## Machine Authentication Service - Secure Token (MAS-ST)

## Service Provider Hosted Authentication - Software Subscription Identifier (SSID)

**SSID**

The following outlines the requirements around the software's automatic generation of a Software ID.

The Software ID **must**:

* be generated using the algorithm provided below and contain 10 digits (leading zeroes are required)
* be unique for each subscription or instance of software
* be passed to the user via a secured electronic communication or over the phone
* be given to the user for the purposes of nominating a software provider in Access Manager

The Software ID **must not**:

* be keyed in by the user for each transmission
* be used as a credential to authenticate the client within online software for lodgement

**Software ID generation algorithm**

1. Generate the first 9 digits of the Software ID (can be a randomly generated)

2. Pad the generated number with leading zeroes on the left to make 9 digit string

3. Calculate the sum of all digits in the string and apply the Modulo 10 division to calculate the remainder

4. Use the reminder as the 10th control digit

5. Concatenate the generated 9 digits (from step 2) with the control digit (from step 4) to form a 10 digit Software ID

The next table provides a few examples of Software ID generation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Generated number** | **Zero padded string (9 characters)** | **Sum of all digits** | **Remainder from division by 10 (control digit)** | **Software ID** |
| 1 | 000000001 | 0+0+0+0+0+0+0+0+1 = 1 | 1 | 0000000011 |
| 2 | 000000002 | 0+0+0+0+0+0+0+0+2 = 2 | 2 | 0000000022 |
| … | … | … | … | … |
| 478593 | 000478593 | 0+0+0+4+7+8+5+9+3=36 | 6 | 0004785936 |