# Mobile Device Activation & Authentication

## Mobile Authentication Fields

Mobile authentication is implemented using these fields in the users table:

device id mobileid Unencrypted mobile id number to identify the device

mobile key mobilekey Mobile encryption key

security code mobilecode Mobile device security code

The device id must be a unique field.

A user account has values for all three fields is considered an activated account. Likewise a mobile device will treat the presence of the mobile device id, mobile key and security code as evidence that activation is completed until it is informed otherwise.

An account that is pending activation will have only a mobile key.

An account with no mobile key is not activated or a candidate for activation until it is given a mobile key.

## Authentication Process

In every web service call after activation the mobile device will pass the mobile device id and security code to the web service. The security code should be encrypted using the mobile key as salt. The mobile device id is sent unencrypted

The web service can authenticate the transaction by:

1. identifying the device using the mobile device id and reading the mobile key and security code.
2. Using mobile key to decrypted security code.
3. Validating the passed security code against the stored code

A user account that does not have all three fields is not an activated account.

## Mobile Device Activation

The following process will be followed to activate a mobile device:

1. A page on the website will generate a mobile key. This key will be stored in the database and provided to the user.
2. The user will enter their email address and mobile key on mobile device and indicate that they want to activate the account.
3. The mobile device will send call the Activate web service passing the email address and mobile key.
4. The web service authenticates the email and mobile key by locating the user record that matches both fields and also has no value for the device id and security code. If no such record can be found then an error is returned.
5. Web service generates a mobile device id and a security code and saves both to the user account.
6. Web service sends the mobile device id and security code to the mobile device.
7. Mobile device saves the mobile device id (received from the web service), mobile key (keyed in) and security code (received from the web service).

At this point activation is completed.