

# Signature Generation Examples

## Before You Start

For your signature generation, Spendgo will provide you with a shared secret (known only to both parties) and API key.

## Security Best Practices

### Storing Credentials Securely

You should take great care to store your credentials securely. Avoid storing API keys in your code base (which gets added to version control). The recommended best practice is to encrypt and store these in a secure location, like a database.

If you feel that the key has been compromised, you can disable it or contact us to regenerate it. Please contact us for [API support](#).

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Here are some examples on how to build authentication in different languages:

## Signature Generation in Scala

```
package com.spendgo.ws

import javax.crypto.Mac
import javax.crypto.spec.SecretKeySpec
import javax.xml.bind.DatatypeConverter.{parseBase64Binary,
printBase64Binary}

object SignatureTest {

    def signRequest(key: String, uri: String, body: String, algorithm:String)
: String = {
    val strToSign = uri + body
```

```

    val s = new SecretKeySpec(fromBase64(key), algorithm)
    val m = Mac.getInstance(algorithm)
    m.init(s)
    printBase64Binary(m.doFinal(strToSign.getBytes("UTF-8")))
}

def fromBase64(data: String) = {
    parseBase64Binary(data)
}

def test() = {
    val key = "Afq3p8iYgWTxUw1d8cx6q7wmQl20REw48yT6Mk3kw9="
    val uri = "/api/v1/member/update"
    val body =
s"""{"spendgo_id":"296076","first_name":"John","last_name":"Doe"}"""
    val st = signRequest(key, uri, body, "HmacSHA256")
    println(s"""signature = $st""")
}
}

```

## Signature Generation in C#

```

var encoding = Encoding.UTF8;
var keyByte =
Convert.FromBase64String("Afq3p8iYgWTxUw1d8cx6q7wmQl20REw48yT6Mk3kw9=");

var messageBytes =
encoding.GetBytes(@"/api/v1/member/update{"spendgo_id":"","296076","first
_name":"","John","last_name":"","Doe"}");
using (var hmacsha256 = new HMACSHA256(keyByte))
{
    var hashmessage = hmacsha256.ComputeHash(messageBytes);
    var base64String = Convert.ToBase64String(hashmessage);
    base64String.Dump();
}

```

# Signature Generation in PHP

```
$key = "!uQa][EPrX[ZmtTKSUz+g36Qg7X[Pvjy\$aITk[fjckaLv&11";
$data =
"/loyalty/accounts{\"customer\":{\"name\":{\"first\":\"Test\",\"last\":\"User55\"},\"phone\":\"5555555555\"}}";
$hmact = hash_hmac("sha256", $data, base64_decode($key), TRUE);
$signature = base64_encode($hmac);
echo "signature = $signature";
```