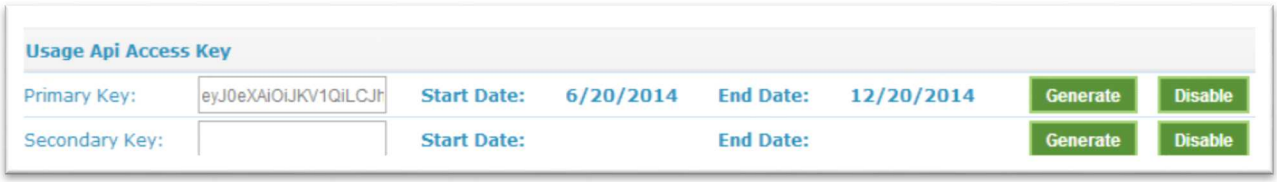
Microsoft Azure – Billing and Usage API for EA Customers

Access to the API:

1. Windows Azure EA customers can now access usage and billing information through an API.
2. Enterprise Administrators control access to the API through access keys.
3. Enterprise Administrators can perform the following functions in the Enterprise Portal under "Manage Access":
    - Generate primary and secondary access keys
    - Disable access keys
    - View start and end dates of access keys



Reports available through the API:

Two different reports will be available:

a. **Enrollment Summary CSV file**: This report contains information regarding the enrollment summary for the month. The report will have the same information and format as "Balance and Charge" report available on the EA portal under the "Download Usage Data" section.

b. **Usage and Billing Details CSV File**: This report will have detailed information regarding service usage and billing. The report will have same information and format as "Usage Detail" report available in the EA portal under the "Download Usage Data" section.

Update Frequency:

1. The files are currently updated every 24 hours.
2. There may be data latency of up to 3 days. So usage incurred on Monday may not appear in the file till Thursday.

APIs details:

REST APIs are used to get the CSV files. Two different REST APIs are available:

1. **GetUsageList API:** provides JSON string which lists the months for which the usage summary and detailed reports are available. The return information will have the URI to call the GetUsageByMonth API. JSON definition and sample JSON information below:

JSON definition	Sample JSON

{
object_type,
contract_version,
[
{
Month,
LinkToDownloadSummaryReport,
LinkToDownloadDetailReport
},
{
Month,
LinkToDownloadSummaryReport,
LinkToDownloadDetailReport
}
]
}
	{
	"object_type" : "Usage",
	"contract_version" : "1.0",
	"AvailableMonths":
	[
	{
	"Month":"2014-02",
	"LinkToDownloadSummaryReport":"/AzureEA/enrollment/100100/usagereport?api-version=1.0month=2014-02&type=summary",
	"LinkToDownloadDetailReport":"/AzureEA/enrollment/100100/usagereport?api-version=1.0month=2014-02&type=detail"
	}
	,{
	"Month":"2014-03",
	"LinkToDownloadSummaryReport":"/AzureEA/enrollment/100100/usagereport?api-version=1.0month=2014-03&type=summary",
	"LinkToDownloadDetailReport":"/AzureEA/enrollment/100100/usagereport?api-version=1.0month=2014-03&type=detail"
	}
	]
	}

LinkToDownloadSummaryReport provides URI to the “Enrollment Summary CSV” file mentioned above. LinkToDownloadDetailReport provides the URI to the “Usage and Billing Details CSV” file mentioned above.

2. **GetUsageByMonth API**: This API lets the user download the Enrollment Summary CSV binary array and Usage and Billing Details CSV binary array.

3. Technical spec and sample code is available here.

API Specification Technical Details and Sample Code
DownloadUsageReport APISpec

All

Name	Uri
GetUsageList	GET https://ea.windowsazure.com/rest/{enrollment}/usage-reports
GetUsageByMonth	GET https://ea.windowsazure.com/rest/{enrollment}/usage-report?month={month}&type={type}

Status code

description	code	message
No error	200	OK
Version is missing	400	Version expected
JWT is invalid, format wrong	401	Unauthorized
JWT is expired	401	Unauthorized
JWT is revoked	401	Unauthorized
Report file not available	404	Report not available
Enrollment number not found	404	Enrollment number not found

GetUsageList

Description: Get the list of month when usage reports are available.

Request:
GET https://ea.windowsazure.com/rest/{enrollment}/usage-reports

enrollment: the enrollment number

Header
api-version: Specifies the version of the API requested. (format: yyyy-mm-dd)
Authorization: bear {access key}

Response:

Status code: See status code in the All page.
Status Message: See status message in the All page

Header
api-version: Specifies the version of the API requested. (format: yyyy-mm-dd)

body

JSON:

JSON definition	Sample JSON

{
object_type,
contract_version,
[
{
Month,
LinkToDownloadSummaryReport,
LinkToDownloadDetailReport
},
{
Month,
LinkToDownloadSummaryReport,
LinkToDownloadDetailReport
}
]
}
	{
	"object_type" : "Usage",
	"contract_version" : "1.0",
	"AvailableMonths":
	[
	{
	"Month":"2014-02",
	"LinkToDownloadSummaryReport":"/rest/100100/usage-report?month=2014-02&type=summary",
	"LinkToDownloadDetailReport":"/rest/100100/usage-report?month=2014-02&type=detail"
	}
	,{
	"Month":"2014-03",
	"LinkToDownloadSummaryReport":"/rest/100100/usage-report?month=2014-03&type=summary",
	"LinkToDownloadDetailReport":"/rest/100100/usage-report? month=2014-03&type=detail"
	}
	]
	}

Response object view
{
AvailableMonths: Array of
{
ObjectType: ApiResourceObjectType
Contract_Version:ApiVersion
Month: string,

LinkToDownloadSummaryReport: string
LinkToDownloadDetailReport: string
}

}

GetUsageByMonth

Description: Get the usage report for the specified month and report type.
.
Request:
GET https://ea.windowsazure.com/rest/{enrollment}/usage-report?month={month}&type={type}

enrollment: the enrollment number
Month -- the month of the report. Should be in the format of yyyy-MM. if not specified, default to current month.
Type -- the type of the report. Should be Summary or Detail. If not specified, default to Summary.

Header
api-version: Specifies the version of the API requested. (format: yyyy-mm-dd)
Authorization: bear {Access key}

Response:

Status code: See status code in the All page.
Status Message: See status message in the All page

Header
api-version: Specifies the version of the API requested. (format: yyyy-mm-dd)
ETag: a version number for the report. When it's different from the client version, the server version is changed from the last time the api is called
LastModified: the last modified time of the report.

Body
Report file binary stream

Authorization

Tuesday, May 13, 2014
12:12 PM

The enrollment number should match {enrollment} in the uri.

Client sample code

C#

Here is client code sample for how to call the APIs. The response is the json from the service. The 2 public methods are the entry points for the API calls. They construct web request by calling GetResponse method, which constructs the header by calling Addheaders method.

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
using System.Net;
using System.Text;
using System.Threading.Tasks;

namespace Microsoft.EA.Sample
{
    class Program
    {
        const string GetUsageByMonthUrl =
            "https://ea.windowsazure.com/rest/{0}/usage-report?month={1}&type={2}";
        const string GetUsageListUrl =
            "https://ea.windowsazure.com/rest/{0}/usage-reports";

        static void Main(string[] args)
        {
            string EnrollmentNumber = /* Your enrollment number */;
            string AccessToken = /* Token can be created in Manage Access page */;

            // Retrieve a list of available reports
            string Url = string.Format(GetUsageListUrl, EnrollmentNumber);
            string ReportList = CallRestAPI(Url, AccessToken);

            // Directly download a monthly summary report,
            string UsageMonth= /* Request report month "2014-04" */;
            Url = string.Format(GetUsageByMonthUrl, EnrollmentNumber, UsageMonth, "summary");
            string SummaryUsageCSV = CallRestAPI(Url, AccessToken);

            // Directly download a monthly detail report,
            Url = string.Format(GetUsageByMonthUrl, EnrollmentNumber, UsageMonth, "detail");
            string DetailUsageCSV = CallRestAPI(Url, AccessToken);
        }

        static string CallRestAPI(string url, string token)
        {
            WebRequest request = WebRequest.Create(url);
            request.Headers.Add("authorization", "bearer " + token);
            request.Headers.Add("api-version", "1.0");

            HttpWebResponse response = (HttpWebResponse)request.GetResponse();
            StreamReader reader = new StreamReader(response.GetResponseStream());
            return reader.ReadToEnd();
        }
    }
}
```

Now you've got the json response and you can deserialize it into an object. Here is a sample object you may have for monthly usage report.

And here is sample code for usage list.

```
    public class UsageReportListApiResponse
    {
        [DataMember]
        public UsageMonth[] AvailableMonths { get; set; }
    }

    [DataContract]
    public class UsageMonth
    {
        [DataMember]
        public DateTime Month { get; set; }

        [DataMember]
        public string LinkToDownloadSummaryReport { get; set; }

        [DataMember]
        public string LinkToDownloadDetailReport { get; set; }
    }
```

Javascript for downloading report

```
function downloadUsage() {
    // Please replace values in { }
    var baseUrl = 'https://ea.windowsazure.com'
    var url = '/rest/{EnrollmentNumber}/usage-report?month={Month}&type={summary/detail}';
    var authHeader = 'bearer {AccessToken}';
    var req = new XMLHttpRequest();
    req.open('GET', baseUrl + url, false);
    req.setRequestHeader('authorization', authHeader);
    req.setRequestHeader('api-version', '1.0');
    req.send(null);
    if (req.status == 200)
        alert(req.response);
    else
        alert('Error downloading file.');
}
```

PowerShell Sample Code

```
$baseurl = "https://ea.windowsazure.com"

#Get the usage list and return the json object
function GetUsageList([string]$accessKey, [string]$enrollmentNumber)
{
    $header = @{"authorization"="bearer $accessKey"}
    $url = "$baseurl/rest/$enrollmentNumber/usage-reports";
    $response = Invoke-WebRequest -Uri $url -Headers $header -Method "Get"
    $json = $response.Content |  ConvertFrom-Json
    return $json
}

##Get the usage report for the specific month.
function GetUsageByMonth([string]$accessKey, [string]$enrollmentNumber,
[string]$month, [string]$type)
{
    $header = @{"authorization"="bearer $accessKey"}
    $url = "$baseurl/rest/$enrollmentNumber/usage-report";
    return Invoke-WebRequest -Uri "$url`?month=$month&type=$type" -Headers $header -
Method "Get"
}

echo ======================GetUsageList=======================================
$json = GetUsageList "{access token}" "{your enrollment number}"
$json.AvailableMonths

echo ======================GetUsageByMonth====================================
#summary report
echo summary
$response = GetUsageByMonth "{access token}" "{enrollment number}" "{month}" Summary
$ETag = $response.Headers["ETag"]
echo Etag: $ETag
$LastModified = $response.Headers["LastModified"]
echo LastModified: $LastModified
$report= $response.Content
$reportString = [System.Text.Encoding]::UTF8.GetString($report)
$reportString
echo ================================================================================

#detail report
echo detail
$response = GetUsageByMonth "{access token}" "{enrollment number}" "{month}" Detail
$ETag = $response.Headers["ETag"]
echo Etag: $ETag
$LastModified = $response.Headers["LastModified"]
echo LastModified: $LastModified
echo ====================================
$report= $response.Content

$reportString = [System.Text.Encoding]::UTF8.GetString($report)
$reportString
```