GovHack APIs from MetService

Introduction

The MetService API for the GovHack NZ event consists of a subset of weather data that has been exposed via a test API created specifically for GovHack NZ. This API will be made available until the end of the GovHack NZ 2016 event and will then be removed.

The API is provided under the following conditions:

- The data may be used only by registered GovHack NZ 2016 participants, only for GovHack NZ 2016 competition purposes, and only for the duration of the GovHack NZ 2016 event.
- The data must not be zused for any other purpose without express permission from MetService.
- Participants must comply with any GovHack NZ Code of Conduct or Competition Rules.
- The data must not to be retained, accessed or used again after 31st July 2016 without express permission from MetService.
- The data is provided as-is, and MetService makes no representations or warranties as to completeness or accuracy.
- The data must not be represented as current MetService observations or forecasts (although real MetService data, it will be not updated as frequently as live production data)

By using the MetService API, GovHack participants agree that any information disclosed by MetService about the API will be held in the strictest confidence and that the structure or content of the API must not be released or disclosed to any individual or organisation other than registered GovHack NZ 2016 participants or organisers. This obligation of confidence survives beyond the end of the GovHack NZ 2016 event.

A quota policy has been implemented to restrict access to the API from each given client IP address to 1000 requests per minute.

The APIs that have been exposed by MetService for the GovHack NZ 2016 event are as follows:

API	**Content**
Forecasts	Forecast data for the next 10 days.
Observations	A mix of observation data for 3 hours and 24 hours.
Tides	The high and low tide times for the next 3 days.
Image Manifest	A list of either the forecast rain or satellite images available, depending on the parameter passed. Use to find the file names to pass to the Image API below.
Image	Provides either a forecast image of how rain will develop over the next 5 days or an infrared satellite image for the Tasman Sea area for the last 30 hours, depending on the parameter passed (hint: try displaying these as a sequence to create an animation)

API Documentation

API	Forecasts
Base URL	http://test-api.amazon-test.metcloudservices.com:8080/api/
URL params	forecast/:location
Method	GET
Locations	auckland-central, wellington-city, kapiti, kaitaia, kerikeri, whangarei, dargaville, paihia, whitianga, thames, hamilton, tauranga, whakatane, rotorua, tokoroa, gisborne, te-kuiti, taupo, taumarunui, napier, hastings, dannevirke, new-plymouth, wanganui, palmerston-north, levin, masterton, paraparaumu, motueka, nelson, blenheim, westport, reefton, greymouth, hokitika, kaikoura, christchurch, ashburton, timaru, queenstown, alexandra, wanaka, oamaru, dunedin, gore, invercargill, mount-cook, milford-sound
Example URL	http://test-api.amazon-test.metcloudservices.com:8080/api/forecast/paihia

Example Success Response with comments	Code 200
	{
	"_usage": "This data is restricted and may only be used with explicit permission from MetService NZ. Contact dataenquiries@metservice.com",
	"days": [{
	"date":"25 Jul", ←Date forecast is for
	"dow":"Monday", ←Day of week
	"dowTLA":"Mon", ←Short day of week
	"forecast":"Cloudy periods, a few showers. Westerlies easing.", ←Forecast
	"forecastWord":"Few showers", ←Short forecast
	"issuedAt":"11:24am 25 Jul", ←Forecast issue time.
	"max":"15", ←Max temperature in Degrees Celsius
	"min":"6", ←Max temperature in Degrees Celsius
	"riseSet":{ ←Moon and Sun Rise/Set information
	"day":"25 July 2016", ←Date data is for
	"location":"Thames", ←Location Name
	"moonRise":"11:05pm", ←Local Moonrise time
	"moonSet":"10:28am", ←Local Moonset time
	"sunRise":"7:22am", ←Local Sunrise time
	"sunSet":"5:27pm" ←Local Sunset time
	},
	
	Other data returned is for internal referencing and may be ignored.

Error	Code nnn

Response	An error response like the following where nnn is the error code returned from the API call:
	`{`
	`  "code" : nnn,`
	`  "message" : "An error has occurred"`
	`}`

	Code 403
	An error response like the following when the user has exceeded 1000 calls to the API within a minute:
	`{`
	`  "code" : 403,`
	`  "message" : "API quota has been exceeded"`
	`}`

API	Observations
Base URL	http://test-api.amazon-test.metcloudservices.com:8080/api/
URL params	obs/:location
Method	GET
List Locations	auckland-central, wellington-city, kapiti, kaitaia, kerikeri, whangarei, whitianga, hamilton, tauranga, whakatane, rotorua, gisborne, taupo, taumarunui, napier, hastings, new-plymouth, wanganui, palmerston-north, levin, masterton, paraparaumu, nelson, blenheim, westport, hokitika, kaikoura, christchurch, ashburton, timaru, queenstown, alexandra, wanaka, oamaru, dunedin, gore, invercargill, milford-sound
Example URL	http://test-api.amazon-test.metcloudservices.com:8080/api/obs/levin
Example Success Response with comments	Code 200 The Obs API returns the last 3 hour and the last 24 hour observation data

```
{
"threeHour": {                          ←Observation for the last
3 hours
      "rainfall": "0.0",                ←Rainfall amount in mm
      "rawTime": 1469403000000,         ←Internal format time
      "windChill": "13",                ←Temperature with
windchill applied
      "temp": "13",                     ←Temperature in degrees
Celsius
      "windProofLayers": "0",
      "humidity": "62",                 ←Humidity Percentage (%)
      "pressure": 1006,                 ←Barometric pressure hPa
      "windSpeed": "24",                ←Windspeed
      "clothingLayers": "3",
      "dateTime": "11:30am Monday 25 Jul 2016",
      "windDirection": "W"              ←Wind direction
},
"twentyFourHour": {
      "minTemp": 9,     ←Minimum Temp. in the last 24 hours
in deg. C
      "maxTemp": 14,    ←Maximum Temp. in the last 24 hours
in deg. C
      "rainfall": "1.0",←Rainfall in the last 24 hours in mm
      "dateTime": "9:00am Monday 25 Jul 2016" ←the date time
the data is current at
},
      "location": "Levin AWS", ←Location
      "_usage": "This data is restricted and may only be used
with explicit permission from MetService NZ. Contact
dataenquiries@metservice.com"
}
```

Or

```
{
      "note": "No localObs station is defined for town
paihia",
      "_usage": "This data is restricted and may only be used
```

	with explicit permission from MetService NZ. Contact dataenquiries@metservice.com" }

Error Response	Code nnn
	An error response like the following where nnn is the error code returned from the API call:
	{
	"code" : nnn,
	"message" : "An error has occurred"
	}

	Code 403
	An error response like the following when the user has exceeded 1000 calls to the API within a minute:
	{
	"code" : 403,
	"message" : "API quota has been exceeded"
	}

API	Tides
Base URL	http://test-api.amazon-test.metcloudservices.com:8080/api/
URL params	tides/:location
Method	GET
Locations	auckland-central, wellington-city, kapiti, kerikeri, whangarei, dargaville, paihia, whitianga, thames, tauranga, whakatane, gisborne, napier, hastings, new-plymouth, wanganui, levin, paraparaumu, motueka, nelson, westport, reefton, greymouth, hokitika, christchurch, timaru, oamaru, dunedin, invercargill, milford-sound
Example URL	http://test-api.amazon-test.metcloudservices.com:8080/api/tides/kapiti
Example Success Response with comments	Code 200

```
{
      "tidesData": [{
            "days": [{
                  "dayOfWeek": "Tue",      ←Day of week
                  "tides": [{
                        "time": "5:43am", ←Time of high/low
tide
                        "type": "LOW",     ←Tide type low/high
                        "height": "0.2"    ←Tide height above
datum in metres
                  }, {
                        "time": "11:58am",
                        "type": "HIGH",
                        "height": "1.8"
                  }, {
                        "time": "6:02pm",
                        "type": "LOW",
                        "height": "0.3"
                  }],
                  "day": "2016 Jul 26"           ←Date
            }, {
                  "dayOfWeek": "Wed",
                  "tides": [{
                        "time": "12:25am",
                        "type": "HIGH",
                        "height": "1.9"
                  }, {
                        "time": "6:35am",
                        "type": "LOW",
                        "height": "0.2"
                  }, {
                        "time": "12:53pm",
                        "type": "HIGH",
                        "height": "1.8"
                  }, {
                        "time": "6:57pm",
                        "type": "LOW",
                        "height": "0.3"
                  }],
                  "day": "2016 Jul 27"
            }, {
```

	"dayOfWeek": "Thu",
	"tides": [{
	"time": "1:19am",
	"type": "HIGH",
	"height": "1.9"
	}, {
	"time": "7:29am",
	"type": "LOW",
	"height": "0.2"
	}, {
	"time": "1:52pm",
	"type": "HIGH",
	"height": "1.8"
	}, {
	"time": "7:56pm",
	"type": "LOW",
	"height": "0.3"
	}],
	"day": "2016 Jul 28"
	}],
	"location": "Tauranga" ←Location
	}],
	"_usage": "This data is restricted and may only be used with explicit permission from MetService NZ. Contact dataenquiries@metservice.com"
	}
	
	Or
	{
	"tidesData": {
	"note": "No tides are defined for town TAUPO"
	},
	"_usage": "This data is restricted and may only be used with explicit permission from MetService NZ. Contact dataenquiries@metservice.com"
	}

Error Response	Code nnn
	An error response like the following where nnn is the error code returned from the API call:
	{
	"code" : nnn,
	"message" : "An error has occurred"
	}

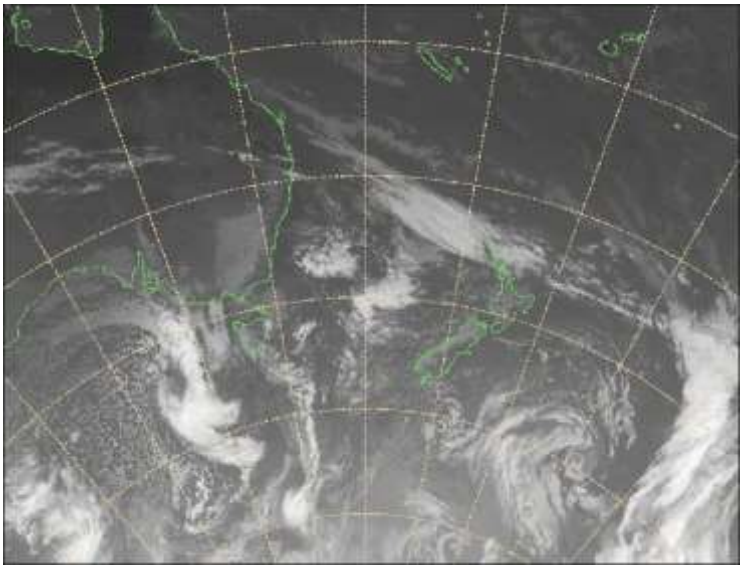
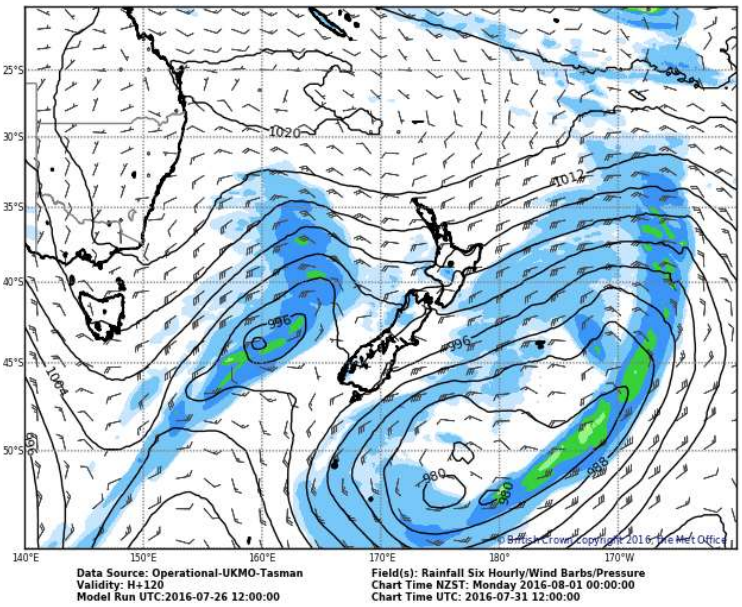
	Code 403
	An error response like the following when the user has exceeded 1000 calls to the API within a minute:
	{
	"code" : 403,
	"message" : "API quota has been exceeded"
	}

API	Image Manifest - The manifest file of images available for downloading.
Base URL	http://test-api.amazon-test.metcloudservices.com:8080/api/
URL params	images/:type/image-manifest.json
Method	GET
Type	rain-forecast tasman-infrared
Example URL	http://test-api.amazon-test.metcloudservices.com:8080/api/images/rain-forecast/image-manifest.json

Example Success Response with comments	Code 200
	{
	"files": [{
	"fileName": "images/rain-forecast/Midnight-Saturday-30-Jul-2016.png" ←URL path of image file relative to the base API URL
	}, {
	"fileName": "images/rain-forecast/600pm-Saturday-30-Jul-2016.png"
	}, {
	"fileName": "images/rain-forecast/Noon-Saturday-30-Jul-2016.png"
	}, {
	"fileName": "images/rain-forecast/600am-Saturday-30-Jul-2016.png"
	}, {
	"fileName": "images/rain-forecast/Midnight-Friday-29-Jul-2016.png"
	}],
	"_usage": "This data is restricted and may only be used with explicit permission from MetService NZ. Contact dataenquiries@metservice.com"
	}

Error Response	Code nnn
	An error response like the following where nnn is the error code returned from the API call:
	{
	"code" : nnn,
	"message" : "An error has occurred"
	}

	Code 403
	An error response like the following when the user has exceeded 1000 calls to the API within a minute:
	{
	"code" : 403,
	"message" : "API quota has been exceeded"
	}

API	Image – Returns the image for a filename listed in the manifest
Base URL	http://test-api.amazon-test.metcloudservices.com:8080/api/
URL params	images/:type/:file-name
Method	GET
Type	rain-forecast tasman-infrared
File-name	From manifest file eg `100pm-Monday-25-Jul-2016.jpeg`
Example	http://test-api.amazon-test.metcloudservices.com:8080/api/images/tasman-infrared/100pm-Monday-25-Jul-2016.jpeg
Success response	Code 200 Tasman Infrared satelite:  Or rain firecast: 
Error Response	Code nnn An error response like the following where nnn is the error code returned from the API call: {

	<pre>{
	  "code" : nnn,
	  "message" : "An error has occurred"
	}</pre>

	Code 403
	An error response like the following when the user has exceeded 1000 calls to the API within a minute:
	<pre>{
	  "code" : 403,
	  "message" : "API quota has been exceeded"
	}</pre>