Uganda Revenue Authority
DEVELOPING UGANDA TOGETHER

EFRIS
Electronic Fiscal Receipting & Invoicing Solution

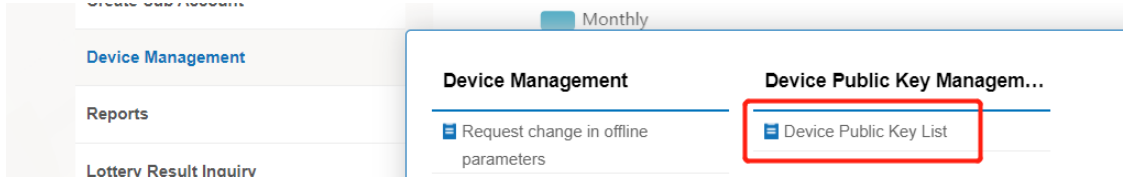
HOW TO USE EFRIS WEB SERVICE API

Requirements

- The Taxpayer has completed first time registration for EFRIS on the EFRIS test portal. https://efristest.ura.go.ug/efrissite

Upon registration,

- Taxpayer shall be assigned a virtual device number. The Taxpayer shall be required to Log into the portal above to set the device public key. Under



- A detailed API technical document is also available for download on the test portal under Download>>Documents.

Integration

Step1 Test Interface

At integration, the web service API shall be tested. Interface code T101 documented in the API technical document issued at registration shall be used. Taxpayer will get the server time as the response. This helps the Taxpayer to compare the time on there end with the Time at the URA server. For integration purposes, we allow a maximum of +-10 minutes time difference between the client and the server

API format

The API utilizes a generic json request format to transfer data; The protocal is divided into three parts: data, globalInfo, and returnStateInfo. These are defined in the API Technical document

Note:

1. The entire json string as defined in the technical document is to be **posted** in the body part of the request. We only allow **POST**
2. We do not send anything in the header section of the request

API modes

The API has two major modes i.e Offline and Online modes;

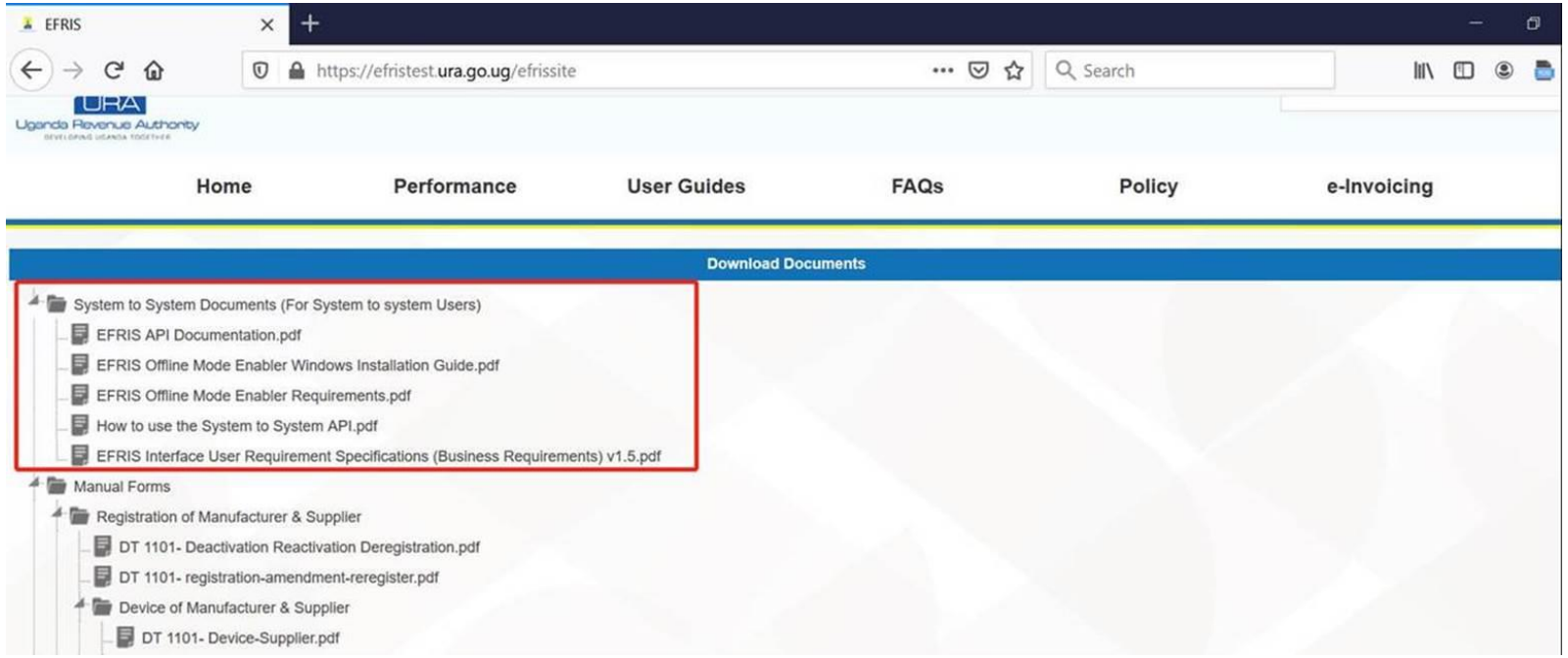
For both modes, the format of the posted data is the same; This format is defined in the Technical document.

Online Mode

The Online mode is what is defined in the shared the technical document;

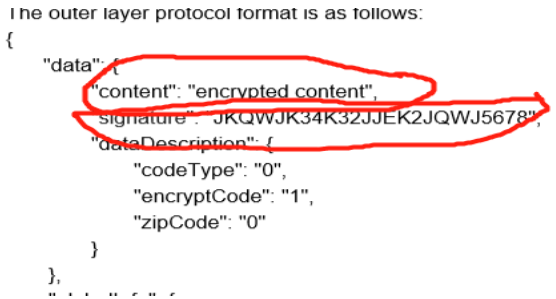
These documents can also be downloaded from available on the EFRIS portal.

Visit https://efristest.ura.go.ug/efrissite , then Downloads >> Documents



Online Mode Cont'd

The content field defined in the json string below always gets its value from what is defined under the request part of each interface code;



The API utilizes PKI to do signing of all requests therefore you are expected to sign all your requests using your private key.

The signature is always derived by signing using the string under the content field with the private key. Signature = Sign(Encrypted(Content))

Online Mode Cont’d

- Online mode utilizes AES encryption to encrypt the requests and the AES key can be obtained using the steps below;
- The system will generate a new AES key for the taxpayer, and all transaction data shall be encrypted/decrypted with the new AES key.
- The new AES key is always valid for 24 hours, the client needs to have it updated every day, and the interface code for this shall be T104
- The new AES key will be encrypted using the client's public key, and the client should use the obtained private key for decryption.

Online Mode Cont'd

Under the globalInfo,

1. The appId will always be APP04 for system to system.
2. Depending on which interface you the interfaceCode varies from interface to interface
3. The requesTime will always be the current time UTC+3
4. The deviceNo will be assigned to you by URA
5. The TIN you will use the Taxpayer TIN



Note:

1. *Details of each field can always be found under the field description in the technical document*
2. *Leave the other fields with default values as stipulated in the document*

Online Mode Cont'd

Each interface has a definition of;

1. The request and expected response
2. The field Definition(s) of both the request and response fields

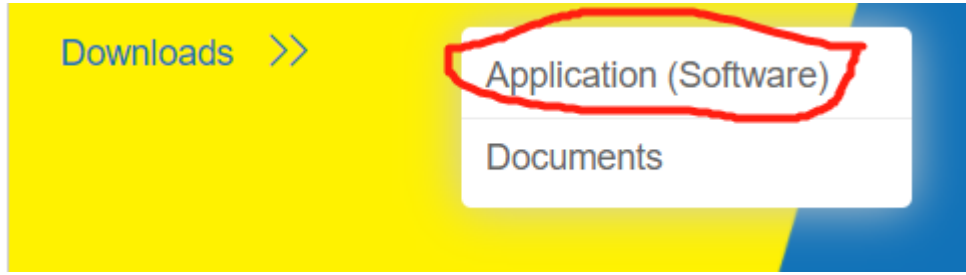
Interface Name	Get server time
Description	The EFD time is synchronized with the server time.
Interface Code	T101
Request Encrypted	N
Response Encrypted	N
Request Message	Null
Response Message	{ "currentTime": "30/07/2019 15:30:01"

	}
Flow Description	Null

Offline Mode

The offline mode can be downloaded from;

https://efristest.ura.go.ug/efrissite , then Downloads >> Application (Software)



The request format for offline mode is the same as that for online mode with the only difference being that with the offline mode, you will always submit an empty string under the signature value of the json string and where content is available, you will only base64 encode it.

Note:

1. The installation guide for this can be found under Downloads >> Documents

Integration

Note:

- The T103 interface contains some system parameters and dictionary versions.
- The client needs to save these parameters and call T103 once a day to compare the dictionary version.
- Where the versions are inconsistent, the taxpayer need to call the corresponding interface to update as summarized below;

Dictionary Version Field	Dictionary Corresponding Interface
dictionaryVersion	T115
commodityCategoryVersion	T123
exciseDutyVersion	T125

THANK YOU

