VDAB Apps: Web Development

VDAB includes many features that support enhancing and supporting web development. Only the **highlighted features** are covered in this application guide.

- Native hosting of web pages.
- Display of visual nodes (charts, images..) on web pages.
- **Using a flow to manage a control sequence between web pages.**
- **Using a flow to provide back end services for a web page.**

Features

- HTTPSource node present a source

This document covers using VDAB flows with the HTTPSource, HTTPService, HTTPResponse and HTTPLocation nodes.

Before This	• You have reviewed the VDAB introductory tutorial and documentation to understand how to create basic flows from nodes.

Contents

Related Documentation 2
Manually applying an update on Windows ..... **Error! Bookmark not defined.**
Manually applying an update on UNIX ..... **Error! Bookmark not defined.**

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Related Documentation

The following document and tutorials either are a) available or b) being developed to further support this subject.

Those available are highlighted in blue while those under development are not highlighted.

Related Guides	Details
Web Client	Describes the specific features of the VDAB Web Client. The Web Client displays details regarding the container and flows that are running on it and allows limited control of the VDAB Container.
Building Web Applications	Details how VDAB can build enhanced web applications which interact with the VDAB flows.

Related Tutorial	Details

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Overview of VDAB HTTP Nodes

The HTTP Service

Node Type	
HTTPService	Calls a GET or PUT method on an external URL. The event data that initiates the service is placed in parameters of the HTTP call. Data can be returned a text event or written to a file.
HTTPSource	Accepts a HTTP Query from an external web browser using a GET method.
HTTPResponse	Sends a response to a web flow that was initiated earlier in the flow sequence by a HTTPSource.
HTTPLocation	A type of HTTPResponse which sends a response which directs the session to a different location

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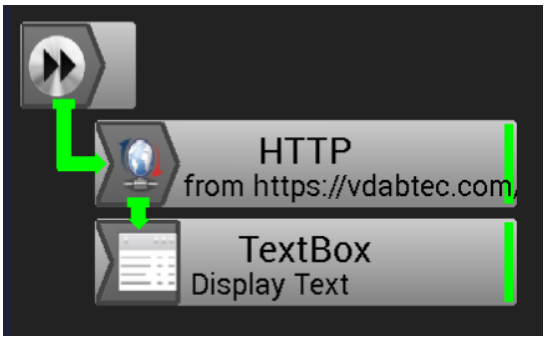
HTTP Service

The HTTPService is can be used to do a GET or POST to any specified URL. The data that is returned can be returned as either a text event or written to a file.

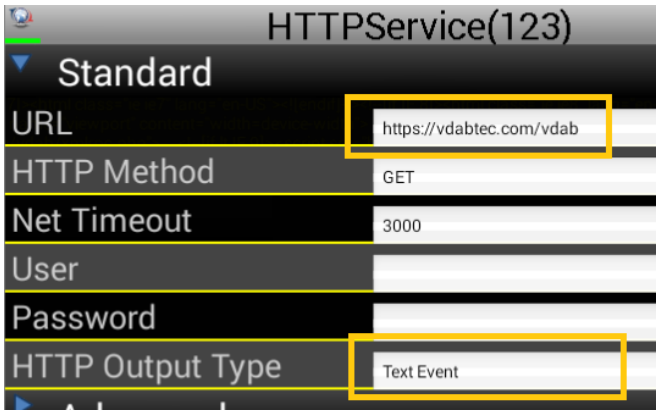
It is often used by itself in a flow though it

Returning the Page as Text after a Trigger

The following flow would take and return an entire page as text.



This would be configured by setting the URL and specifying the return type as text.



If the data returned is HTML it can be parsed

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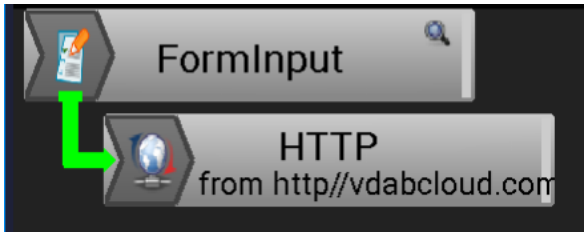
Sending Parameter in the Request

If you initiate the *HTTPService* node with an event that is not a simple trigger, the event items will be added to the *HTTPService* query as parameters. For example if a *FormInput* node is used to send data to an *HTTPService*, all of the form data will be added to the url.



The query would include the appended parameters

```
http//vdabcloud.com:41002/vdab/test?EMail=JoeP@gmail.com&Password=$P$BKFIE0N3FzxSYAMs
xlmzwa2/v92zkx0&Username=JoePiscopo&FirstName=Joe&LastName=Piscopo
```

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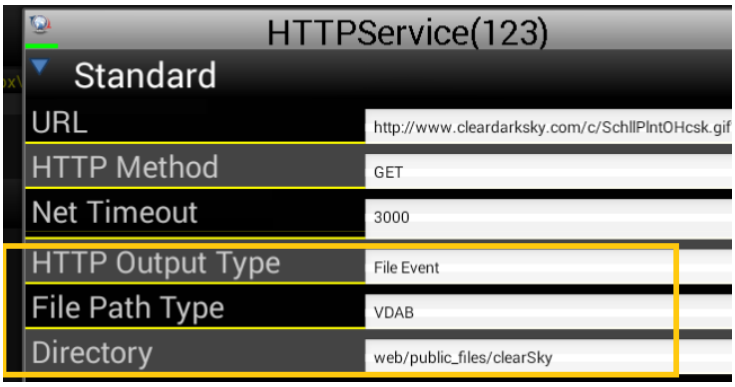
Returning Binary Data

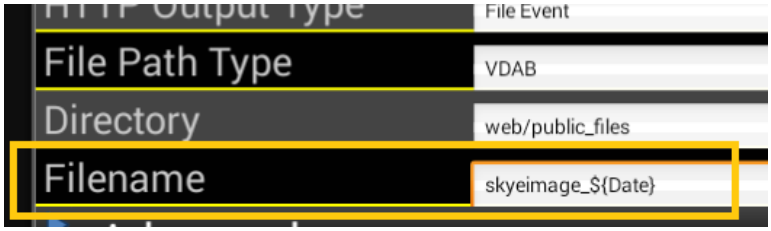
The HTTPService is also capable of receiving different forms of binary data which is written to a file followed by sending a File Event any subsequent node.

When configuring the node for receiving binary data, specify a file event as the *HTTP Output Type.*

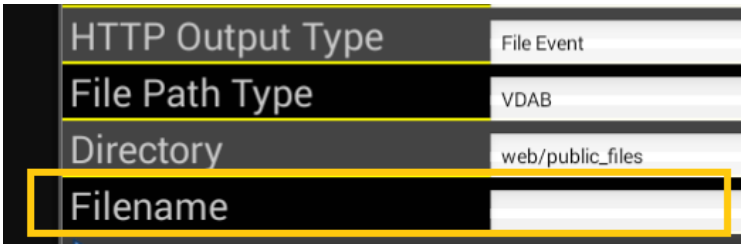
You can then specify in which directory you want the File represented by the file event to be written.



You can also optionally specify the file name.



If no file name is provided, the existing filename will be used with a date time appended to the original name.



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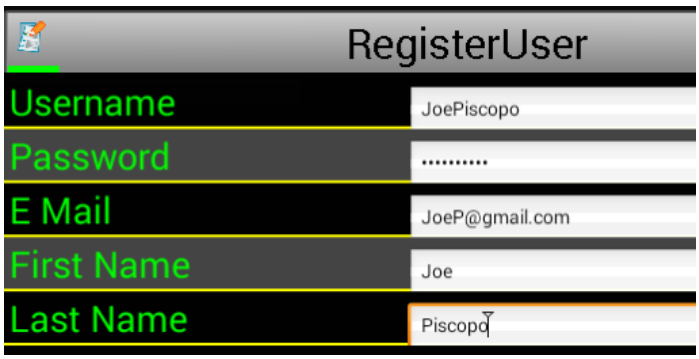
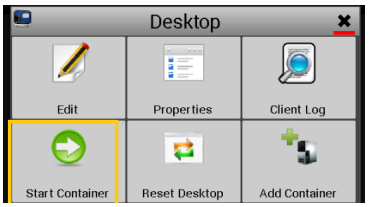
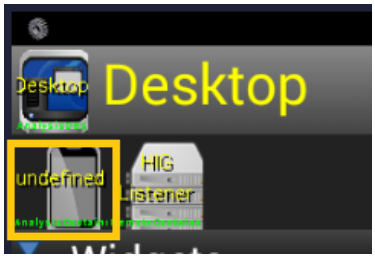


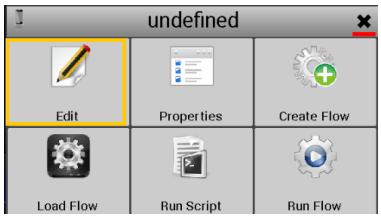
The HTTPService is used to POST or GET information from a specific URL.



1. Optional



2. Select the Edit action to edit the Android container properties.



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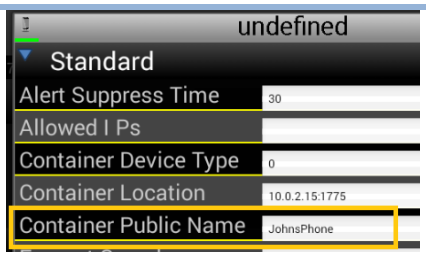
3. While most container properties can be left unchanged, The Container Public Name should be edited so that location data originating from your phone can be identified. Click on the upper left to save the configuration.



4. Stop and then start the Container using the Desktop Action Menu.

HTTPSource with HTTPResponse

The HTTP source can be used together with HTTPResponse (or HTTPLocation which is a special type of HTTPResponse) to use a flow to serve specific web content.

The HTTPSource received data

HTTPService Examples

Sample Flows and Applications

Flows	Key Features
grabViewChart	Demonstrates periodically retrieving an chart describing astronomical seeing conditions from a web site using **HTTPService**. The data is stored and served on VDAB's integral web server.
grabLocalWeather	Demonstrates retrieving local weather information from Open Weather Map using the **HTTPService**. The JSON data is converted to VDAB event data to find the local temperature, humidity and pressure. Historical data is saved and charted.
distanceFromCLE	Demonstrates creating a simple flow that handles user registration. A standard HTML form is used to push the data to a **HTTPSource** node in the VDAB flow. After sending a confirmation email, the **HTTPResponse** nodes sresponds
registerUser	Demonstrates creating a simple flow that handles user registration. A standard HTML form is

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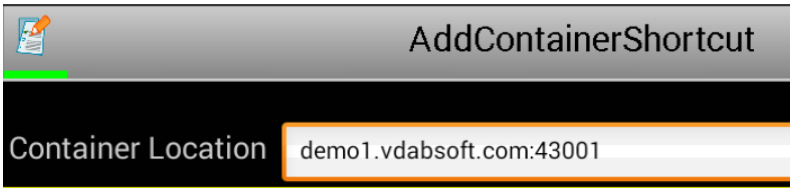
	used to push the data to a **HTTPSource** node in the VDAB flow. After sending a confirmation email, the **HTTPResponse** nodes sresponds

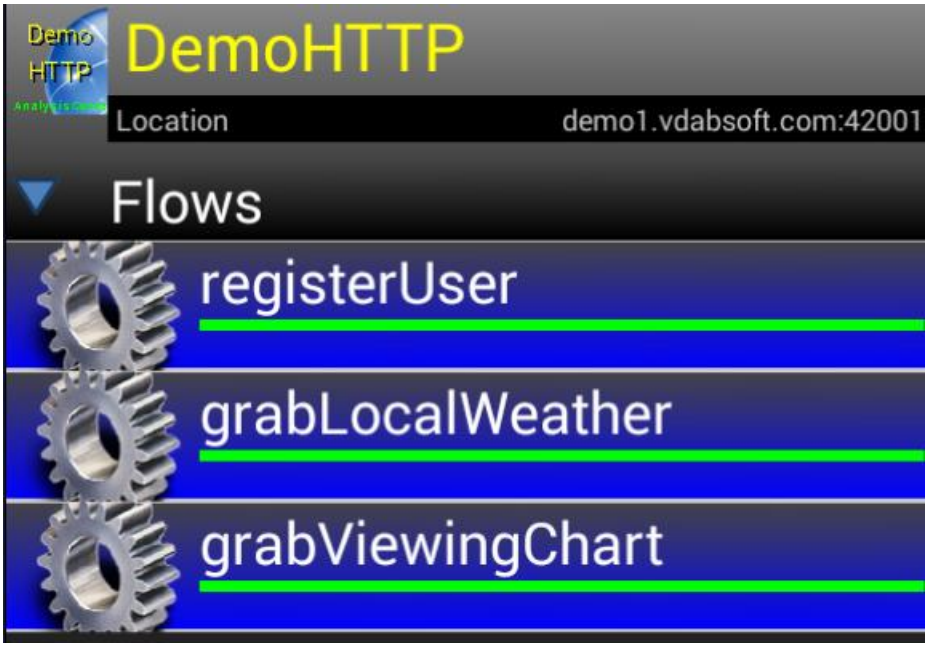
Viewing and Copying the Sample Flows

You can both view and copy these sample flows from your VDAB Android Client.

Add the container location **demo1.vdabsoft.com:42001** to your Android Client desktop to access these demo flows.



The flows that power these samples are listed in on the Container detail page. You can click to see the flow detail or copy the flows to your own container.



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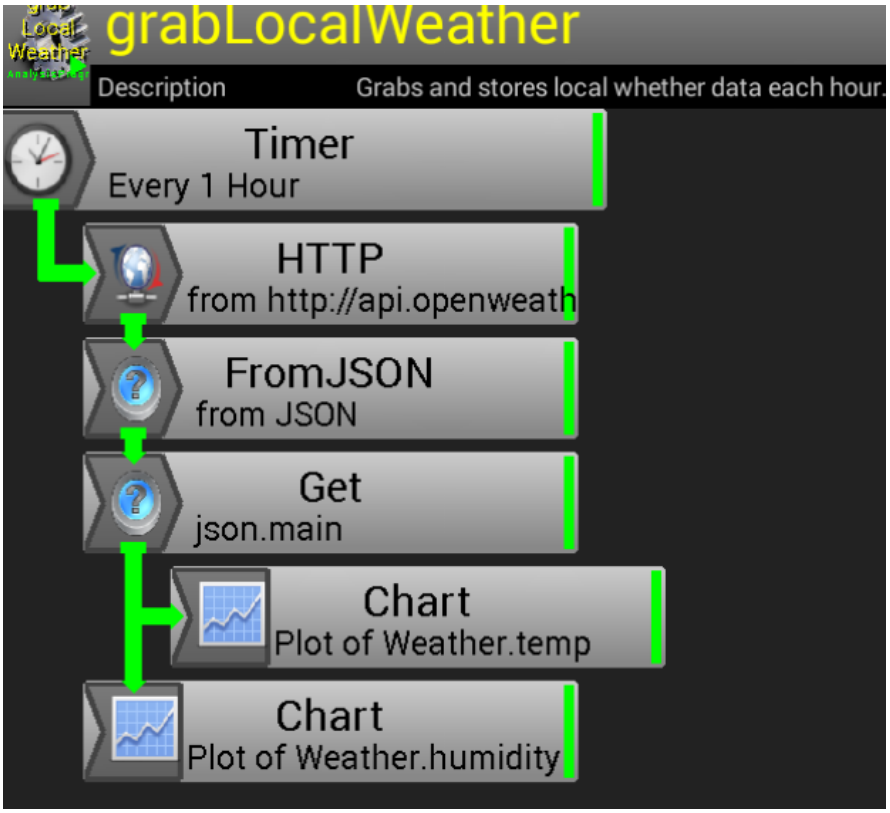
Retrieving and Plotting Weather Statistic

A flow containing a HTTPService can be configured to read JSON formatted weather data using a specified API.



Using the VDAB *FromJSON* node this can be converted to a VDAB event which can find and parse specific parts of the weather data and

Retrieving and Serving Sky Forecast Images

This example illustrates how the HTTPService node can be used to automatically capture and serve images or other content from another website. In this example the flow goes out and captures the Astronomical viewing conditions posted every 4 hours and save those to a specific directory that can be accessesd can be used to retrieve a chart every hour. The charts that accumulate can be accessed later allowing comparing the changes in the charts.

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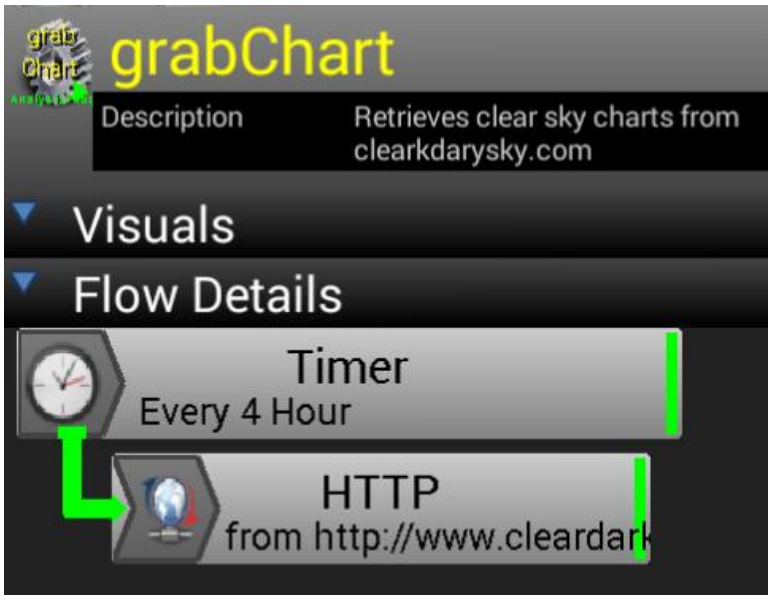

Managing Web User Registration

This example application show how VDAB can be used to manage the sequence of registering a user. While this demo flow is designed to work with the VDAB web server, a similar flow can be configured to work with any web page.

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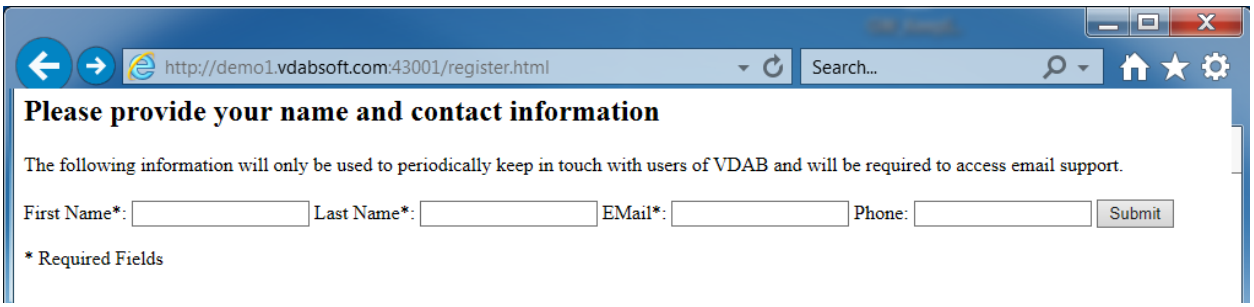
1. Take in user information from a form which is sent to a VDABSource.
2. The VDABSource converts the posted data to a VDABEvent.
3. If the information is not valid, an error is returned to the same page using the HTTPLocation node.
4. If the information is valid, a success message is displayed using the HTTPResponse node.



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Appendix: Documentation for Nodes

This same information is available for all nodes by going to your local vdab web server at

HTTPService

Beta

Makes a HTTP request to an external URL using a GET or POST method. If an event with data initiates the service it is placed in the parameters of the HTTP call.

URL	The complete URL for the web page. Incoming event data can be included by enclosing a reference in ${...}.
AddParams	If set, the incoming event data is added as parameters to the HTTP query.
HTTPMethod	HTTP request method that will be used. Select either GET or POST.
NetTimeout	Timeout time in milliseconds for this Internet connection
User	The username or user id associated with the access required for this node.
Password	The password associated with the user specified on this node.
HTTPOutputType	The type of output that should be produced from the HTTP Request. A File Event type will capture the response in a file.
FilePathType	Selects whether to use a SYSTEM or VDAB relative directory path for the directory.
Directory	The directory where the HTTP response file will be written.
Filename	The name of the file to receive the HTTP response. If left blank a default filename will be created which includes a datetime stamp.

HTTPSource

Beta

Listens for a HTTP GET an the identified Web Subpath. Parameters are converted to matching event data items. The flow containing the HTTPSource must include at least one HTTPResponse.

WebSubpath	The HTTP query subpath where this HTTP source can be accessed. The full path would be prefixed by vdab/.
MaxResponseTime	Maximum time in seconds to wait for a response from a HTTPResponse or HTTPLocation node in this flow.

HTTPResponse

Beta

Sends a response for a flow initiated by a HTTPSource. A response template is used to build the response from the incoming data. If the template is not provided the data is returned as JSON.

SelectedElement	Select the data element that should be operated on in this node
ResponseTemplate	The template used to build HTTP the response. Incoming event data can be referenced by enclosing in ${...}.

HTTPLocation

Beta

A type of HTTPResponse which sends the web session directly to a different location using javascript

NewLocation	Complete URL for the new page to be displayed.

http://vdabsoft.net/vdab/apps/VDABNodes

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