

# Authenticating Requests for Users and Devices

## Users and Devices Authenticated Requests

Requests can be authenticated with user or device credentials (username/password). In order to create a user or a device belonging to a customer: A user or a device must be created using the SaveUser API or SaveDevice API action with a request signed by the customer's authentication key and authentication secret; a username and password will be used to create the user or device.

Signing a request with the customer's authentication key, and one of his/her users' username and password (a hash of the password) can be used to allow rich client applications to make requests to Apstrata database without giving out the customer's secret.

- **Default Signature:** Follow the steps in the [Default Signature Type](#) section, and set the parameter `apsws.authKey` to be the username of the created user or device. Then calculate the HMAC-SHA1 hash string using the MD5 hash of the created user's or device's password.
- **Token-based Authentication:** Follow the steps in the [Token-Based Authentication](#) section about token-based authentication which is only allowed for users or devices.
- **Simple Signature Type:** Follow the steps in the [Simple Signature Type](#) section, and set the parameter `apsws.authKey` to be the username of the created user or device. Then use the MD5 hash of the created user's or device's password when creating the signature.
- **Bearer Token Authentication:** Follow the steps in the [Bearer Token Authentication](#) section, and set the header `Authorization` of the request with the bearer token to `https://<serviceName>/rest/<action>`.

By using the user's or device's username and password:

### Hashed Value

```
ValueToHash = [timestampValue][username][action name] [Md5hashFunction(new user password)]
```

Requests signed using the `authKey` and the `sharedSecret` without a username are called "owner" requests where the owner is considered to be the database owner *i.e.*, the Apstrata database customer who holds the shared secret.



ACL checking is skipped when the request is performed by owner.