prefs_MODULE_ID__ = new gadgets.Prefs(__MODULE_ID__);
          var dataStr = prefs_MODULE_ID__.getString("contextualData");
          dataStr = gadgets.util.unescapeString(dataStr);
          var data = gadgets.json.parse(dataStr);
          return data.xPageUrl;
        }

        onload_MODULE_ID__();

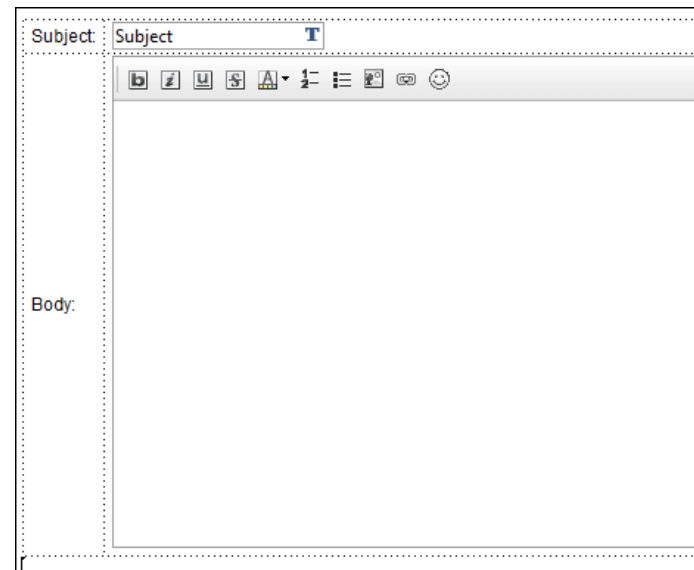
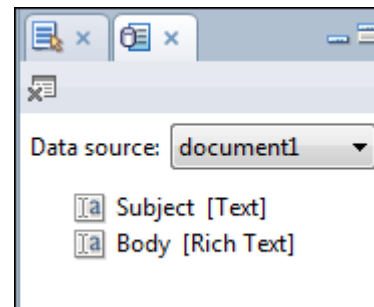
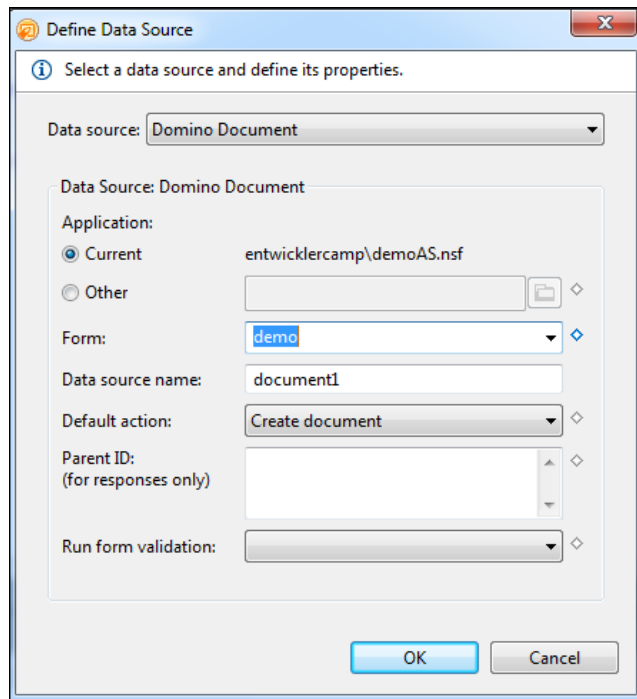
      </script>

      <iframe width="500px" height="700px" scrolling="no" frameborder="0" id="xPage_MODULE_ID__" src=""></iframe>
    ]]>
  </Content>
</Module>
```



Post to the Activity Stream

- Create XPages and make binding to the Demo form.



Post to the Activity Stream

- Add ObjectData control to the XPage
- ObjectData has 2 components
 - ✓ CreateObject: to compose the object JSON
 - ✓ SaveObject: save the object to an url.

```
<xe:objectData var="objectData1">
  <xe:this.createObject><![CDATA[#{javascript:return {
    "postedTime":0,
    "title": "",
    "actor": {
      "id": "ae8ba4c0-9825-102f-989e-c0e3f204291e",
      "displayName": userBean.email
    },
    "body": "",
    "verb": "post",
    "object": {
      "id": "",
      "displayName": "",
      "link": @AbsoluteUrl(view.getRequestUrl()),
      "objectType": viewScope.actionType
    },
    "target": {
      "id": "",
      "displayName": "",
      "link": @AbsoluteUrl(view.getRequestUrl()),
      "objectType": "type"
    },
    "standardLinks": {
      "alternate": [{"href": "", "type": "application/gadget-instance+json", "inline": {"ee:component-instance-data": {"ee:c
      "container": [{"href": "http://projectvulcan.lotus.com/community", "type": "text/html"}]}
    }
  }
}]]></xe:this.createObject>
  <xe:this.saveObject><![CDATA[#{javascript:var svc = new sbt.ActivityStreamsService(greenHouse, "/vulcan/shir
value.postedTime = (new Date()).getTime();
var msg = svc.post(value);}]]>
</xe:this.saveObject>
</xe:objectData>
```

Post to the Activity Stream

- Save the datasources
 - ✓ First save datasource linked to notes document
 - ✓ Collect some field values, e.g. documentUniqueID
 - ✓ Add values to ObjectData
 - ✓ Save datasource linked to ObjectData

```
<xp:button id="buttonSave" value="Save">
  <xp:eventHandler event="onclick" submit="true" refreshMode="complete">
    <xp:this.action>
      <xp:actionGroup>
        <xp:saveDocument var="document1"></xp:saveDocument>
        <xp:executeScript>
          <xp:this.script><![CDATA[#{javascript:if (greenHouse.isAuthenticated()) {
objectData1.object.id = document1.getDocument().getUniversalID();
objectData1.body = document1.getDocument().getItemValueString("BodyPlainTxt");
objectData1.object.displayName = document1.getDocument().getItemValueString("Subject");
objectData1.title = document1.getDocument().getItemValueString("Subject");

objectData1.standardLinks.alternate = [{"href":"","type":"application/gadget-instance+json","inline":{"ee:component-instance-data":{"ee:context":
}}}></xp:this.script>
        </xp:executeScript>
        <xp:saveDocument var="objectData1"></xp:saveDocument>
      </xp:actionGroup>
    </xp:this.action>
  </xp:eventHandler>
</xp:button>
```

Post to the Activity Stream

- Imported coding to define the OpenSocial gadget syntax
 - ✓ `{"ee:context":{"bookmarkTitle":"EntwicklerCamp2012","xPageUrl":"http:\\\\\\ld09.e-office.com\\ventwicklercamp\\demoAS.nsf\\demo.xsp?id="+document1.getDocument().getUniversalID()+""},"ee:component-definition":"http:\\\\ld09.e-office.com\\ventwicklercamp\\demoAS.nsf\\gadget.xml"}`


Post to the Activity Stream

- Refresh Activity Stream
- Click the new entry and you will see the embedded experience

Activity Stream Demo

Publish Sample Events

Clear Events



Vulcan Test21 EntwicklerCamp Demo

EntwicklerCamp Demo

EntwicklerCamp Demo


3:49 PM

SAP Workflow event

SAP Workflow Event

Workflow event

3:43 PM




API Test bookmarked a page

API Toolkit

bookmarked a page

3:43 PM



Voicemail System you have a new voice mail message

Voice Message - 1/31/2011

you have a new voice mail message


3:43 PM


Vulcan Test21 EntwicklerCamp Demo

Subject:

Font

Size





EntwicklerCamp Demo

Body:

Press ALT 0 for help

Save

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Delete from the Activity Stream

- Create a Custom Control for the Delete Button
- Add custom properties
 - ✓ objectID, identification of entry in ActivityStream
 - ✓ refreshID, component to refresh after delete Action

The screenshot shows a software development tool's 'Property Definition' window. On the left is a sidebar with a tree view containing 'Custom Control', 'Data', 'Style', 'Font', 'Background', 'Margins', 'Resources', 'Navigation', 'Dojo', 'Property Definition' (selected), 'Design Definition', and 'All Properties'. The main area has a toolbar with 'New Property', 'New Group', 'Delete', 'Move Up', and 'Move Down' buttons. Below the toolbar, the 'Properties:' section shows a tree with 'Root' containing 'objectID' and 'refreshID'. The right pane has tabs for 'Property', 'Validation', and 'Visible'. The 'Property' tab is active, showing fields for 'Name' (refreshID), 'Display name' (empty), 'Type' (string), 'Editor' (empty), 'Parameters' (empty), and 'Default Value' (empty). There are folder icons next to the 'Type' and 'Editor' dropdowns, and a diamond icon next to the 'Default Value' field.

Delete from the Activity Stream

- Add ObjectData control to Custom Control
- ObjectData has 2 components
 - ✓ CreateObject: to compose the object JSON
 - ✓ SaveObject: save the object to an url.

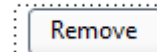
```
<xe:objectData var="objectData1">
  <xe:this.saveObject><![CDATA[#{javascript:var svc = new sbt.ActivityStreamsService(greenHouse,"/vulcan/shindig/r
value.postedTime = (new Date()).getTime();
var msg = svc.post(value);}]]>
  </xe:this.saveObject>
  <xe:this.createObject><![CDATA[#{javascript:return {
  "id":compositeData.objectID,
  "postedTime":0,
  "verb":"delete",
  "title": "",
  "actor":{
    "id":"ae8ba4c0-9825-102f-989e-c0e3f204291e",
    "displayName": userBean.email
  },
  "body": "",
  "object":{
    "id": "",
    "displayName": "",
    "link":@AbsoluteUrl(view.getRequestUrl()),
    "objectType":viewScope.actionType
  },
  "target":{
    "id": "",
    "displayName": "",
    "link":@AbsoluteUrl(view.getRequestUrl()),
    "objectType":"type"
  }
}
}]]></xe:this.createObject>
</xe:objectData>
```

Delete from the Activity Stream

- The service URL:
[/vulcan/shindig/rest/activitystreams/@me/@all/@all?X-HTTP-Method-Override=DELETE&activityEntryId="+compositeData.objectID](/vulcan/shindig/rest/activitystreams/@me/@all/@all?X-HTTP-Method-Override=DELETE&activityEntryId=)
- Endpoint: greenHouse, as stated in the Faces-config.xml

Delete from the Activity Stream

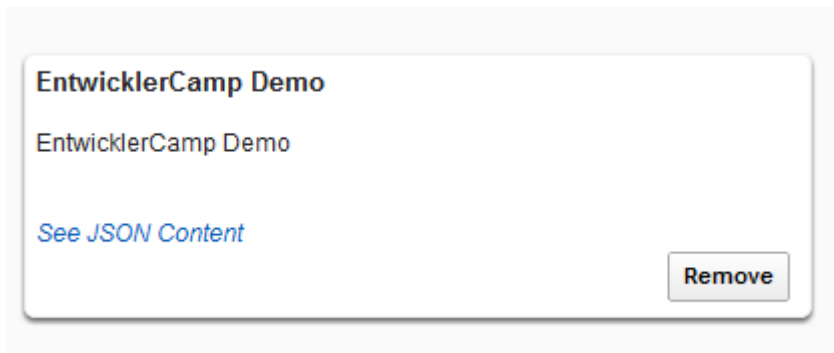
- Add button control to the Custom Control.
- And add onClick event to save datasource and refresh the viewpanel



```
<xp:button value="Remove" id="removeButton"
  rendered="false">
  <xp:eventHandler event="onclick" submit="true"
    refreshMode="partial"
    refreshId="#{javascript:compositeData.refreshID}">
    <xp:this.action>
      <xp:actionGroup>
        <xp:saveDocument var="objectData1"></xp:saveDocument>
        <xp:executeScript>
          <xp:this.script><![CDATA[{javascript:getComponent(compositeData.refreshID).getData().refresh()}]]></xp:this.script>
        </xp:executeScript>
      </xp:actionGroup>
    </xp:this.action>
  </xp:eventHandler>
</xp:button>
```

Delete from the Activity Stream

- Go back to the Activity Stream XPage
- Add Delete Action Custom Control to the ViewColumn
- Pass some custom properties to identify the entry and for the partial refresh



```
<!-- Delete Button Custom Control -->  
<xc:ccDeleteButton  
    refreshID="viewPanel1"  
    objectID="{javascript:entry.id}">  
</xc:ccDeleteButton>
```

Q&A

e-office

Usefull links

- OpenNTF Extention Library
 - ✓ <http://extlib.openntf.org/>
- Social Business Toolkit Activity Stream
 - ✓ <https://greenhouse.lotus.com/activitystream/>
- API explorer
 - ✓ <https://greenhouse.lotus.com/sbtapiexplorer/mainpage.jsp>

How to reach me

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