Qualys Cloud Platform (VM, PC) v8.x

API Release Notes

Version 8.18

March 8, 2019

This new version of the Qualys Cloud Platform (VM, PC) includes improvements to the Qualys API. You'll find all the details in our user guides, available at the time of release. Just log in to your Qualys account and go to Help > Resources.

What's New

New InformixDB Authentication API

Scan EC2 Assets for Certificate Information

Support for New Authentication Types in KnowledgeBase API

URL to the Qualys API Server

Qualys maintains multiple Qualys platforms. The Qualys API server URL that you should use for API requests depends on the platform where your account is located.

Account Location	API Server URL
Qualys US Platform 1	https://qualysapi.qualys.com
Qualys US Platform 2	https://qualysapi.qg2.apps.qualys.com
Qualys US Platform 3	https://qualysapi.qg3.apps.qualys.com
Qualys US Platform 4	https://qualysapi.qg4.apps.qualys.com
Qualys EU Platform 1	https://qualysapi.qualys.eu
Qualys EU Platform 2	https://qualysapi.qg2.apps.qualys.eu
Qualys India Platform 1	https://qualysapi.qg1.apps.qualys.in
Qualys Private Cloud Platform	https://qualysapi.<customer_base_url>

The Qualys API documentation and sample code use the API server URL for the Qualys US Platform 1. If your account is located on another platform, please replace this URL with the appropriate server URL for your account.

New InformixDB Authentication API

APIs affected	/api/2.0/fo/auth/
New or Updated API	Updated
DTD or XSD changes	Yes
API affected	api/2.0/fo/auth/informixdb/
New or Updated API	New
DTD or XSD changes	New

InformixDB authentication is now supported for compliance scans. The new InformixDB Authentication API (api/2.0/fo/auth/informixdb/) lets you list, create, update and delete InformixDB authentication records. User permissions for this API are the same as other authentication record APIs. Note that the API supports authentication record creation only for InformixDB installed on Unix.

List All Record Types

Use the Authentication Record List API (/api/2.0/fo/auth/?action=list) to list records. You'll see <AUTH_INFORMIXDB_IDS> in the output when you have InformixDB records.

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"action=list" "https://qualysapi.qualys.com/api/2.0/fo/auth/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE AUTH_APACHE_LIST_OUTPUT SYSTEM
..
  <RESPONSE>
    <DATETIME>2017-05-21T13:32:17Z</DATETIME>
    <AUTH_RECORDS>
      <AUTH_UNIX_RECORDS>
        <ID_SET>
          <ID_RANGE>17-41</ID_RANGE>
          <ID_RANGE>62-119</ID_RANGE>
        </ID_SET>
      </AUTH_UNIX_RECORDS>
      <AUTH_WINDOWS_RECORDS>
        <ID_SET>
          <ID_RANGE>1-6</ID_RANGE>
        </ID_SET>
      </AUTH_WINDOWS_RECORDS>
      ...
      <AUTH_MARIADB_IDS>
```

```
          <ID_SET>
            <ID>6</ID>
          </ID_SET>
        </AUTH_MARIADB_IDS>
        <AUTH_INFORMIXDB_IDS>
          <ID_SET>
            <ID>6</ID>
          </ID_SET>
        </AUTH_INFORMIXDB_IDS>
      </AUTH_RECORDS>
    </RESPONSE>
    ...
```

Updated DTD

<base_url>/api/2.0/fo/auth/auth_records.dtd

The element AUTH_INFORMIXDB_IDS was added to identify InformixDB record IDs.

```
<!-- QUALYS AUTH_RECORDS_OUTPUT DTD -->

<!ELEMENT AUTH_RECORDS_OUTPUT (REQUEST?, RESPONSE)>
...
<!ELEMENT AUTH_RECORDS (AUTH_UNIX_IDS?, AUTH_WINDOWS_IDS?,
AUTH_ORACLE_IDS?, AUTH_ORACLE_LISTENER_IDS?, AUTH_SNMP_IDS?,
AUTH_MS_SQL_IDS?, AUTH_IBM_DB2_IDS?, AUTH_VMWARE_IDS?, AUTH_MS_IIS_IDS?,
AUTH_APACHE_IDS?, AUTH_IBM_WEBSPHERE_IDS?, AUTH_HTTP_IDS?,
AUTH_SYBASE_IDS?, AUTH_MYSQL_IDS?, AUTH_TOMCAT_IDS?,
AUTH_ORACLE_WEBLOGIC_IDS?, AUTH_DOCKER_IDS?, AUTH_POSTGRESQL_IDS?,
AUTH_MONGODB_IDS?, AUTH_PALO_ALTO_FIREWALL_IDS?, AUTH_VCENTER_IDS?,
AUTH_JBOSS_IDS?, AUTH_MARIADB_IDS?, AUTH_INFORMIXDB_IDS?)>
...
<!ELEMENT AUTH_JBOSS_IDS (ID_SET)>
<!ELEMENT AUTH_MARIADB_IDS (ID_SET)>
<!ELEMENT AUTH_INFORMIXDB_IDS (ID_SET)>
...
```

List InformixDB Records

Use the new InformixDB Authentication Record List API (/api/2.0/fo/auth/informixdb/?action=list) to list InformixDB records.

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"action=list&details=Basic"
"https://qualysapi.qualys.com/api/2.0/fo/auth/informixdb/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE AUTH_INFORMIXDB_LIST_OUTPUT SYSTEM
"https://qualysapi.qualys.com/fo/auth/informixdb/auth_informixdb_list_out
put.dtd">
<AUTH_INFORMIXDB_LIST_OUTPUT>
    <RESPONSE>
        <DATETIME>2019-01-30T15:19:02Z</DATETIME>
        <AUTH_INFORMIXDB_LIST>
            <AUTH_INFORMIXDB>
                <ID>40034</ID>
                <TITLE><![CDATA[InformixDB1]]></TITLE>
                <USERNAME><![CDATA[root]]></USERNAME>
                <DATABASE><![CDATA[informixdb]]></DATABASE>
                <SERVER>InformixDB_1</SERVER>
                <PORT>27017</PORT>
                <UNIX>
                    <CONFIG_PATH>
                        <![CDATA[/opt/Informix/]]>
                    </CONFIG_PATH>
                    <ONCONFIG>
                        <![CDATA[/opt/Informix/etc/onconfig.demo]]>
                    </ONCONFIG>
                    <SQLHOSTS>
                        <![CDATA[/opt/Informix/etc/sqlhosts.demo]]>
                    </SQLHOSTS>
                </UNIX>
                <SSL_VERIFY><![CDATA[1]]></SSL_VERIFY>
                <HOSTS>
                    <HOST><![CDATA[test.com]]></HOST>
                </HOSTS>
                <IP_SET><IP>10.10.10.10</IP></IP_SET>
                <LOGIN_TYPE><![CDATA[basic]]></LOGIN_TYPE>
                ...
            </AUTH_INFORMIXDB>
        </AUTH_INFORMIXDB_LIST>
    </RESPONSE>
</AUTH_INFORMIXDB_LIST_OUTPUT>
```

New DTD:

<baseurl>/api/2.0/fo/auth/informixdb/auth_informixdb_list_output.dtd

```
<!-- QUALYS AUTH_INFORMIXDB_LIST_OUTPUT DTD -->
<!-- QUALYS AUTH_INFORMIXDB_LIST_OUTPUT DTD -->
<!ELEMENT AUTH_INFORMIXDB_LIST_OUTPUT (REQUEST?, RESPONSE)>
<!ELEMENT REQUEST (DATETIME, USER_LOGIN, RESOURCE, PARAM_LIST?,
POST_DATA?)>
<!ELEMENT DATETIME (#PCDATA)>
<!ELEMENT USER_LOGIN (#PCDATA)>
<!ELEMENT RESOURCE (#PCDATA)>
<!ELEMENT PARAM_LIST (PARAM+)>
<!ELEMENT PARAM (KEY, VALUE)>
<!ELEMENT KEY (#PCDATA)>
<!ELEMENT VALUE (#PCDATA)>
<!ELEMENT POST_DATA (#PCDATA)>
<!ELEMENT RESPONSE (DATETIME, (AUTH_INFORMIXDB_LIST|ID_SET)?,
WARNING_LIST?, GLOSSARY?)>
<!ELEMENT AUTH_INFORMIXDB_LIST (AUTH_INFORMIXDB+)>
<!ELEMENT AUTH_INFORMIXDB (ID, TITLE, USERNAME?, DATABASE, SERVER?, PORT,
UNIX? ,SSL_VERIFY?, HOSTS?, IP_SET?, LOGIN_TYPE?, NETWORK_ID?, CREATED,
LAST_MODIFIED, COMMENTS?)>
<!ELEMENT ID (#PCDATA)>
<!ELEMENT TITLE (#PCDATA)>
<!ELEMENT USERNAME (#PCDATA)>
<!ELEMENT PORT (#PCDATA)>
<!ELEMENT DATABASE (#PCDATA)>
<!ELEMENT SERVER (#PCDATA)>
<!ELEMENT SSL_VERIFY (#PCDATA)>
<!ELEMENT UNIX (CONFIG_PATH?, ONCONFIG?, SQLHOSTS?)>
<!ELEMENT CONFIG_PATH (#PCDATA)>
<!ELEMENT ONCONFIG (#PCDATA)>
<!ELEMENT SQLHOSTS (#PCDATA)>
<!ELEMENT HOSTS (HOST+)>
<!ELEMENT HOST (#PCDATA)>
<!ELEMENT IP_SET (IP|IP_RANGE)+>
<!ELEMENT IP (#PCDATA)>
<!ELEMENT IP_RANGE (#PCDATA)>

<!ELEMENT LOGIN_TYPE (#PCDATA)>

<!ELEMENT NETWORK_ID (#PCDATA)>

<!ELEMENT CREATED (DATETIME, BY)>
<!ELEMENT BY (#PCDATA)>
<!ELEMENT LAST_MODIFIED (DATETIME)>
<!ELEMENT COMMENTS (#PCDATA)>
```

```
<!ELEMENT WARNING_LIST (WARNING+)>
<!ELEMENT WARNING (CODE?, TEXT, URL?, ID_SET?)>
<!ELEMENT CODE (#PCDATA)>
<!ELEMENT TEXT (#PCDATA)>
<!ELEMENT URL (#PCDATA)>
<!ELEMENT ID_SET (ID|ID_RANGE)+>
<!ELEMENT ID_RANGE (#PCDATA)>

<!ELEMENT GLOSSARY (USER_LIST?)>
<!ELEMENT USER_LIST (USER+)>
<!ELEMENT USER (USER_LOGIN, FIRST_NAME, LAST_NAME)>
<!ELEMENT FIRST_NAME (#PCDATA)>
<!ELEMENT LAST_NAME (#PCDATA)>
<!-- EOF -->
```

Create/Update InformixDB Record

Use these parameters to create or update a InformixDB record. For an update request, all parameters are optional except “ids” which is required.

Parameter	Description
action={action}	(Required) Specify create, update, delete (using POST) or list (using GET or POST).
echo_request={0|1}	(Optional) Specify 1 to view (echo) input parameters in the XML output. By default these are not included.
ids={value}	(Required to update or delete record) Record IDs to update/delete. Specify record IDs and/or ID ranges (for example, 1359-1407). Multiple entries are comma separated.
title={value}	(Required to create record) A title for the record. The title must be unique. Maximum 255 characters (ascii).
comments={value}	(Optional to create or update record) User defined comments. Maximum of 1999 characters.
InformixDB	
ssl_verify={0|**1**}	(Optional to create or update record, and valid for server that supports SSL) Specify 1 for a complete SSL certificate validation. - If ssl_verify=0, the Qualys scanners authenticate with Informix Servers that don’t use SSL or InformixDB servers that use SSL. However, in the SSL case, the server SSL certificate verification will be skipped. - If unspecified (or ssl_verify=1), the Qualys scanners will only send a login request after verifying that a connection to the InformixDB server uses SSL, the server SSL certificate is valid and matches the scanned host.

Parameter	Description
hosts={value}	(Optional to create or update record) A list of FQDNs for the hosts that correspond to all host IP addresses on which a custom SSL certificate signed by a trusted root CA is installed. Multiple hosts are comma separated.
database_name={value}	(Required to create record, optional to update record) The database name to authenticate to. Specify a valid InformixDB database name. Maximum 255 characters.
port={value}	(Required to create record, optional to update record) The port the database name is running on. Valid range is 1-65535. The standard port for InformixDB is 1526.
unix_config_dir	(Optional to create or update record) The path to the Unix informixdb installation directory. Access to this directory is required to run certain checks on Unix hosts.
unix_on_config_dir	(Optional to create or update record) The absolute path to the Unix file that contains configuration parameters of the database server.
unix_sql_host_dir	(Optional to create or update record) The absolute path to the Unix file that contains database connectivity information.
Login credentials	
login_type={basic}	(Optional) The login type is basic by default. We are not supporting vault based authentication.
username={value}	(Required to create record, optional to update record) The username to be used for authentication to InformixDB server.
password={value}	(Required to create record, optional to update record) The password to be used for authentication to InformixDB server.
Target Hosts	
ips={value}	(Required to create record) The IP address(es) the server will log into using the record's credentials. Multiple entries are comma separated. (Optional to update record) IPs specified will overwrite existing IPs in the record, and existing IPs will be removed.
add_ips={value}	(Optional to update record) Add IPs to the IPs list for this record. Multiple IPs/ranges are comma separated.
remove_ips={value}	(Optional to update record) IPs to be removed from your record. You may enter a combination of IPs and ranges. Multiple entries are comma separated. This parameter and the ips parameter cannot be specified in the same request.

Parameter	Description
network_id={value}	(Optional and valid when the networks feature is enabled) The network ID for the record.

Example: Create InformixDB Record (with basic login and without ssl_verify)

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: curl sample" -d
"action=create&title=my-informixdb-record&username=informix-
admin&password=test123&ips=10.10.10.11&comments=informix-basic-login-
ipv4&unix_config_dir=/opt/informix/&port=1526&ssl_verify=0&unix_on_config
_dir=/opt/Informix/etc/onconfig.demo&unix_sql_host_dir=opt/Informix/etc/s
qlhosts.demo&database_name=dbname&login_type=basic"
"https://qualysapi.qualys.com/api/2.0/fo/auth/informixdb/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE BATCH_RETURN SYSTEM
"http://qualysapi.qualys.com/api/2.0/batch_return.dtd">
<BATCH_RETURN>
    <RESPONSE>
        <DATETIME>2019-01-30T15:45:05Z</DATETIME>
        <BATCH_LIST>
            <BATCH>
                <TEXT>Successfully Created</TEXT>
                <ID_SET>
                    <ID>43025</ID>
                </ID_SET>
            </BATCH>
        </BATCH_LIST>
    </RESPONSE>
</BATCH_RETURN>
```

Example: Create InformixDB Record (with ssl_verify)

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: curl sample" -d
"action=create&title=my-informixdb-record&username=informix-
admin&password=test123&ips=10.10.10.11&comments=informix-basic-login-
ipv4&unix_config_dir=/opt/informix/&port=1526&ssl_verify=1&unix_on_config
_dir=/opt/Informix/etc/onconfig.demo&unix_sql_host_dir=opt/Informix/etc/s
qlhosts.demo&database_name=dbname&login_type=basic&hosts=mlinformixdb32e.
s2012r2.qualys.com,mlinformixdb32e.s2008r2.qualys.com"
"https://qualysapi.qualys.com/api/2.0/fo/auth/informixdb/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE BATCH_RETURN SYSTEM
"http://qualysapi.qualys.com/api/2.0/batch_return.dtd">
<BATCH_RETURN>
    <RESPONSE>
        <DATETIME>2019-01-30T15:47:01Z</DATETIME>
        <BATCH_LIST>
            <BATCH>
                <TEXT>Successfully Created</TEXT>
                <ID_SET>
                    <ID>43026</ID>
                </ID_SET>
            </BATCH>
        </BATCH_LIST>
    </RESPONSE>
</BATCH_RETURN>
```

Example: Update InformixDB Record

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: curl sample" -d
"action=update&ids=41026&title=API-informixdb-basic-login-
updated&username=admin-updated-again&password=updated-
password&database_name=new-admin&comments=informixdb-basic-login-ipv4-
updated&unix_config_dir=/opt/informixdb/updated/again"
"https://qualysapi.qualys.com/api/2.0/fo/auth/informixdb/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE BATCH_RETURN SYSTEM
"http://qualysapi.qualys.com/api/2.0/batch_return.dtd">
<BATCH_RETURN>
    <RESPONSE>
        <DATETIME>2019-01-30T16:00:16Z</DATETIME>
        <BATCH_LIST>
            <BATCH>
                <TEXT>Successfully Updated</TEXT>
                <ID_SET>
                    <ID>43025</ID>
                </ID_SET>
            </BATCH>
        </BATCH_LIST>
    </RESPONSE>
</BATCH_RETURN>
```

Delete InformixDB Records

Use these parameters to delete records.

Parameter	Description
action=delete	(Required) POST method may be used.
ids={value}	(Required) InformixDB authentication record IDs for the records you want to delete. Multiple records are comma separated.

Example: Delete InformixDB Records

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: curl sample" -d
"action=delete&ids=43023,43024"
"https://qualysapi.qualys.com/api/2.0/fo/auth/informixdb/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE BATCH_RETURN SYSTEM
"http://10.114.69.159:46445/api/2.0/batch_return.dtd">
<BATCH_RETURN>
    <RESPONSE>
        <DATETIME>2019-01-30T15:41:46Z</DATETIME>
        <BATCH_LIST>
            <BATCH>
                <TEXT>Successfully Deleted</TEXT>
                <ID_SET>
                    <ID_RANGE>43023-43024</ID_RANGE>
                </ID_SET>
            </BATCH>
        </BATCH_LIST>
    </RESPONSE>
</BATCH_RETURN>
```

Scan EC2 Assets for Certificate Information

APIs affected	/api/2.0/fo/schedule/scan/ /api/2.0/fo/scan/
New or Updated API	Updated
DTD or XSD changes	No

You can now collect certificate information from EC2 assets using EC2 CertView scans. We added a new input parameter (scan_type=ec2certview) to scheduled/scan and /scan APIs.

Input parameter

scan_type=ec2certview	To launch and list ec2 certview type scans using API.

Sample - Launch Scheduled EC2 CertView Scan

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"action=create&scan_title=CertView+EC2+Scan+via+API&connector_name=AWS_Co
nnector&ec2_endpoint=us-east-
1&target_from=tags&tag_include_selector=any&tag_set_by=name&tag_set_inclu
de=EC2&iscanner_name=EC2_Scanner&scan_type=ec2certview&active=1&occurrenc
e=daily&start_date=02/19/2019&start_hour=15&start_minute=26&time_zone_cod
e=IN&option_title=Initial
Options&frequency_days=364&end_after=1&observe_dst=no"
"https://qualysapi.qualys.com/api/2.0/fo/schedule/scan/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE SIMPLE_RETURN SYSTEM
"https://qualysapi.qualys.com/api/2.0/simple_return.dtd">
<SIMPLE_RETURN>
 <RESPONSE>
   <DATETIME>2019-02-19T09:45:21Z</DATETIME>
   <TEXT>New scan scheduled successfully</TEXT>
   <ITEM_LIST>
     <ITEM>
       <KEY>ID</KEY>
       <VALUE>996462</VALUE>
     </ITEM>
   </ITEM_LIST>
 </RESPONSE>
</SIMPLE_RETURN>
```

Sample - Launch On Demand Scan

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"action=launch&scan_title=CertView+EC2+Scan+via+API&connector_name=AWS_Co
nnector&ec2_endpoint=us-east-
1&target_from=tags&tag_include_selector=any&tag_set_by=name&tag_set_inclu
de=EC2&option_id=929654&iscanner_name=EC2_Scanner&scan_type=ec2certview"
"https://qualysapi.qualys.com/api/2.0/fo/schedule/scan/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE SIMPLE_RETURN SYSTEM
"https://qualysapi.qualys.com/api/2.0/simple_return.dtd">
<SIMPLE_RETURN>
  <RESPONSE>
    <DATETIME>2019-02-19T09:45:45Z</DATETIME>
    <TEXT>New vm scan launched</TEXT>
    <ITEM_LIST>
      <ITEM>
        <KEY>ID</KEY>
        <VALUE>1494159</VALUE>
      </ITEM>
      <ITEM>
        <KEY>REFERENCE</KEY>
        <VALUE>scan/1550569544.94159</VALUE>
      </ITEM>
    </ITEM_LIST>
  </RESPONSE>
</SIMPLE_RETURN>
```

Sample - Scheduled Scan List

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"https://qualysapi.qualys.com/api/2.0/fo/schedule/scan/?action=list&scan_
type=ec2certview"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE SCHEDULE_SCAN_LIST_OUTPUT SYSTEM
"https://qualysapi.qualys.com/api/2.0/fo/schedule/scan/schedule_scan_list
_output.dtd">
<SCHEDULE_SCAN_LIST_OUTPUT>
  <RESPONSE>
    <DATETIME>2019-02-19T09:50:48Z</DATETIME>
```

```
    <SCHEDULE_SCAN_LIST>
      <SCAN>
        <ID>996462</ID>
        <SCAN_TYPE>ec2certview</SCAN_TYPE>
        <ACTIVE>1</ACTIVE>
        <TITLE><![CDATA[CertView EC2 Scan via API]]></TITLE>
        <USER_LOGIN>USERNAME</USER_LOGIN>
        <TARGET><![CDATA[Asset Tags Included]]></TARGET>
        <NETWORK_ID><![CDATA[0]]></NETWORK_ID>
        <ISCANNER_NAME><![CDATA[EC2_Scanner]]></ISCANNER_NAME>
        <EC2_INSTANCE>
          <CONNECTOR_UUID><![CDATA[9ef995a8-0708-4155-a3f2-
49a3cfcb2b7b]]></CONNECTOR_UUID>
          <EC2_ENDPOINT><![CDATA[1507b6c1-07a7-4d88-acf2-
8c6b63e749c4]]></EC2_ENDPOINT>
          <EC2_ONLY_CLASSIC><![CDATA[0]]></EC2_ONLY_CLASSIC>
        </EC2_INSTANCE>
        <ASSET_TAGS>
          <TAG_INCLUDE_SELECTOR>any</TAG_INCLUDE_SELECTOR>
          <TAG_SET_INCLUDE><![CDATA[EC2]]></TAG_SET_INCLUDE>
          <USE_IP_NT_RANGE_TAGS>0</USE_IP_NT_RANGE_TAGS>
        </ASSET_TAGS>
        <OPTION_PROFILE>
          <TITLE><![CDATA[Initial Options]]></TITLE>
          <DEFAULT_FLAG>1</DEFAULT_FLAG>
        </OPTION_PROFILE>
        <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
        <SCHEDULE>
          <DAILY frequency_days="364" />
          <START_DATE_UTC>2019-02-19T09:56:00Z</START_DATE_UTC>
          <START_HOUR>15</START_HOUR>
          <START_MINUTE>26</START_MINUTE>
          <END_AFTER_HOURS>1</END_AFTER_HOURS>
          <NEXTLAUNCH_UTC>2019-02-19T09:56:00</NEXTLAUNCH_UTC>
          <TIME_ZONE>
            <TIME_ZONE_CODE>IN</TIME_ZONE_CODE>
            <TIME_ZONE_DETAILS>(GMT+0530) India:
Asia/Calcutta</TIME_ZONE_DETAILS>
          </TIME_ZONE>
          <DST_SELECTED>0</DST_SELECTED>
        </SCHEDULE>
      </SCAN>
    </SCHEDULE_SCAN_LIST>
  </RESPONSE>
</SCHEDULE_SCAN_LIST_OUTPUT>
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```

Sample - On Demand Scan List

API request:

```
curl -u "USERNAME:PASSWORD" -H "X-Requested-With: Curl" -d
"action=list&scan_type=ec2certview"
"https://qualysapi.qualys.com/api/2.0/fo/scan/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE SCAN_LIST_OUTPUT SYSTEM
"https://qualysapi.qualys.com/api/2.0/fo/scan/scan_list_output.dtd">
<SCAN_LIST_OUTPUT>
  <RESPONSE>
    <DATETIME>2019-02-19T15:22:20Z</DATETIME>
    <SCAN_LIST>
      <SCAN>
        <REF>scan/1550574242.94297</REF>
        <SCAN_TYPE>ec2certview</SCAN_TYPE>
        <TYPE>On-Demand</TYPE>
        <TITLE><![CDATA[EC2 CERTVIEW Sanity - 20190219]]></TITLE>
        <USER_LOGIN>USERNAME</USER_LOGIN>
        <LAUNCH_DATETIME>2019-02-19T11:04:02Z</LAUNCH_DATETIME>
        <DURATION>Pending</DURATION>
        <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
        <PROCESSED>0</PROCESSED>
        <STATUS>
          <STATE>Queued</STATE>
          <SUB_STATE>Launch_Requested</SUB_STATE>
        </STATUS>
        <TARGET><![CDATA[i-0bc7a911e4ee31175]]></TARGET>
      </SCAN>
      <SCAN>
        <REF>scan/1550570176.94173</REF>
        <SCAN_TYPE>ec2certview</SCAN_TYPE>
        <TYPE>Scheduled</TYPE>
        <TITLE><![CDATA[CertView EC2 Scan via API]]></TITLE>
        <USER_LOGIN>USERNAME</USER_LOGIN>
        <LAUNCH_DATETIME>2019-02-19T09:56:15Z</LAUNCH_DATETIME>
        <DURATION>N/A</DURATION>
        <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
        <PROCESSED>1</PROCESSED>
        <STATUS>
          <STATE>Canceled</STATE>
        </STATUS>
        <TARGET><![CDATA[]]></TARGET>
      </SCAN>
      <SCAN>
        <REF>scan/1550569544.94159</REF>
```

```
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>API</TYPE>
  <TITLE><![CDATA[CertView EC2 Scan via API]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T09:45:44Z</LAUNCH_DATETIME>
  <DURATION>N/A</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550567996.94134</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[EC2 CERTVIEW Sanity]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T09:19:56Z</LAUNCH_DATETIME>
  <DURATION>00:03:50</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Finished</STATE>
    <SUB_STATE>No_Vuln</SUB_STATE>
  </STATUS>
  <TARGET><![CDATA[i-0bc7a911e4ee31175]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550559788.93970</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[EC2 CV test for JOBd]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T07:03:08Z</LAUNCH_DATETIME>
  <DURATION>N/A</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Error</STATE>
    <SUB_STATE>Crashed</SUB_STATE>
  </STATUS>
  <TARGET><![CDATA[i-0bc7a911e4ee31175]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550556652.93951</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
```

```
  <TITLE><![CDATA[CV EC2 SCAN- WITH one instance]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T06:10:52Z</LAUNCH_DATETIME>
  <DURATION>00:41:10</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[i-0bc7a911e4ee31175]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550556282.93947</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>API</TYPE>
  <TITLE><![CDATA[CertView EC2 Scan via API]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T06:04:42Z</LAUNCH_DATETIME>
  <DURATION>00:46:08</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550556141.93945</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[CertView EC2 Scan via API - 20190219]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T06:02:20Z</LAUNCH_DATETIME>
  <DURATION>00:49:41</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550556031.93943</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[EC2 CV Test2 - 20190219]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T06:00:31Z</LAUNCH_DATETIME>
  <DURATION>00:51:30</DURATION>
```

```
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550555940.93942</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[CV EC2 Test 22]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T05:59:00Z</LAUNCH_DATETIME>
  <DURATION>00:53:02</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550555796.93940</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[EC2 CV Test2]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T05:56:36Z</LAUNCH_DATETIME>
  <DURATION>00:55:25</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Canceled</STATE>
  </STATUS>
  <TARGET><![CDATA[]]></TARGET>
</SCAN>
<SCAN>
  <REF>scan/1550555533.93938</REF>
  <SCAN_TYPE>ec2certview</SCAN_TYPE>
  <TYPE>On-Demand</TYPE>
  <TITLE><![CDATA[EC2 CV Test2]]></TITLE>
  <USER_LOGIN>USERNAME</USER_LOGIN>
  <LAUNCH_DATETIME>2019-02-19T05:52:13Z</LAUNCH_DATETIME>
  <DURATION>N/A</DURATION>
  <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
  <PROCESSED>1</PROCESSED>
  <STATUS>
    <STATE>Error</STATE>
```

```
        </STATUS>
        <TARGET><![CDATA[]]></TARGET>
      </SCAN>
      <SCAN>
        <REF>scan/1550551774.93921</REF>
        <SCAN_TYPE>ec2certview</SCAN_TYPE>
        <TYPE>API</TYPE>
        <TITLE><![CDATA[CertView EC2 Scan via API]]></TITLE>
        <USER_LOGIN>USERNAME</USER_LOGIN>
        <LAUNCH_DATETIME>2019-02-19T04:49:33Z</LAUNCH_DATETIME>
        <DURATION>02:01:27</DURATION>
        <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
        <PROCESSED>1</PROCESSED>
        <STATUS>
          <STATE>Canceled</STATE>
        </STATUS>
        <TARGET><![CDATA[]]></TARGET>
      </SCAN>
      <SCAN>
        <REF>scan/1550490192.93535</REF>
        <SCAN_TYPE>ec2certview</SCAN_TYPE>
        <TYPE>On-Demand</TYPE>
        <TITLE><![CDATA[CertView_EC2- ALL Ips]]></TITLE>
        <USER_LOGIN>USERNAME</USER_LOGIN>
        <LAUNCH_DATETIME>2019-02-18T11:43:11Z</LAUNCH_DATETIME>
        <DURATION>19:08:50</DURATION>
        <PROCESSING_PRIORITY>0 - No Priority</PROCESSING_PRIORITY>
        <PROCESSED>1</PROCESSED>
        <STATUS>
          <STATE>Canceled</STATE>
        </STATUS>
        <TARGET><![CDATA[]]></TARGET>
      </SCAN>
    </SCAN_LIST>
  </RESPONSE>
</SCAN_LIST_OUTPUT>
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```

Support for New Authentication Types in KnowledgeBase API

API affected	/api/2.0/fo/knowledge_base/vuln/
New or Updated API	Updated
DTD or XSD changes	No

Now you can filter XML output to show vulnerabilities for five new authentication types. The discovery_auth_types parameter in the KnowledgeBase API now accepts the following five new authentication types: PANOS,TOMCAT, MARIADB, MongoDB, WEBLOGIC.

Sample - Request Vulnerabilities for PANOS Authentication Type

API request:

```
curl -u "user:password" -H "X-Requested-With: Curl" -X "POST"
-d "action=list&echo_request=0&discovery_auth_types=PANOS"
"https://qualysapi.qualys.com/api/2.0/fo/knowledge_base/vuln/" >
output.txt
```

XML output:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE KNOWLEDGE_BASE_VULN_LIST_OUTPUT SYSTEM
"https://qualysapi.qualys.com/api/2.0/fo/knowledge_base/vuln/knowledge_ba
se_vuln_list_output.dtd">
<KNOWLEDGE_BASE_VULN_LIST_OUTPUT>
  <RESPONSE>
    <DATETIME>2019-03-08T05:19:54Z</DATETIME>
    <VULN_LIST>
      <VULN>
        <QID>11736</QID>
        <VULN_TYPE>Vulnerability</VULN_TYPE>
        <SEVERITY_LEVEL>5</SEVERITY_LEVEL>
       <TITLE><![CDATA[Palo Alto Networks PAN-OS Multiple Vulnerabilities
(PAN-SA-2016-0034 and PAN-SA-2016-0035)]]></TITLE>
        <CATEGORY>CGI</CATEGORY>
        <LAST_SERVICE_MODIFICATION_DATETIME>2018-02-
14T08:19:04Z</LAST_SERVICE_MODIFICATION_DATETIME>
        <PUBLISHED_DATETIME>2018-02-14T08:19:04Z</PUBLISHED_DATETIME>
        <BUGTRAQ_LIST>
        ...
          <AUTH_TYPE_LIST>
            <AUTH_TYPE>PANOS</AUTH_TYPE>
          </AUTH_TYPE_LIST>
          ...
      </VULN>
      ...
```