



California ISO

Technical Specification for Acceptable Use Policy Implementation

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1. Revision History

Date	Version	Description	Author
Mar 4 th , 2014	1.0.0	Initial revision	AM
Mar 10 th , 2014	1.0.0	Small updates based on internal review	AM
Jan 12, 2016	1.0.1	Modified to include OASIS and CMRI updates	AK

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2. Overview

This document explains the technical specifications for the Acceptable Use Policy (AUP) Implementation. The purpose of this project is to assure continued access to ISO data and market applications in a fair and equal manner by all participants, and where appropriate the public. A process that regulates web service consumption by users has existed for years as part of the ISO commitment to assure fair and equal access to the market. This process was refined and vetted with participants. Early in 2013, the most recent evolution of the process went into effect stating that users are not allowed to exceed 1 call per service every 5 seconds.

Given the increased number of users that impede access to the markets and violate the acceptable use policy, CAISO's plan through this project is to track and log the participants' B2B web services consumption behavior. This information will be used to assist participants in correcting their usage to align with the policy. Additionally, CAISO aims, through this project, to automate the enforcement of the acceptable use policy blocking those that would, if left unregulated, prevent access to the markets or market data for others.

3. Implementation Details

For OASIS, the policy will be applied to the service (report name) from a source IP address. If the request count is more than once in a 5 second period, the second (and subsequent) request will get the 429 error code.

For CMRI secure web services, the policy will be applied to the service (end point) from a named user and additional request xml parameters (market type, execution type etc) as applicable. The user will be the SSL certificate name determined from the mutual authentication between the client request and the ISO web server. Hence as a pre-requisite for AUP phase 2, the mutual authentication at the transport level will be made mandatory for the secure web services.

2.1 Time Line

As part of Fall2015 release, the enforcement of the policy went into effect for all OASIS API web services.

As part of Fall 2016, the enforcement of the policy will apply to all CMRI secure web services

2.1 Service definition

From the AUP perspective, a service for OASIS is the queryname or groupid query parameter value and will be subject to the one request allowed from a source IP in a 5 second period.

Examples of the OASIS services are:

- PRC_INVTL_LMP
- TRNS_CURR_USAGE
- AS_OP_RSRV
- SLD_FCST_PEAK
- HASP_LMP_GRP
- DAM_PRC_AS_GRP

For CMRI, the API end point will be used for a service. Examples are

- “RetrieveExpectedEnergy_CMRIv1_AP” and “SC01_CN”
- “RetrieveSchedulePrices_CMRIv3_DocAttach_AP” and “SC01_CN” and marketType=RTM and executionType=RTUC
- “RetrieveSchedulePrices_CMRIv3_DocAttach_AP” and “SC01_CN” and marketType=RTM and executionType=RTD
- “RetrieveExpectedEnergyAllocationDetails_CMRIv1_AP” and “SC01_CN” and energyBidType=Final

Where “SC01_CN” is the certificate common name in the request xml; and marketType, executionType, energyBidTypes are additional request xml parameters to uniquely identify the API call.

4. Return Codes

When AUP is enforced, the second request for a service within the allowed time period (5 seconds) will get rejected with the HTTP 429 error code. This error code is reserved for AUP and it will not be used by other failure scenarios.

3.1 HTTP Return code 429

429 Too Many Requests (RFC 6585)

The user has sent too many requests in a given amount of time. Intended for use with rate limiting schemes

3.2 Example HTTP session for OASIS

```
--2014-03-10 06:33:43--  
http://oasisdev.ete.wepex.net/oasisapi/SingleZip?queryname=PRC_LMP&startdatetime=  
20131103T07:00-0000&enddatetime=20131104T08:00-  
0000&version=1&market_run_id=DAM
```

Resolving oasisdev.ete.wepex.net... X.X.X.X

Connecting to oasisdev.ete.wepex.net[X.X.X.X]:80... connected.

HTTP request sent, awaiting response... 302 Moved Temporarily

Location:

```
http://oasisdev.ete.wepex.net/oasisapi/GroupZip?groupid=DAM_LMP_GRP&startdateti  
me=20131103T07:00-0000&resultformat=5&version=1 [following]
```

```
--2014-03-10 06:33:43--
```

```
http://oasisdev.ete.wepex.net/oasisapi/GroupZip?groupid=DAM_LMP_GRP&startdateti  
me=20131103T07:00-0000&resultformat=5&version=1
```

Reusing existing connection to oasisdev.ete.wepex.net:80.

HTTP request sent, awaiting response... 200 OK

Length: unspecified [application/x-zip-compressed]

```
--2014-03-10 06:33:46--
```

```
http://oasisdev.ete.wepex.net/oasisapi/SingleZip?queryname=PRC_LMP&startdatetime=  
20131103T07:00-0000&enddatetime=20131104T08:00-  
0000&version=1&market_run_id=DAM
```

Resolving oasisdev.ete.wepex.net... X.X.X.X

Connecting to oasisdev.ete.wepex.net[X.X.X.X]:80... connected.

HTTP request sent, awaiting response... 429 Too Many Requests

2014-03-10 06:33:46 ERROR 429: Too Many Requests.

3.3 Example HTTP session for CMRI

SOAP Request:

```
POST
https://wsdev.ete.wepex.net:4445/sst/runtime.asvc/RetrieveEIMEntityMarketBaseSchedules_C
MRiv1_DocAttach_AP HTTP/1.1
Accept-Encoding: gzip,deflate
Content-Type: text/xml;charset=UTF-8
SOAPAction:
"http://www.caiso.com/soa/retrieveEIMEntityMarketBaseSchedules_v1_DocAttach"
Content-Length: 6631
Host: wsdev.ete.wepex.net:4445
Sample error Response:
HTTP/1.1 429 Too Many Requests
Date: Mon, 11 Jan 2016 21:42:17 GMT
Set-Cookie:
CTSESSION=AAAAAgABAEhD52Jc%2F0kcX6K29OkxLojA7MucRJRJ9QNw0pl21KXms04aKnMIKMj
Mw4QEHjsk07PGtEZpJZGeuqVkvJj85s0VySt9x%2Fol3yE%3D; secure; domain=.caiso.com; path=/
Content-Length: 81
Connection: close
Content-Type: text/html; charset=iso-8859-1
```

CAISO Acceptable Use Policy Violation. Please retry your request after 5 seconds.

5. Frequently Asked Questions (FAQ)

1. How long will I be denied service?
For the specific service that got the 429 error code due to AUP violation, you can retry the request after 5 seconds of inactivity on that service for that identity.
2. How will I know I am exceeding the limit
You will receive the HTTP error code 429 when the limit is exceeded. However, during the initial enforcement of the project in Market Simulation and Production, the ISO customer service team will be doing a proactive outreach.
3. Will I receive any notification prior to denial of service
No, once enforcement is in place, your request will get the 429 error code for the specific service that violated the AUP.
4. Will I receive data and error notification or just the notification
Once enforcement is in place, you will only get the HTTP 429 error code for the specific service that violated the AUP. No additional data will be received.