# eCert Web API User Guide

Version 1.2

FRUIT SOUTH AFRICA

# Table of Contents

# Purpose of Document

This document demonstrates the step by step process of setting up and using the eCert Web API methods to perform an application for an electronic Phytosanitary certificate from the request to the issuance of the certificate. In order to interact with the eCert Web API, client systems need to be registered.

# Web API Versions

There are three versions of the API that are available at a time and these are stated below:

- **Old-** Soon to be deprecated

- **Stable –** Current stable version

- **Beta-**Latest Build

All requests are sent with the version of the API in the url or the consumer can to call the API through a custom request header as below:

```
Accept-version: v1
Accept-version: v2
```

The current version of the API will be displayed on the API's Swagger page. The swagger page will display the available endpoints depending on the selected version.

When a new version becomes available, notifications will be sent out to all the relevant parties with a change log of the new changes and features. The Swagger page will be updated accordingly with these new features. The links to the swagger pages are as follows:

- PRODUCTION - https://app.ecert.co.za/api/
- TESTING- http://qa.ecert.co.za/api/

# Pre-requisites

The pre-conditions for a client system to be able to consume the eCert Web API for ePhyto requests are as follows:

- The client system must belong or be associated to a registered business in the Central Business Register
- The client system will need to be registered as a client in the User Authentication Service and issued a valid **client_id** and **client_secret** to be able to consume the endpoints
- All request calls for the eCert Notice will be authenticated using a JWT (Json Web token) bearer token over OAuth 2.0 protocol
- The authorization grant type used by the User Authentication Service is 'Client Credentials Grant' (please see Appendix 1)

# How to Connect

Refer to the **How to Connect to Web API Document**

# Testing Web API Endpoints

To test the eCert Web API endpoints users can use 3rd party tools like Swagger or Postman. These tools will help the user get a feel of what the endpoint parameters look like, as well as view the responses in various formats. Following is the endpoint to the QA eCert API to see the available standards:

## Swagger

- [http://qa.ecert.co.za/api/swagger](http://qa.ecert.co.za/api/swagger) (TESTING)

# Available Methods

## Apply for ePhyto Certificate (eCert): POST

**PLEASE NOTE**: this is currently reserved for Fruit.

Used to apply for ePhyto certificate by submitting all the necessary information to process the application.

**Endpoint:**

- [https://app.ecert.co.za/api/v1/certificate/apply](https://app.ecert.co.za/api/v1/certificate/apply) (PRODUCTION)

- [http://qa.ecert.co.za/api/v1/certificate/apply](http://qa.ecert.co.za/api/v1/certificate/apply) (TESTING)

**Swagger Endpoint:**

**Request (xml, json):**

| Parameter | Description | Datatype | Req? | Example/ Ref |
|---|---|---|---|---|
| >CertificateRequest | | | | |
| CBRID | The owner of the consignment | Int | Yes | e.g. 3 |
| CBRBillingID | The responsible person to bill | Int | Yes | e.g. 45 |
| CustomReferenceNo | Sent by the consumer to reference their own system | String | No | e.g. 2016044 |
| RecipientId | The Import Country's NPPO | String | Yes | e.g. NVWA |

| | | | | |
|---|---|---|---|---|
| DesiredIssueLocation | Location where Phyto will be issued | String | Yes | e.g. Durban, Cape Town |
| ConsignorId | Exporter code | String | Yes | e.g. D9999 |
| ConsignorName | Name of exporter | String | Yes | e.g. Overlake Farm |
| ConsignorAddressLine1 | Exporter address line 1 | String | Yes | |
| ConsignorAddressLine2 | Exporter address line 2 | String | No | |
| ConsignorAddressLine3 | Exporter address line 3 | String | No | |
| ConsigneeId | The party importing the consignment's business code | String | Yes | e.g. VDLANS |
| ConsigneeName | Consignee name | String | Yes | e.g. VAN DER LANS INTERNATIONAL B.V. |
| ConsigneeAddressLine1 | Consignee address line 1 | String | Yes | |
| ConsigneeAddressLine2 | Consignee address line 2 | String | No | |
| ConsigneeAddressLine3 | Consignee address line 3 | String | No | |
| ConsigneeCountryId | Consignee's country | Lookup | Yes | e.g. "NL" Country ISO Alpha-2 Code |
| ImportCountryId | Importing Country | Lookup | Yes | e.g. "NL" Country ISO Alpha-2 Code |
| UnloadingBaseportLocation | The first point of arrival | Lookup | Yes | e.g. RTM |
| TransportModeCode | Type of transport used | Lookup | Yes | e.g. 1 (Maritime Transport) Modes of Transport |
| TransportMeans | The means of transport | String | No | e.g. Ocean Vessel |
| >> ConsignmentItems | | | | |
| >>> ConsignmentItem | | | | |
| Description | Description of product to be exported | String | Yes | e.g. Oranges for Human Consumption |
| CommonName | General product name | String | Yes | e.g. Oranges |
| ScientificName | Scientific name of product | String | Yes | e.g. Citrus Sinonsis |

| | | | | |
|---|---|---|---|---|
| NetWeightMeasureCode | Unit of measure for net weight | Lookup | Yes | e.g. KGM<br>Units of Measures Codes |
| NetWeightMeasure | Net weight | Int | Yes | e.g. 23315 |
| GrossWeightMeasureCode | Unit of measure for gross weight | String | Yes | e.g. KGM<br>Units of Measures Codes |
| GrossWeightMeasure | Gross weight | Int | Yes | e.g. 23320 |
| CustomsHarmonizedSystemClass | Harmonized system code | String | No | e.g. 000000 |
| CommodityVegetableClass | Type of commodity class | Lookup | No | e.g. Fruits<br>Commodity Class Codes |
| CommodityConditionClass | Condition of commodity | Lookup | No | e.g. Fresh<br>Commodity Conditions |
| CommodityIntentOfUseClass | Commodity's intent of use | Lookup | No | e.g. Consumption<br>Commodity Intent Of Use List |
| AppliedProcessTypeCode | UN/CEFACT requirement | String | Yes | Fixed Text: ZZZ |
| AppliedProcessStartDate | Treatment Start Date | String | Yes | W3 Format YYYY-MM-DD |
| AppliedProcessEndDate | Treatment End Date | String | Yes | W3 Format YYYY-MM-DD |
| AppliedProcessTreatmentTypeLevel1 | Treatment Type Level 1 | Lookup | Yes | e.g. TPT<br>Treatment Types |
| AppliedProcessTreatmentTypeLevel2 | Treatment Type Level 2 | Lookup | Yes | e.g. CT<br>Treatment Types |
| AppliedProcessChemicalCode | Chemical Ingredient | Lookup | No | e.g. Clothianidin<br>Active Ingredient List |
| AppliedProcessTemperatureUnitCode | Unit of measure for temperature | Lookup | No | e.g. HUR<br>Units of Measures Codes |
| AppliedProcessTemperature | Temperature applied | Decimal | No | e.g. o.6 |

| | | | | |
|---|---|---|---|---|
| AppliedProcessConcentrationUnitCode | Unit of measure for concentration | String | No | e.g. GM<br>Units of Measures Codes |
| AppliedProcessConcentration | Concentration Level | Decimal | No | e.g. 2.5 |
| AppliedProcessAdditionalNote | Additional notes for treatments | String | No | |
| PackageLevelCode | Package Level | Int | No | e.g. Default = 1 |
| PackageTypeCode | Package Type | Lookup | Yes | e.g. CT<br>Packaging Codes |
| PackageItemUnitCode | Unit of code for package item | Lookup | Yes | e.g. H87 (Default)<br>Units of Measures Codes |
| PackageItemQuantity | Quantity of packaged items | Int | Yes | e.g. 1435 |
| PackageShippingMarks | Visible Shipping Marks | String | No | e.g.<br>Seal Number: 800000 |
| AdditionalConsignmentNotes | Additional notes or declarations for consignment | String | No | e.g.<br>The shipment was inspected and found free of Trogoderma variable. |
| <<< ConsignmentItem | | | | |
| << ConsignmentItems | | | | |
| >> AdditionalInformation | | | | |
| LoadSeaPoint | Loading Sea Port | String | Yes | e.g. ZACPT |
| TargetCountry | Targeted Country | Lookup | Yes | e.g. NL |
| TargetRegion | Targeted Region | String | Yes | e.g. UKI |
| PortOfEntry | Port of Entry | String | Yes | e.g. GBLGP |
| ExportCertificateNumber | Export Certificate Number | String | No | |
| BookingRef | Booking Reference | String | Yes | e.g.<br>032CAL1617983 |
| Vessel | Name of the vessel shipping | String | Yes | e.g. MSC Sofia Celeste |
| VoyageNumber | Voyager Number | String | Yes | e.g. NZ738R |
| DepartureDate | Date of departure | String | Yes | W3 Format |

| | | | | YYYY-MM-DD |
|---|---|---|---|---|
| TemperatureRegime | Temperature Regime | String | No | e.g. EW001 |
| >>> TradeUnits | | | | |
| >>>> TradeUnit | | | | |
| TradeUnitID | Trade Unit's unique identifier | String | Yes | e.g.GS1 – SSCC format |
| ClientRef | Client reference for trade unit | String | Yes | e.g. Z129 |
| PUC | Operator code of grower | String | Yes | e.g. L1147 |
| Orchard | Orchard code | String | Yes | e.g. JB1A |
| OrchardPhytoStatus | Status of orchard | String | Yes | e.g. EUA1------ |
| PHC | Pack house code | String | Yes | e.g. L0748 |
| ProductionArea | Region where produced derived | String | Yes | e.g. EASTERN CAPE |
| Commodity | Commodity group | String | Yes | e.g. SC |
| MarketingIndication | Market indicator | String | Yes | e.g. MRR |
| FleshColour | Colour of produce | String | No | e.g. Red |
| Class | Class | Int | Yes | e.g. 1 |
| ContainerNumber | Container's number | String | Yes | e.g. CRLU1319539 |
| NumberOfPackagedItems | Number of packaged items on trade unit. | Int | Yes | e.g. 19 |
| NettTradeUnitWeight | Trade Unit weight | Int | Yes | e.g. 304 |
| PPECBInspectionDate | Date PPECB performed inspection | String | Yes | W3 Format YYYY-MM-DD |
| StuffDate | Stuff date | String | Yes | W3 Format YYYY-MM-DD |
| InspectionManifestNo | Inspection Manifest No. | String | Yes | e.g. KO00010723 |
| InspectionPoint | Inspection Point | String | Yes | e.g. 3055 |
| <<<< TradeUnit | | | | |
| <<< TradeUnits | | | | |
| << AdditionalInformation | | | | |
| *>> FlexiFields | | | | |
| *>>> FlexiField | | | | |
| *Name | Name of the flexi field | String | No | e.g. RegimeCode, ImportNo, etc. |
| *Value | Value of flexi field | Any | No | e.g. NZ738R |
| *<<< FlexiField | | | | |
| *<< FlexiFields | | | | |
| < CertificateRequest | | | | |

**\* PLEASE NOTE:** This feature is reserved for future purposes in order capture flexible data that may be required for certain markets. It is essentially a collection of key/value pairs, whereby the Key is the name of the FlexiField and the Value is the data that is required for that FlexiField.

Response:

| Parameter | Description | Datatype | Example |
|---|---|---|---|
| ApplicationRefNo | Number generated when an application has been successfully created, used for reference purposes | String | e.g. 201900016 |
| CustomReferenceNo | The consumer's number to reference back to their system (same as request) | String | e.g. 2016044 |
| ApplicationStatus | The state of the application | String | e.g. New |
| DateCreated | Date the application was created | String | W3 Format YYYY-MM-DD |
| IsSuccessful | Response status | Boolean | e.g. true |
| ResponseMessage | Response message | String | e.g. "Successfully submitted" |
| | | | |

Swagger Endpoint:

## Get Additional Input (eCert): GET

PLEASE NOTE: This feature is reserved for future purposes for cooling data.

Used to retrieve additional cooling data information for the application.

Endpoint:

- https://app.ecert.co.za/api/v1/additionalinput (PRODUCTION)

- http://qa.ecert.co.za/api/v1/additionalinput (TESTING)

Request (xml, json):

| Parameter | Description | Datatype | Req? | Example/ Ref |
|-----------|-------------|----------|------|--------------|
| ApplicationRefNo | Identifier for Phyto application | String | Yes | e.g. 201900016 |
| | | | | |
| | | | | |

Response:

| Parameter | Description | Datatype | |
|-----------|-------------|----------|---|
| IsSuccessful | Response status | Boolean | e.g. true |
| ResponseMessage | Response message | String | e.g. "Successfully submitted" |
| AdditionalInput | Cooling data | Byte[] | e.g. pdf, excel, docx, documents |

## Post Additional Input (eCert): POST

PLEASE NOTE: This feature is reserved for future purposes for cooling data.

Used to post additional information for the certification process such as cooling data

Endpoint:

- https://app.ecert.co.za/api/v1/additionalinput (PRODUCTION)

- http://qa.ecert.co.za/api/v1/additionalinput (TESTING)

Request (xml, json):

| Parameter | Description | Datatype | Req? | Example/ Ref |
|---|---|---|---|---|
| ApplicationRefNo | Identifier for Phyto application | String | Yes | e.g. 201900016 |
| AdditionalInput | Supporting documents | Byte[] | Yes | e.g. pdf, excel, docx, documents |
| | | | | |

Response:

| Parameter | Description | Datatype | |
|---|---|---|---|
| IsSuccessful | Response status | Boolean | e.g. true |
| ResponseMessage | Response message | String | e.g. "Successfully submitted" |
| | | | |

## Check Phyto Application Status (eCert): GET

Used to get the status of a phyto application after it has been submitted.

**Endpoint:**

- https://app.ecert.co.za/api/v1/phytostatus (PRODUCTION)

- http://qa.ecert.co.za/api/v1/phytostatus (TESTING)

Request (xml, json):

| Parameter | Description | Datatype | Req? | Example/ Ref |
|---|---|---|---|---|
| ApplicationRefNo | Identifier for Phyto application | String | Yes | e.g. 201900016 |
| | | | | |

Response:

| Parameter | Description | Datatype | |
|---|---|---|---|
| IsSuccessful | Response status | Boolean | e.g. true |
| ResponseMessage | Response message | String | e.g. "Successfully submitted" |
| HubTrackingNumber | The tracking number of the application on the IPPC Hub | String | e.g. ZANL54635645 |
| HubTrackingStatus | Status message of the application | String | e.g. "Delivered" |

Swagger Endpoint:

**PhytoStatus**                                    Show/Hide | List Operations | Expand Operations

GET   /api/v1/PhytoStatus/Get                      Retrieve the status of an ePhyto application

Response Class (Status 200)
OK

Model   Example Value

{}

Response Content Type  application/json
Parameters

| Parameter | Value | Description | Parameter Type | Data Type |
|---|---|---|---|---|
| applicationRefNo | (required) | | query | string |

Try it out!

## API Change Log

Version 1.1 (09 September 2019)

- Changed Base API Url https://**www**.ecert.co.za/api/v1 to https://**app**.ecert.co.za/api/v1
- Changed *Consignment.Common* to *Consignment.CommonName (*Apply for ePhyto Certificate*)*
- Changed *Addendum* to *AdditionalInformation* (Apply for ePhyto Certificate)
- Changed *Pallets* to *TradeUnits* (Apply for ePhyto Certificate)
- Changed *Pallet* to *TradeUnit* (Apply for ePhyto Certificate)
- Changed *NettPalletWeight* to *NettTradeUnitWeight* (Apply for ePhyto Certificate)
- Changed *NumberOfCartons* to *NumberOfPackagedItems* (Apply for ePhyto Certificate)
- *TradeUnit.FleshColour* changed to not required

# APPENDIX 1



### Application for eCert Web API Access

By completing and returning this form stakeholders in the SA export fruit industry can apply to make use of the eCert Application Programming Interface (API) in order to download or upload data from/onto the eCert platform.

This is a generic form and will allow access to generic, already publicly available data. Should Information of a more confidential nature be required then additional agreements may need to be entered.

The basis for sharing this information is that Department of Agriculture, Fisheries and Forestry require stakeholders in the supply chain to conduct pre-verification of relevant details before presenting their documentation for phytosanitary certification, and also to assist in the logistics and planning of fruit for Special Markets.

### Contact Details

First name: _____

Last name: _____

Company Name: _____

Email address: _____

Phone number: _____

Cell number: _____

### Declaration

I agree to use the information provided by Fruit South Africa for the purpose in which it was intended, and which is specifically aimed at supporting the official process of certification of export fruit. I further agree to not sure this information to parties whose purpose and objective are not aligned to making the export certification process more efficient and effective.

Signature          _____          Date _____

Please complete and email back to us on **support@ecert.co.za** – ATTENTION FRUIT SOUTH AFRICA (eCert WEB ACCESS)

# APPENDIX 2

## Reference Documents

- How to Connect Web API Guide v 1.0

## Web References

- https://oauthlib.readthedocs.io/en/latest/oauth2/grants/credentials.html
- https://oauth.net/2/grant-types/client-credentials/