Directions for Installing the   
Weather Clock Application   
on SharePoint

# What is the Weather Clock Application?

The Weather Clock application displays the local weather and time for multiple MAF locations around the world. The header is color coded to indicate which organization works at that location:

* Blue – MAF-I
* Red – MAF-US
* Gray – MAF Affiliate or MAF Canada

In the header there is a location name, and country or state. Under that is the organization name, and location type. The current location types are:

* Admin
* Air Base
* LT
* Language School
* Flight Training Centre

Below the header is the weather summary. This information is generated by the weather feed source. It is a short description of the current weather at the location. In a blue or red text is the currently reported temperature for the location. It is displayed in Celsius and Fahrenheit so that at a glance, and American can discuss the temperature with someone who uses Celsius.

On the left side of the temperature information is a weather icon representing the current weather and daytime conditions. On the right side is the country flag for the location. When the flag is clicked on, the flag is opened in a larger view on a new browser window.

In a similar sized font below the temperatures is other weather data that may be of interest to pilots. The last line of that section tells the user the local time that the weather data was collected. This helps determine the timeliness of the information. It can also help troubleshoot data transfer problems.

The last line has several icons on the left hand side. These icons allow the user to learn more about the location. Each icon has a link that opens up in a new browser window. The first icon, shaped like a globe, displays a Google Map of the location. The second one opens up the Operation World webpage for the country the location is in. The third icon, with the W opens up the Wikipedia article for the location. My goal in adding this feature was to promote knowledge of the locations MAF works in among staff members.

On the right side of the last line is the current time at the location. This time calculation is based on the time and time zone settings of the client computer. So if there are complaints about the time being off, the first thing to do is check the local computers time and location settings. This time is kept up to date every 10 seconds when the browser is open.

# Installation

The data update application can be run on any Windows computer that has network access to the SharePoint server. Log into the machine as an admin and run the setup.exe application that should be in the same directory as this document. The installer will walk you through the process.

After the install is complete, open the folder named “Post Install” and run “CreateScheduledTask.exe”. When this is done, the Task Scheduler management console. In the left hand tree view, click on the branch labeled “Task Scheduler Library”. In the top center pane, you should now see a list of scheduled tasks. In this list you will see a task named “Weather Data Update”. Please make sure that the use this task runs under has permission to upload files to the SharePoint web interface. The task is completely setup, and you can review or modify it at this time. The schedule is best set 2 minutes before the hour and half hour. The webUI updates every hour and half hour.

You also need to copy the webUI files to the SharePoint server. They belong in the /Sites/[Site Name]/SiteAssets/ folder.

## Display the Weather Clock on a SharePoint Page

On a page that you want to display the Weather Clock, go to the page in SharePoint and click the 'EDIT' button in the upper right hand corner. Put the cursor in the location you want the Weather Clock to be displayed. Click the tab 'INSERT'. Select 'Web Part', 'Media and Content', 'Content Editor'. This will add the content editor at the cursor location. In the upper right hand corner of the 'Content Editor' hover over the upper left hand corner. A down arrow and a check box will appear. Click the down arrow and select 'Edit Web Part'. Copy the line below and paste it in the 'Content Link' field.

/Sites/[Site Name]/SiteAssets/scripts/wxClock.txt

Make any other changes needed to the 'Content Editor' menu and click 'OK'. The Weather Clock should now display on the page.

There are several ways to filter the locations displayed. One way is to start with the full list and adjust the filter select lists to view the locations you want to see. The label 'Filter:' before the select lists is a link that will open a new window with your filter selections saved as an URL query string.

The hidden way to pass in a filter is to edit the page in SharePoint, and insert a 'Web Part', 'Media and Content', 'Script Editor'. In the new 'Script Editor' hover over the upper left hand corner. A down arrow and a check box will appear. Click the down arrow and select 'Edit Web Part'.

Click on the 'EDIT SNIPPET' link that appears in the web part. If you do not see the link, change the 'Chrome State' in the menu on the right. Then click the 'Apply' button. The link should then appear.

In the 'Embed' modal window paste the code below. The // marks designate the line as disabled. Enable any of the lines you want to filter by. To do this remove the // from the beginning of the line.

Next change the filter value. For example "Nampa" can be replaced with "Juba", or "Oaxaca". Multiple locations can be filtered for by separating the values by a comma. The other filters only accept one value.

<script type="text/javascript">

// var wxLocation = "Nampa, Ashford, Quito";

// var wxProgram = "Kalimantan";

// var wxRegion = "Africa";

// var wxOrg = "MAF-I";

</script>

After the filter has been set, click the 'Insert' button. Make sure that the 'Chrome Type' is set to 'None' to hide the box and title. In the upper right hand corner click the 'SAVE' button.

If you do not see the items you wanted to see there is an error with the filter script. The location name may have been misspelled. Feel free to copy the spelling directly from the full list on the web page.

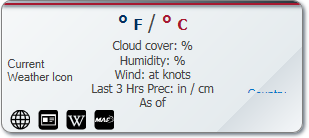
# Troubleshooting

This application downloads weather data from the Open Weather Map API (<http://openweathermap.org/api>). If the data suddenly stops working, please check the URL to see if the Open Weather Map project is still working.

Most errors are logged to a text log file in the application directory. Read that file to find out what the problem is.

I used the Open Weather Map API because it was the one service that had weather data for the most locations that MAF works in. If Open Weather Map is no longer working, feel free to alter the OpenWeatherMap part of this app to conform to another data provider. This will require an installation of Visual Studio 2013 or above. The Express version should work.

This app does more than just download the data for local caching. The source provides temperatures in Kelvin, and wind speed in meters per second. The app converts the speeds into multiple formats. Not all of the formats are displayed on the UI. Additional data about the location, such as time zone are added to the output. This data uses the standard Linux time zone strings. If there is a time zone problem, please try updating the Moment.JS files before updating this application. <http://momentjs.com/timezone/>.

If the display looks like the image to the right, the problem is that the data file, wx.js, could not be found, or that the filter script was not added to the SharePoint page. Please look at section 2.1 to learn about adding the script section to the SharePoint page.

# Add, Remove, or Change a Location

If you just need to add, remove, or change a location, please look at the WeatherUpdateSettings.xml file. This is a standard XML data file. Please make sure that all edits to this file are valid XML. If the application does not work after you edit this file, and it worked before you edited it, the problem is most likely that the changes you made were not valid XML. Please work with a web developer to make the correct changes. To find the location ID for a location use the following URL and replace London with the location name:

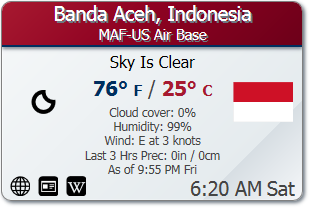
<http://api.openweathermap.org/data/2.5/find?q=London&type=accurate&mode=xml>

I recommend double checking that the location ID is for the correct city. When I was first setting this up I accidentally used the weather data for a city in Portugal when I really wanted data for a city in Brazil. They both had the same name and spelling. So use the URL below, and replace the ID at the end of the URL with the ID you got from the previous query:

<http://openweathermap.org/city/5601933>

The location country and coordinates will be part of the data returned. In the WeatherUpdateSettings.xml file copy the following section and paste it back into the file, then edit the values for the new location.

<WeatherLocation>  
 <id>5601933</id>  
 <city>Nampa</city>  
 <country>US</country>  
 <timeZone>America/Boise</timeZone>  
 <offset>-6</offset>  
 <region></region>  
 <type>Admin</type>  
 <org>MAF-US</org>  
 <program></program>  
<opWorldUrl><http://www.operationworld.org/country/unsa/owtext.html>  
</opWorldUrl>  
<wikipediaUrl><https://en.wikipedia.org/wiki/Nampa,_Idaho>  
</wikipediaUrl>  
<mafUrl><http://www.maf.org/></mafUrl>  
</WeatherLocation>

After the WeatherUpdateSettings.xml file is saved with the new information, the next data feed will include the new location or an error will be thrown. If there is an error, the data on the weather app will not have been updated.

Take a look at the line of data just above the time on the weather card. That is the last time the weather information was updated in the timzone of the location. In the example to the right the weather has not been updated since 9:55 pm the previous day. This is an indicator that the changes you made are throwing an error. To learn more about the error look in the WeatherUpdate application directory. There will be a log file with the current date such as WeatherUpdate-2015-01-23.log. All application errors should be logged there.

# Data Location

The location that the data file is saved to is also in the WeatherUpdateSettings.xml file. If the web directory for the application has been changed, you will need to change this value. The tag name for this value is ‘sharepointUrls’. It should start on the third line of the WeatherUpdateSettings.xml file. Multiple locations can be entered so that multiple SharePoint site collections can use the same data.

The change also needs to be made in the wxClock.txt file that is in the /Sites/[Site Name]/SiteAssets/scripts/ directory on the SharePoint server.

# Changing the Web UI

The UI is written in HTML5, JavaScript and CSS3. It uses KnockoutJS to update the UI when the data changes. The date time and time zone data is calculated using Moment.JS. All of the graphics are vector graphics using the SVG format. The country flag SVG files should be in the /i/flags/ directory with the name of the country as the file name.

If you add a new location with a new country, you will have to find or draw a vector version of the country flag. I recommend looking at the Wikipedia page for the country. There should be a link to the image of the current flag, and there should be a vector version of the flag. If you want to draw it yourself, I recommend using the open source application Inkscape. It is a great tool to create and edit vector graphics.