



# JWTBearerTokenExchange Class

Contains methods that POST the signed JWT bearer token to a token endpoint to request an access token, in the OAuth 2.0 JWT bearer token flow.

## Namespace

Auth

## Usage

Use the methods in this class to post a signed JWT bearer token to the OAuth token endpoint, in exchange for an access token.

To test HTTP callouts to the token endpoint, use the `Auth.HttpCalloutMockUtil` class.

## Example

In the following example application, the Apex controller:

1. Creates the JSON Claims Set.
2. Specifies the scope of the request with additional claims.
3. Creates the signed JWT.
4. Specifies the token endpoint and POSTs to it.
5. Gets the access token from the HTTP response.

```
public class MyController{

    public MyController() {
        Auth.JWT jwt = new Auth.JWT();
        jwt.setSub('user@salesforce.com');
        jwt.setAud('https://login.salesforce.com');
        jwt.setIss('3MVG990xTyEMCQ3gNp2PjkqeZKxnmAiG1xV4oHh9AKL_rSK.BoSVP6ZHQukXnVjzRgSuQ

        //Additional claims to set scope
        Map<String, Object> claims = new Map<String, Object>();
        claims.put('scope', 'scope name');

        jwt.setAdditionalClaims(claims);

        //Create the object that signs the JWT bearer token
        Auth.JWS jws = new Auth.JWS(jwt, 'CertFromCertKeyManagement');

        //Get the resulting JWS in case debugging is required
        String token = jws.getCompactSerialization();

        //Set the token endpoint that the JWT bearer token is posted to
        String tokenEndpoint = 'https://login.salesforce.com/services/oauth2/token';

        //POST the JWT bearer token
        Auth.JWTBearerTokenExchange bearer = new Auth.JWTBearerTokenExchange(tokenEndpoint

        //Get the access token
        String accessToken = bearer.getAccessToken();
```



- [JWTBearerTokenExchange Methods](#)

## JWTBearerTokenExchange Constructors

The following are constructors for `JWTBearerTokenExchange`.

- [JWTBearerTokenExchange\(tokenEndpoint, jws\)](#)  
Creates an instance of the `JWTBearerTokenExchange` class using the specified token endpoint and the signed JWT bearer token.
- [JWTBearerTokenExchange\(\)](#)  
Creates an instance of the `Auth.JWTBearerTokenExchange` class.

### JWTBearerTokenExchange(tokenEndpoint, jws)

Creates an instance of the `JWTBearerTokenExchange` class using the specified token endpoint and the signed JWT bearer token.

#### Signature

```
public JWTBearerTokenExchange(String tokenEndpoint, Auth.JWS jws)
```

#### Parameters

##### *tokenEndpoint*

Type: [String](#)

The token endpoint that the signed JWT bearer token is POSTed to.

##### *jws*

Type: [Auth.JWS](#)

The signed JWT bearer token.

### JWTBearerTokenExchange()

Creates an instance of the `Auth.JWTBearerTokenExchange` class.

#### Signature

```
public JWTBearerTokenExchange()
```

## JWTBearerTokenExchange Methods

The following are methods for `JWTBearerTokenExchange`. All are instance methods.

- [clone\(\)](#)  
Makes a duplicate copy of the `JWTBearerTokenExchange` object.
- [getAccessToken\(\)](#)  
Returns the `access_token` in the token response to the JWT bearer token request.
- [getGrantType\(\)](#)  
Returns the grant type specified in the JWT bearer token request. The grant type value defaults to `urn:ietf:params:oauth:grant-type:jwt-bearer`.
- [getHttpResponse\(\)](#)  
Returns the full `System.HttpResponse` token response to the JWT bearer token request.
- [getJWS\(\)](#)  
Returns the JWS specified in the JWT bearer token request.



method.

- **setJWS(jws)**  
Sets the JWS in the JWT bearer token request. Returned by the `getJWS()` method.
- **setTokenEndpoint(tokenEndpoint)**  
Sets the token endpoint that the JWT bearer token request is POSTed to. Returned by the `getTokenEndpoint()` method.

## clone()

Makes a duplicate copy of the `JWTBearerTokenExchange` object.

### Signature

```
public Object clone()
```

### Return Value

Type: [JWTBearerTokenExchange](#)

## getAccessToken()

Returns the `access_token` in the token response to the JWT bearer token request.

### Signature

```
public String getAccessToken()
```

### Return Value

Type: [String](#)

### Usage

This method extracts the `access_token` from the token response. If the token response issues the access token in a different parameter, the request fails.

If you want the full HTTP token response returned, use `getHttpResponse` instead.

## getGrantType()

Returns the grant type specified in the JWT bearer token request. The grant type value defaults to `urn:ietf:params:oauth:grant-type:jwt-bearer`.

### Signature

```
public String getGrantType()
```

### Return Value

Type: [String](#)

## getHttpResponse()

Returns the full `System.HttpResponse` token response to the JWT bearer token request.

### Signature

```
public System.HttpResponse getHttpResponse()
```

### Return Value

Type: [System.HttpResponse](#)



## getJWS()

Returns the JWS specified in the JWT bearer token request.

### Signature

```
public Auth.JWS getJWS()
```

### Return Value

Type: [Auth.JWS](#)

## getTokenEndpoint()

Returns the token endpoint that the JWT bearer token request is POSTed to.

### Signature

```
public String getTokenEndpoint()
```

### Return Value

Type: [String](#)

## setGrantType(grantType)

Sets the grant type in the JWT bearer token request. Returned by the `getGrantType()` method.

### Signature

```
public void setGrantType(String grantType)
```

### Parameters

#### *grantType*

Type: [String](#)

### Return Value

Type: void

## setJWS(jws)

Sets the JWS in the JWT bearer token request. Returned by the `getJWS()` method.

### Signature

```
public void setJWS(Auth.JWS jws)
```

### Parameters

#### *jws*

Type: [Auth.JWS](#)

### Return Value

Type: void

## setTokenEndpoint(tokenEndpoint)

Sets the token endpoint that the JWT bearer token request is POSTed to. Returned by the `getTokenEndpoint()` method.



*tokenEndpoint*

Type: [String](#)

**Return Value**

Type: void

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