

```
Jose\Object\JWS Object
```

```
(
    [is_payload_detached:Jose\Object\JWS:private] => 1
    [encoded_payload:Jose\Object\JWS:private] =>
    [signatures:Jose\Object\JWS:private] => Array
        (
        )

    [payload:Jose\Object\JWS:private] => A JWS with a detached payload
)
```

```
=====
Working with Metadata Statements.
```

```
Using examples from: https://openid.andreas.labs.uninett.no
```

```
>>>
```

```
eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZmVpZGUubm8vIn0.eyJjbGllbnRfbmFtZSI6IkZvb2RsZSBwb2xscyBhbmQgc3VydmV5cyIsImNvbnRhY
```

```
<<<
```

```
/home/constantin/public_html/oidcfed/github/oidcfed_lib_php_rp/examples/jose_jwt_jws_1.php:96:
```

```
array (size=3)
  0 => string 'eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZmVpZGUubm8vIn0' (length=71)
  1 => string 'eyJjbGllbnRfbmFtZSI6IkZvb2RsZSBwb2xscyBhbmQgc3VydmV5cyIsImNvbnRhY3RzIjpbImFuZHZJLYXMuc29sYmVpZ0B1bmLuZXR0Lm5vIiwia29udGFrdEB'
  2 => string 'wjM0fZxf0kM88E7Rk1cU74pxZYqvzpimZijVIC_710G2TUykD9TV8Zcz1B17v9xuANxwSLW29fHk2LK508eDBizwfX4dUJwulnkCJHUcY8hWLPxIJJa_o2lXBDX'
```

```
=====
MS Header:
```

```
stdClass Object
```

```
(
    [alg] => RS256
    [typ] => JWT
    [kid] => https://feide.no/
)
```

```
RS256=====
```

```
MS Payload:
```

```
stdClass Object
```

```
(
    [client_name] => Foodle polls and surveys
    [contacts] => Array
        (
            [0] => andreas.solberg@uninett.no
            [1] => kontakt@uninett.no
        )

    [redirect_uris] => Array
        (
            [0] => https://foodl.org/callback
            [1] => https://www.foodl.org/callback
        )

    [response_types] => Array
        (
            [0] => code
        )

    [claims] => Array
        (
            [0] => sub
            [1] => name
            [2] => picture
        )

    [iss] => https://feide.no/
    [signing_keys] => Array
        (
            [0] => stdClass Object
                (
                    [kty] => RSA
                    [kid] => https://foodl.org/
                    [n] => yLwifXilG3JPDx60mj12x8sJsyYoYfKryLtNIT00Gj2wXiQi04uaPiXmvsFymrNgdpKPKMTiMDndaeVY1cJW45TJD03ld1MVHskUvrADHwA6Jq
                    [e] => AQAB
                )
        )

    [metadata_statements] => Array
        (
            [0] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWR1Z2Fpbj5vcmcvIn0.eyJjbGFpbXMiOlsic3ViIiwibmFtZSI6ImVtYWlsIi
            [1] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8va2FsbWZyY8iFQ.eyJjbGFpbXMiOlsic3ViIiwibmFtZSI6ImVtYWlsIiwia29udGFrdEB'
        )

    [iat] => 1488873238
    [exp] => 1488876838
)
```

```
=====
Payload/Claims...
```

```
/home/constantin/public_html/oidcfed/github/oidcfed_lib_php_rp/examples/jose_jwt_jws_1.php:141:
```

```
array (size=10)
```

```
'client_name' => string 'Foodle polls and surveys' (length=24)
'contacts' =>
    array (size=2)
        0 => string 'andreas.solberg@uninett.no' (length=26)
        1 => string 'kontakt@uninett.no' (length=18)
'redirect_uris' =>
    array (size=2)
        0 => string 'https://foodl.org/callback' (length=26)
        1 => string 'https://www.foodl.org/callback' (length=30)
'response_types' =>
    array (size=1)
        0 => string 'code' (length=4)
'claims' =>
    array (size=3)
        0 => string 'sub' (length=3)
        1 => string 'name' (length=4)
        2 => string 'picture' (length=7)
'iss' => string 'https://feide.no/' (length=17)
'signing_keys' =>
    array (size=1)
        0 =>
            array (size=4)
                'kty' => string 'RSA' (length=3)
                'kid' => string 'https://foodl.org/' (length=18)
                'n' => string 'yLWiFXiLG3JPDx60mj12x8sJsyYoYfKryLtNIT00Gj2wXiQi04uaPiXmvsFymrNgdpKPKMTiMDndaeVY1cJW45TJD03ld1MVHskUvrADHwA6JqzKa'
                'e' => string 'AQAB' (length=4)
'metadata_statements' =>
    array (size=2)
        0 => string 'eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWZpbi5vcmcvIn0.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImVtYWlsIiwiaWF0Ij0iMTQ4ODU3MjM3Lm9yZy8ifQ.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImVtYWlsIiwiaWF0Ij0iMTQ4ODU3MjM3Lm9yZy8ifQ' (length=256)
        1 => string 'eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWZpbi5vcmcvIn0.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImVtYWlsIiwiaWF0Ij0iMTQ4ODU3MjM3Lm9yZy8ifQ' (length=256)
'iat' => int 1488873238
'exp' => int 1488876838
```

=====

Signatures count: 1

Signatures:

/home/constantin/public\_html/oidcfed/github/oidcfed\_lib\_php\_rp/examples/jose\_jwt\_jws\_1.php:147:

```
array (size=1)
    0 =>
        object(Jose\Object\Signature) [10]
            private 'encoded_protected_headers' => string 'eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWZpbi5vcmcvIn0.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImVtYWlsIiwiaWF0Ij0iMTQ4ODU3MjM3Lm9yZy8ifQ.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImVtYWlsIiwiaWF0Ij0iMTQ4ODU3MjM3Lm9yZy8ifQ' (length=71)
            private 'protected_headers' =>
                array (size=3)
                    'alg' => string 'RS256' (length=5)
                    'typ' => string 'JWT' (length=3)
                    'kid' => string 'https://feide.no/' (length=17)
            private 'headers' =>
                array (size=0)
                    empty
            private 'signature' => string '34]_C<NfWUqe:bT]5-SW\Peq>q)VÜiJx-uBpY✓q'

s_hN|/

U-'.22"U0n_mRv◀GFMofXZ^5vL_yCn[#w-QDcö~c]7i' (length=256)

private 'signature_key' => null
```

Jose\Object\Signature Object

```
(
    [encoded_protected_headers:Jose\Object\Signature:private] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWZpbi5vcmcvIn0
    [protected_headers:Jose\Object\Signature:private] => Array
        (
            [alg] => RS256
            [typ] => JWT
            [kid] => https://feide.no/
        )

    [headers:Jose\Object\Signature:private] => Array
        (
        )

    [signature:Jose\Object\Signature:private] => 34]_C<NfWUqe:bT]5-SW\Peq>q)VÜiJx-uBpY✓q

s_hN|/

U-'.22"U0n_mRv◀GFMofXZ^5vL_yCn[#w-QDcö~c]7i

    [signature_key:Jose\Object\Signature:private] =>
)
Protected header(s) (from signature):
Array
(
    [0] => Array
        (
            [alg] => RS256
            [typ] => JWT
            [kid] => https://feide.no/
```

```

)

)
=====
Creating JWK for public key for kid: 'kid' => string 'https://feide.no/' (in this example)

#####
@@@ Instance of JWKInterface @@@
<#####

/home/constantin/public_html/oidcfed/github/oidcfed_lib_php_rp/examples/jose_jwt_jws_1.php:178:
object(Jose\Object\JWK)[13]
  private 'values' =>
    array (size=4)
      'kty' => string 'RSA' (length=3)
      'kid' => string 'https://feide.no/' (length=17)
      'n' => string '51Fc9aXA576q98xAwrT2rLFmBksT-94Jd_0hlByfP4_K8CuLBTM8HClIfdweTFdUdSiB44etC6YLQrJEIyBZ_x-GiEr5oMRNls6HWmWnLBxaDAU16znHQ'
      'e' => string 'AQAB' (length=4)

=====

*****
Signature verified, below you can see our MS object...
Jose\Object\JWS Object
(
  [is_payload_detached:Jose\Object\JWS:private] =>
  [encoded_payload:Jose\Object\JWS:private] => eyJjbGllbnRfbmFtZSI6IkZvb2R5ZSBwb2xscyBhbmQgc3VydmV5cyIsImNvb3R5Y3RzIjpbImFuZHZJLYXMuc29s
  [signatures:Jose\Object\JWS:private] => Array
    (
      [0] => Jose\Object\Signature Object
        (
          [encoded_protected_headers:Jose\Object\Signature:private] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8v
          [protected_headers:Jose\Object\Signature:private] => Array
            (
              [alg] => RS256
              [typ] => JWT
              [kid] => https://feide.no/
            )

          [headers:Jose\Object\Signature:private] => Array
            (
            )

          [signature:Jose\Object\Signature:private] => 34C<NfW?Sqe:bT]o5-?SW\Peq>q)V

s_hN|4/

TqU?-"0U?n_mRv<]GFMofXZ^5vL_yCn[#w-QDcö~c]7i

    [signature_key:Jose\Object\Signature:private] =>
  )
)

[payload:Jose\Object\JWS:private] => Array
(
  [client_name] => Foodle polls and surveys
  [contacts] => Array
    (
      [0] => andreas.solberg@uninett.no
      [1] => kontakt@uninett.no
    )

  [redirect_uris] => Array
    (
      [0] => https://foodl.org/callback
      [1] => https://www.foodl.org/callback
    )

  [response_types] => Array
    (
      [0] => code
    )

  [claims] => Array
    (
      [0] => sub
      [1] => name
      [2] => picture
    )

  [iss] => https://feide.no/
  [signing_keys] => Array
    (
      [0] => Array
        (
          [kty] => RSA
          [kid] => https://foodl.org/
          [n] => yLWifXiLG3JPDx60mj12x8sJsyYoYfKryLtNIT00Gj2wXiQi04uaPiXmvsFymrNgdpKPKMTiMDndaeVY1cJW45TJD03ldIMVHskUvr
          [e] => AQAB
        )
    )
)

```

```
)

[metadata_statements] => Array
(
    [0] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8vZWRR1Z2Fpbj5vcmcvIn0.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6Im
    [1] => eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCIsImtpZCI6Imh0dHBzOi8va2FsbWFyLm9yZy8ifQ.eyJjbGFpbXMiOi0lsic3ViIiwibmFtZSI6ImFtZSdLCJ
)

[iat] => 1488873238
[exp] => 1488876838
)

)

*****
```