

Proof of Audit

Introduction

Proof-of-Audit (POA) is generated by the tax authority's system once all expected audit packages have been received and securely stored on the tax authority's system.

Even if the taxpayer is unable to send one or more audit packages due to the failure of the EFD component or some other reason, the tax authority can still issue a POA if it can determine the tax liability for that secure element.

A POA cycle begins with E-SDC initiating the *Start Audit APDU command* (**Audit Start**). A POA cycle finishes with the tax authority's system receiving a confirmation that the secure element has successfully executed the issued POA command (**Audit End**).

NOTE:

This article describes the default operation mode of the *Proof of Audit Service*. However, upon the tax authority's decision, the service can use different strategies to issue a POA.

For the currently applicable non-standard issuance strategies, see [Currently Applicable Non-Standard Strategy for Issuing Proof of Audit](#).

There are two scenarios for obtaining a POA:

- As part of the [Local Audit process](#);
- Via [direct communication with TaxCore.API](#)

NOTE:

Regardless of which scenario was used to initiate the POA cycle, once the commands (containing the POA command) have been generated by the tax authority's system, the cycle can be completed using the other scenario.

POA cycle frequency

Audit Start should be initiated periodically, and the length of the period between two Audit Starts should be set dynamically. In regular conditions, there is no reason to initiate an Audit more often than every 30 minutes; although this can be extended to a period of a couple of hours as well (depending on the turnover). There is no need to initiate unnecessary Audits if the secure element(s) does not register sale amounts that will cause it to cross its assigned limit.

However, if the secure element is reaching its limit, the Audit should be initiated immediately and the period between two Audit Starts should be shortened to 10 minutes (unless there were no new invoices created in that period).

NOTE:

Although the Audit Start should be initiated periodically, audit packages should be submitted continuously, as soon as they are created (regardless of the Audit Start and Audit End).

The TaxCore system needs about 10 minutes to process submitted data and generate a POA command, provided that there are no missing audit packages for that Audit.

Once the Secure Element receives a valid POA, the E-SDC can delete the audit packages included in that Audit.

NOTE:

E-SDC must store the SDC number of the last invoice created before an Audit Start (the last invoice included in that Audit) to know which invoices to delete upon receiving a valid POA.



Be mindful of these cases

Sometimes, audit packages can arrive in TaxCore database after the Start Audit command - in that case, the

system will again need at least 10 minutes after the arrival of the last audit package to generate the End Audit command (**see case 2a below**).

If two Audit Starts are initiated before an End Audit command is generated, the POA for the first Audit Start will not be valid. Only the next POA (covering both Audit Starts) will be valid (**see Case 3 below**). Moreover, the POA for the first Audit Start will be replaced by the next POA, so E-SDC will receive only the latest one. But if E-SDC happens to receive the first POA, it will be invalid and rejected by the Secure Element.

If one or more audit packages issued by the same secure element (same UID) do not arrive in the database, the End Audit command (POA) will never be generated.

Audit cycle cases

This means that there are three possible scenarios for completing the Audit cycle:

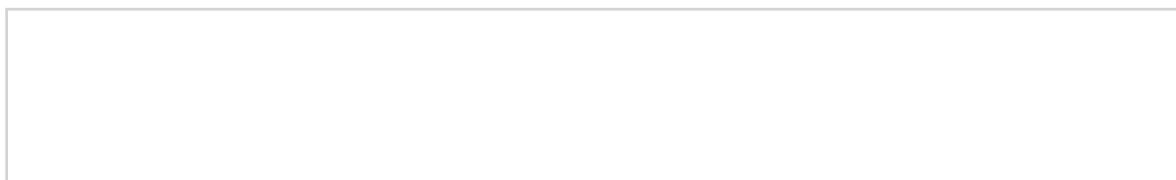
1.
One audit package is created and one Audit Start is initiated between completing two Audit Ends (two POAs) - **see Case 1 below**
2.
Multiple audit packages are created and one Audit Start is initiated between two Audit Ends (two POAs) - **see Case 2 below**
 - o Sometimes, an E-SDC can initiate an Audit Start before submitting all the audit packages from that Audit. In that case, the system will wait for the last audit package from that Audit to arrive before it starts generating the End Audit command (POA) - **see Case 2a below**
3.
Multiple audit packages are created and multiple Audit Starts are initiated between two Audit Ends (two POAs) - **see Case 3 below**

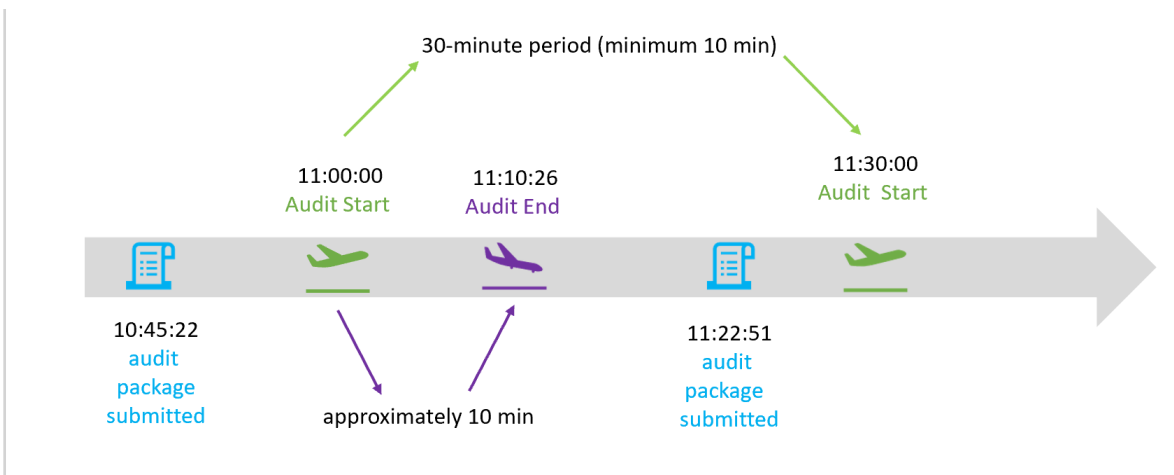
Case 1 – Audit is performed after the creation of each audit package

This is the simplest case, where no additional audit packages are generated during the whole audit process, as follows:

1. Create an audit package
2. Initiate the Audit process by invoking the [Start Audit APDU command](#)
3. Receive POA and pass it to the [End Audit APDU command](#)
4. If EndAudit returns the value "true," you can safely delete the audit package(s)
5. If EndAudit returns the value "false," continue until a valid POA is received
6. The period until the next Audit Start must be **at least 10 minutes (recommended from 30 minutes to a couple of hours)** after the previous Audit Start

The figure below illustrates the process:



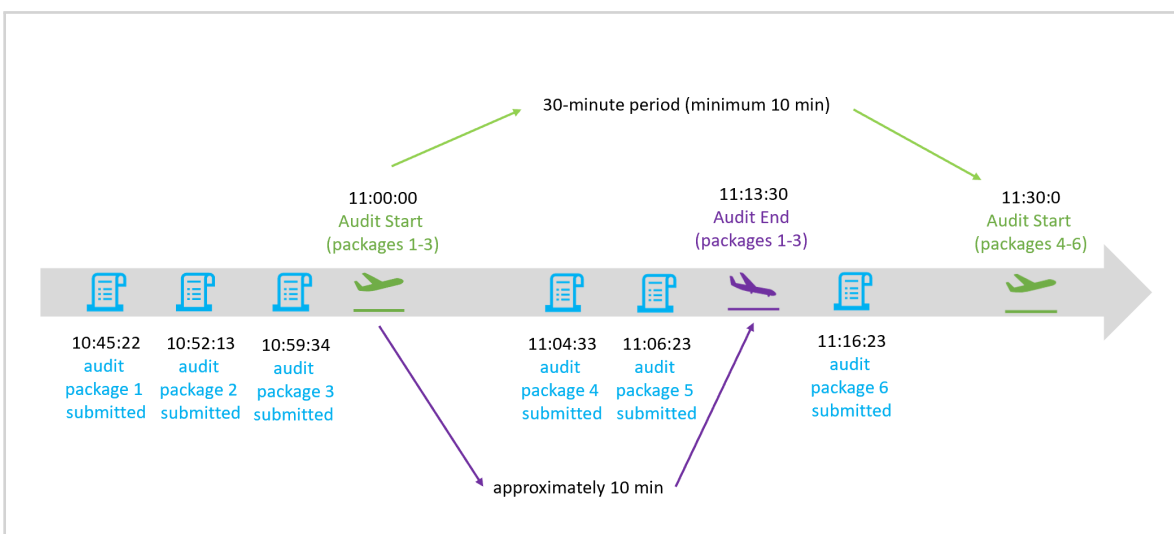


Case 2 – Audit is performed after multiple audit packages have been created

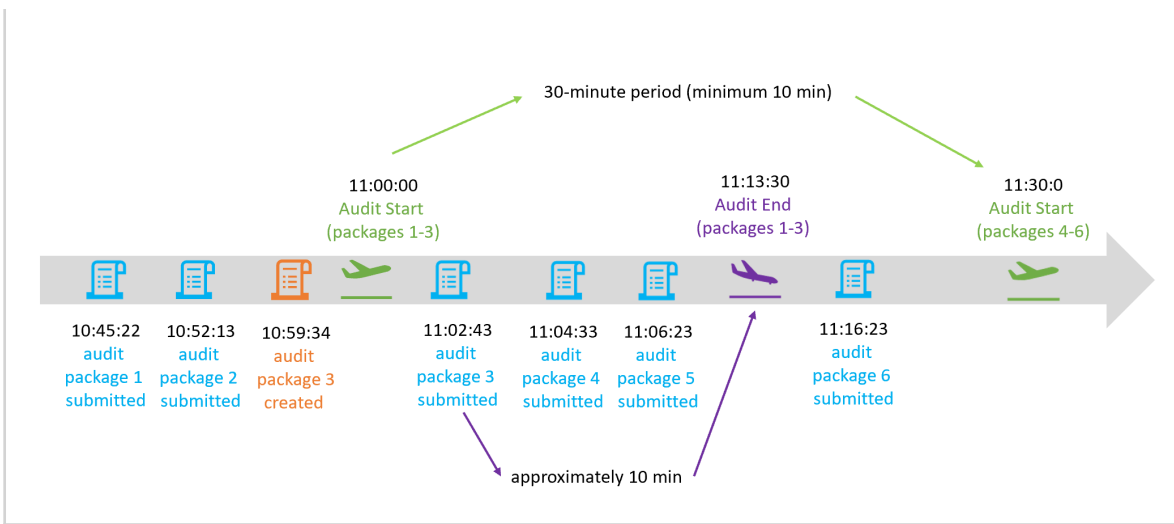
In this case, new packages can be created after an audit start:

1. Create audit packages 1-3 (as shown on the diagram)
2. Initiate the audit process by invoking the Start Audit APDU command
3. Continue to fiscalize invoices and create audit packages 4-6
4. Receive POA and pass it to the End Audit APDU command
5. If EndAudit APDU command returns value true, you can delete remaining audit packages 1-3 because it is the last initial audit being invoked by E-SDC. Audit packages 4-6 are created after the call to BeginAudit APDU command so they are not audited in this cycle
6. If EndAudit APDU command returns value false, continue (return to point 1) until valid POA is received
7. The period until the next Audit Start must be **at least 10 minutes (recommended from 30 minutes to a couple of hours)** after the previous Audit Start

The figure below illustrates the process:



Case 2a - Audit Start is initiated before all audit packages are submitted



Case 3 – Audit is started multiple times before POA is generated

This case involves multiple audit starts:

1. Create Audit Packages 1-3
2. Initiate the Audit process by invoking the Start Audit APDU command
3. Continue to fiscalize invoices and create Audit Packages 4 and 5
4. Initiate another audit process by invoking the Start Audit APDU command – the previous audit is canceled
5. Receive POA and pass it to End Audit APDU command
6. If EndAudit returns value true, you can delete remaining audit packages 1-5 because it is the last BeginAudit being invoked by E-SDC
7. If EndAudit APDU command returns value false, continue until valid POA is received
8. POA generated for the first Audit Start (Audit 1 below) is not considered valid. Only the POA generated for the last Audit Start (Audit 2 below) is considered valid and will be forwarded to the secure element
9. The period until the next Audit Start must be **at least 10 minutes (recommended from 30 minutes to a couple of hours)** after the previous Audit Start.

The figure below illustrates the process:

