

Alibaba Cloud CDN

Tools

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Sample authentication code

Overview

The following Python demo provides three authentication methods and describes the composition of requested URLs and hash strings for each method.

For URL authentication rules, see [URL Authentication Document](#).

Python demo

```
import re
import time
import hashlib
import datetime

def md5sum(src):
    m = hashlib.md5()
    m.update(src)
    return m.hexdigest()

def a_auth(uri, key, exp):
    p = re.compile("^(http://|https://)?([^\?]+)([^\?]*)?(\\?.*)?$")
    if not p:
        return None
    m = p.match(uri)
    scheme, host, path, args = m.groups()
    if not scheme: scheme = "http://"
    if not path: path = "/"
    if not args: args = ""
    rand = "0" # "0" by default, other value is ok
    uid = "0" # "0" by default, other value is ok

    sstring = "%s-%s-%s-%s-%s" %(path, exp, rand, uid, key)
    hashvalue = md5sum(sstring)
    auth_key = "%s-%s-%s-%s-%s" %(exp, rand, uid, hashvalue)

    if args:
        return "%s%s%s%s&auth_key=%s" %(scheme, host, path, args, auth_key)
    else:
```

```

return "%s%s%s%s?auth_key=%s" %(scheme, host, path, args, auth_key)

def b_auth(uri, key, exp):
    p = re.compile("^(http://|https://)?([^/?]+)(/[^?]*)?(\\?.*)?$")
    if not p:
        return None
    m = p.match(uri)
    scheme, host, path, args = m.groups()
    if not scheme: scheme = "http://"
    if not path: path = "/"
    if not args: args = ""

    # convert unix timestamp to "YYmmDDHHMM" format
    nexptime = datetime.datetime.fromtimestamp(exp).strftime('%Y%m%d%H%M')
    sstring = key + nexptime + path
    hashvalue = md5sum(sstring)

    return "%s%s/%s/%s%s%s" %(scheme, host, nexptime, hashvalue, path, args)

def c_auth(uri, key, exp):
    p = re.compile("^(http://|https://)?([^/?]+)(/[^?]*)?(\\?.*)?$")
    if not p:
        return None
    m = p.match(uri)
    scheme, host, path, args = m.groups()
    if not scheme: scheme = "http://"
    if not path: path = "/"
    if not args: args = ""

    hexexp = "%x" %exp
    sstring = key + path + hexexp
    hashvalue = md5sum(sstring)

    return "%s%s/%s/%s%s%s" %(scheme, host, hashvalue, hexexp, path, args)

def main():

    uri = "http://xc.cdnpe.com/ping?foo=bar" # original uri
    key = "<input private key>" # private key of authorization
    exp = int(time.time()) + 1 * 3600 # expiration time: 1 hour after current itme

    authuri = a_auth(uri, key, exp) # auth type: a_auth / b_auth / c_auth

    print("URL : %s\nAUTH: %s" %(uri, authuri))

if __name__ == "__main__":
    main()

```