Creating an HTTP Callout on the NetScaler

For this example, I used the site hostip.info. They have an API that can be called via an HTTP request, making it very simple to use with NetScaler HTTP Callouts.

For examples of the hostip.info api, please reference the following site:

http://www.hostip.info/use.html

In this example, the callout will be sending the parameters ‘ip’ (client source IP address) and ‘position=true’ which will cause the api to return latitude and longitude information. If the latitude is less than or equal to 39, the browser is coming from south of the Mason-Dixon line, and will be sent a message indicating that they are from the South along with their latitude.

First create the HTTP Callout. In the GUI, this is under the AppExpert folder:
Create the HTTP Callout. Give it a name, and the IP address and port of the server that will receive the callout. In the case of hostip.info, the address is 67.159.20.108, and the port is 80.

This will be an Attribute-based request:
The **Host Expression** field is the information that will be inserted in the Host: header of the HTTP Callout request to the callout server. In this case, the host name that the api server is looking for is “api.hostip.info”. Put this in quotes, since it is a literal value. An expression could also be used to insert other data, or to extract something from the incoming user’s browser request.

The **URL Stem Expression** is the URL that will be sent to the callout server. In this case, we are sending “/get_html.php”. Again, this is in quotes because it is a value. An expression could also be used here.

For the **parameters**, two will be added - *ip* which has the value-expression of *client.ip.src* (client source IP address of the client browser) and *position*, which has the value of “true”.

For this combination of parameters, the request that will be sent to the callout server is /get_html.php?ip=client.ip.address&position=true with a host header of api.hostip.info.

This callout will result in the following response that will be parsed:

```
Country: UNITED STATES (US)
City: Sugar Grove, IL
Latitude: 41.7696
Longitude: -88.4588
```
Now to extract data from the response. In the **Server Response**, the **Return Type** that will be returned to the `sys.http_callout()` function is `BOOL`. In the example below, the expression is extracting the HTTP response body, after the string “Latitude: “, typecasting that to a number, and then seeing if the number is less than or equal to 39. If so, a value of TRUE will be returned, otherwise a value of FALSE.
A responder policy will use the HTTP Callout function. It checks the Host header of the browser request to see if it contains any from the Pattern Class “Colors” and does the HTTP Callout to see if the user is coming from the South.

With the associated responder action.

This responder action is also leveraging an HTTP Callout that returns the text value of the client’s latitude.
Here is the cli used to create the mason_lat_txt callout. It uses the same callout parameters as before, but the Server Response is now returning the first six characters that come after “Latitude: “ in the callout server response:

add policy httpCallout mason_lat_txt

set policy httpCallout mason_lat_txt -IPAddress 67.159.20.108 -port 80 -returnType TEXT -hostExpr "\api.hostip.info\" -urlStemExpr "\get_html.php\" -parameters ip(client.ip.src) position("true") -resultExpr "HTTP.RES.BODY(1000).AFTER_STR("Latitude: ").PREFIX(6)"

A few caveats:

Don’t use the words ip, src, or text as part of the callout name. i.e. CustomerIP, region_src, mason_dixon_text, etc.

This will give you an invalid expression error when you try to call it via the SYS.HTTP_CALLOUT() function.