

SIGNiX Technical Document

UNDERSTANDING

SIGNiX

AUDIT TRAILS

SIGNiX TOTALAUDIT™

CONFIDENTIAL – V1.2

March 2016

SIGNiX

UNDERSTANDING SIGNIX AUDIT TRAILS

Version	Author	Date	Changes
1.0	John Harris	July 2014	Initial version.
1.1	John Harris	Feb 2015	Updated to include 21 CFR 11 details.
1.2	John Harris	Mar 2016	Added 'Notary Information Added' and 'Preview Completed' events as well as updated details for 'Document Presented.'

Summary

SIGNiX is committed to providing its customers with best-in-class evidence to support digital signatures applied by the SIGNiX service. This evidence is broadly known as SIGNiX TotalAudit™ and includes the following elements:

- **Embedded per-document signature audit trail:** Once a digital signature is applied to a PDF file, the PDF file retains all changes to the document made from that point on. This information can be viewed in the ‘Signature’ panel in most PDF viewers.
- **Embedded per-signature document view:** Every SIGNiX digital signature triggers the PDF file to retain a snapshot of what the document looked like at the point of signature. This information is completely embedded in the PDF file itself and viewable in most PDF viewers by right-clicking on a signature and choosing *View Signed Version*.
- **Transaction Audit Trail:** SIGNiX keeps track of every single event that takes place during a transaction. This history of ‘events’ can encompass processes that extend beyond a single document—it provides comprehensive data about every user, action and document in a SIGNiX transaction, even keeping track of events after a transaction has been completed.

This document will provide additional details regarding the last item in that list, the Transaction Audit Trail.

Available Formats

SIGNiX provides the audit trail in three formats depending on the needs of the client and the means by which the audit trail is retrieved.

- **Digitally Signed XML:** This is the optimal format for the audit trail, allowing clients to easily parse the structured data in the audit trail and include it in their own reporting and analytical toolsets.
- **HTML:** Submitters and administrators can also view the audit trail in a more interactive fashion via the Transaction Status tab. This is accessed by clicking on a specific transaction in the Document Center dashboard and choosing the *View History* button.
- **Digitally Signed PDF:** Parties to a transaction, as well as the Submitter, can download a PDF version of the audit trail by choosing the Download All option in the Document Review screen (for Submitters in the Status tab) after a transaction is complete.

How the Audit Trail Works

Upon transaction start, SIGNiX begins collecting data about every interaction both the Submitter and the Parties have with the transaction. This can include signatures and viewing, but also includes e-consent, opt outs and cancellations or changed parties. The intent is to collect as wide a field of information as possible to provide clients with an optimal set of data points to defend any and all signatures and signed documents from repudiation or challenge.

The SIGNiX audit trail is additive—that is, all changes are appended to the audit trail, not written over. Note that due to the granularity of time recording in the audit trail some events may appear to happen at

the same second, but are in fact happening simultaneously or milliseconds after one another (it is possible for events happening simultaneously to be listed out of order – ie. certificate comes before the signature or vice versa when they actually happened at the same time). SIGNiX recommends that the audit trail be used alongside signed documents in a transaction to provide a complete picture of the transaction in question.

Understanding an Audit Trail Event

Below is a snippet from a sample audit trail. There are several elements to take notice of.

1 2013-06-28 06:45:31 PM GMT		2 Document Presented		3 !!Demo!JHuman6124	
SessionId W/1201/13F8C12C7CE/CEFA1584		4			
Documents	Document RefId	Document Title			
	D01	Commitment Letter Release			

1. Date and time of the event, in 12h format, Greenwich Mean Time.
2. The event type.
3. The UserID of the current Party or Submitter responsible for this action.
4. Session ID

Note that for some events, such as *Email Sent*, the UserID may reflect the last Party in the transaction. For example, in a sequential signing process, if Party A is Bob and Party B is Sarah, when Bob finished his required actions and the system sends an email notification to Sarah to let her know it's her turn to sign, the event will list Bob's UserID, as his completion triggers the email delivery to the next Party.

Note also that IP addresses are captured for each audit event and are available to clients on request. SIGNiX will be making these elements visible in a forthcoming release.

Audit Events, by Type

Note that this may not be a complete list, and it will be updated over time as additional events and capabilities are added.

- *Transaction Accepted by Signix*
- *Email Sent*
- *Esign Consent Accepted*
- *Shared Secret Code Sent*
- *User Entered Shared Secret Code*
- *Certificate Issued*
- *Preview Completed Event*
- *Document Presented*
- *Notary Information Added*
- *Transaction Completed*
- *Transaction Suspended / Resumed*
- *Party (Document) Added / Deleted*

- *Transaction Cancelled*
- *User Opted Out*
- **Signatures**
 - Intent (Authenticated) Signatures:
 - *User Entered PIN*
 - *Signature Creation Authorized*
 - *Document Signed*
 - Non-Intent (Low Authenticated) Signatures
 - *Signature Creation Authorized*
 - *Document Signed*
 - Intent (Authenticated) Endorsement Tasks:
 - *User Entered PIN*
 - *User Acknowledged Viewing Document*
 - Non-Intent (Low Authenticated) Endorsement Tasks
 - *User Acknowledged Viewing Document*

Transaction Accepted by Signix

This audit event marks the beginning of a transaction and includes pertinent information as to the Parties and documents included in the transaction.

2013-06-27 03:34:48 PM GMT																				
DocumentSetId	13f85a8f12-4dc8-2008a5a-na8urt	1																		
TransactionId	MyDoc.....2013-06-27 11:34:47:907	2																		
Sponsor	mydoxaandbox	3																		
ServiceType	SDDDC	4																		
Submitter	John Harris	5																		
SubmitterEmail	johnbharris@gmail.com	6																		
Role	mydoxaandbox	7																		
RefId	JHarris6691	8																		
Parties	<table border="1"> <thead> <tr> <th>Party Name</th> <th>Party RefId</th> </tr> </thead> <tbody> <tr> <td>Jane Human</td> <td>P01</td> </tr> <tr> <td>John Human</td> <td>P02</td> </tr> <tr> <td>Bob Smith</td> <td>P03</td> </tr> </tbody> </table>	Party Name	Party RefId	Jane Human	P01	John Human	P02	Bob Smith	P03	9										
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PDF:13f85a8f12-4dcc-2008a5a-na8urt	D05	IRS 4506-T-Request for Transcript of Tax Return																		

1. **DocumentSetId** – A unique ID number for the transaction (aka document set) set by SIGNiX.
2. **TransactionID** – The title of the transaction as set by the Submitter.
3. **Sponsor** – Client Name
4. **ServiceType** – Standard SIGNiX service.
5. **Submitter/SubmitterEmail** – Full Name and Email Address of the Submitter
6. **Role** – Identical to Client, unless otherwise set
7. **RefId** – Referrer ID – UserID of the Submitter
8. **Parties** – Full Names of Parties in the Transaction, along with the Reference IDs for each (P01, P02...)
9. **Documents** – A list of all of the documents included in a transaction. Each document has a unique Document Id set by SIGNiX as well as a Reference ID (D01, D02...) and Document Title set by the Submitter.

Email Sent

This audit event is triggered every time an email is sent by the SIGNiX service.

2014-07-11 08:44:42 PM GMT		Email Sent	
SessionId	W/1203/147272B0532/5E4C6AD4		
	Party Name	Jane Human	
	Email Address To	jbhdemo1@gmail.com	
Email	Email Address From	"MyDoX Sandbox Online Signatures" <demo@signix.com>	
	Body	Dear Jane Human, Your documents are available online for viewing and signing. To access your document, cli i=z0PERnF0atjL5lZtvp0Bpt PLEASE NOTE: If you are not the correct person to sign these documents, please i=z0PERnF0atjL5lZtvp0Bpt&delegate=yes If you have any questions, please contact your representative at job	
Reason	PickUp link generated for P01		

It includes the following information.

- **Party Name:** The name of the Party to whom the email is sent.
- **Email Address To/From:** The email addresses on the To and From lines.
- **Body:** The complete body text of the email. (Feature added in late 2013.)
- **Reason:** Explains the nature of the email.

Reason codes are listed below:

PickUp link generated for P**	This is the first email a Party will receive, letting him or her know there are documents to review and sign. This email includes the PickUp link or URL to the signing portal and transaction.
Thank you mail for completing task for P**	Once a Party has completed his or her tasks in a transaction, an email is sent to thank him or her for their work.
Document set sent to the parties on the CC list	If email addresses have been added to the CC list, once the transaction is complete an email will be sent to each of these parties with all of the signed documents as attachments.

Emails sent as a result of an Opt Out or Transaction Completion are not recorded in the audit trail per se, though the event itself *is* recorded.

Esign Consent Accepted

This audit event records when a user has consented to the use of electronic signatures and documents by choosing 'Accept' on the consent dialog.

2013-06-28 06:43:57 PM GMT	
SessionId	W/1201/13F8C12C7CE/CEFA1584
Service Type	SharedSecret

ServiceType indicates the type of authentication required for the Party.

SelectOneClick	Email or shared question and answer-level authentication
SharedSecret	Authentication via SMS text message
SelectID	Authentication via knowledge-based authentication (KBA), otherwise known as out-of-household questions.

More information on authentication types can be found in other SIGNiX documentation.

Shared Secret Code Sent

This audit event records when a random 6-digit password is sent to a Party's mobile number for authentication.

The Party ID, Party Name and mobile number of the Party (as entered by the Submitter) are listed in this audit event.

2013-06-28 06:42:50 PM GMT	
SessionId	W/1201/13F8C12C7CE/CEFA1584
Party ID	P01
Party Name	Jane Human
Party Mobile	4083481585
Description	Secret Code generated first time

User Entered Shared Secret Code

This audit event records when a user successfully enters the password sent to him or her via SMS text message (as shown in *Shared Secret Code Sent*).

2013-06-28 06:43:57 PM GMT	
SessionId	W/1201/13F8C12C7CE/CEFA1584
Type	Direct
Authority	signix
Party Name	Jane Human
MethodId	SharedSecret

Certificate Issued

This audit event records the creation of the user's digital certificate and identity within the SIGNiX service for the particular Sponsor (client of SIGNiX).

Contained in this audit event are several elements that are commonly used in x.509v3 digital certificates:

1. **Issuer:** Information about the Issuer of the certificate and identity.
2. **Serial Number** of the certificate
3. **Subject** fields included in the digital certificate.

2013-06-28 06:48:45 PM GMT	
SessionId	W/1201/13F8C12C7CE/CEFA1584
Issuer	CN=Signix Operational CA II, OID.2.5.4.65=SignixOperCA-II, OU=Signix Trust Services, O=Signix Inc, L=Chattanooga, ST=TN, C=US ①
Serial Number	435232200000013f04fb367000000000018af5 ②
Subject	CN=John Human, OID.0.9.2342.19200300.100.1.1=!!Demo!JHuman0795, OU=Signix User, OU=DEMONSTRATION USE ONLY, O="Signix, Inc.", L=Chattanooga, ST=TN, C=US ③

Preview Completed Event

This audit event records when a party has completed viewing all documents ahead of signature as required by the DocPreview™ capability.

Document Presented - *deprecated*

NOTE: This event is not as prominent in the new signing experience introduced in January 2015, as now ALL documents are presented to the user at the same time, rather than one at a time as was the case in the previous version of the software.

This audit event records when a document within a transaction is rendered and presented to a Party for review and action. The event lists the document Reference ID and Title.

Notary Information Added

This audit event records information that a notary party will add to a transaction during an electronic notary session, including venue, fee assessed, email of the notary party, the notary act type and then specific information regarding how parties were identified during the notarization.

2016-01-29 07:31:57 PM GMT		Notary Information Added				!!Demo!!JHarris72215n7363	
NotaryPartyId	P02						
NotaryPartyName	John Harris72215n						
Venue	Alexandria, VA						
FeeAssessed	\$25						
NotaryPartyEmail	jbhdemo2@gmail.com						
NotaryActType	POA						
Parties	Party Name	Party RefId	Id Method	Additional Info	Address		
	Leopold Demosmith	P01	Remote - KBA (Knowledge-based Authentication)	n/a	n/a		

User Opted Out

This audit event records when a user exits the e-signature process and chooses from a selection of options to explain why he or she is leaving the process. The event itself records the reason why and the explanation, if the user provided one. The various options and results are explained in more detail in the **SIGNiX Exit E-Signature Options** document.

Transaction Completed

This audit event records when all Parties have completed their required actions on the documents within a transaction and the workflow is complete. Note that the audit trail will continue to record Parties accessing and viewing the documents even after transaction completion.

Transaction Suspended / Resumed

A Submitter can at any time suspend and then resume a transaction. This is often done to change a faulty email address or add a new party or document to a transaction. This audit event records when the transaction was suspended / resumed.

Party (Document) Added and Party (Document) Deleted

2013-08-05 05:12:08 PM GMT		Party Added	
SessionId W/1201/1404F3F51F4/A60193B5			
Party	Party Name	Party RefId	
	Bob Smith	P03	
2013-08-05 05:12:16 PM GMT		Document Added	
SessionId W/1201/1404F3F51F4/A60193B5			
Document	Document Id	Document RefId	Document Title
	PDF:1404e0a194f-5a75-9f74441a2x3f39	D02	Notice Regarding Use of a Demo Bill of Sale

After a transaction has been started, it's possible that a Submitter may suspend a transaction in order to change aspects of the workflow. This might include adding or deleting documents or Parties in a transaction. These audit events record the addition or deletion of Parties and/or documents by the Submitter. The information of the Party or document is included in these audit events.

Transaction Cancelled

This audit event records when a Transaction is cancelled either through Submitter action, a Party opting out, or natural expiration of the transaction. The only additional information recorded for this event is in the case of a user choosing an opt out that automatically cancels the transaction.

2013-04-11 07:56:41 PM GMT		Esign Consent Accepted	!!Demo!!JHuman0540
2013-04-11 07:56:41 PM GMT		User Entered Shared Secret Code	!!Demo!!JHuman0540
2013-04-11 07:57:14 PM GMT		Transaction Cancelled	!!Demo!!JHuman0540
Reason: Wish to Opt Out & Note Sign on Paper User writes: I don't want to do this online.			
2013-04-11 07:57:14 PM GMT		User Opted Out	!!Demo!!JHuman0540
SessionId W/1201/13DFAABA7F/IF5413D46			
Party	Party Name	Party RefId	
	Jane Human	P01	
Reason	Wish to Opt Out & Sign on Paper		
Explanation	I don't want to do this online.		

Signatures on the Audit Trail

Depending on the type of authentication chosen by the Submitter for a particular Party, different signature modes are activated. For higher levels of authentication—for example, SMS text message and KBA—SIGNiX uses so-called 'intent' signatures, where users are required to re-enter their Signing PIN when they sign a document to clearly communicate their intention to execute the document or terms in question. For these types of signatures, there are three specific audit events recorded for EACH signature or initial: *User Entered PIN*, *Signature Creation Authorized*, and *Document Signed*. This represents the input of the Signing PIN, the clicking of the 'Click Here to Sign' button, and the actual cryptographic digital signature itself.

For lower forms of authentication—email verification and shared Q&A—SIGNiX uses a simpler signing process that does not require the entry of a Signing PIN for each signature. For these signatures, only two events are recorded for each signature: *Signature Creation Authorized* and *Document Signed*. In fact, if a

Party has multiple signatures on the same document, *Signature Creation Authorized* will be recorded once and *Document Signed* as many times as there are signatures or initials on the document.

+ 2013-08-05 04:58:23 PM GMT	Signature Creation Authorized
+ 2013-08-05 04:58:24 PM GMT	Document Signed
+ 2013-08-05 04:58:24 PM GMT	Document Signed
+ 2013-08-05 04:58:24 PM GMT	Document Signed

In the example to the left, a document has been signed three times by the same party. *Signature Creation Authorized* is listed once, but *Document Signed* is listed three times.

Signature-specific audit events are described below.

User Entered PIN

This audit event records when a user enters his or her Signing PIN to authorize a digital signature.

Signature Creation Authorized

This audit event records when a user specifically authorizes the creation of a signature by clicking the Click Here to Sign or related controls.

2013-06-28 06:46:11 PM GMT	
SessionId	W/120113F8C12C7CE/CEFA1584
AuthorizationMethod	PIN
Party Name	Jane Human
SignerId	!Demo\JHuman6124
FieldId	Signature_6272013102645
Documents	Document RefId
	Document Title
	Commitment Letter Release

The audit event includes the following information:

- **Party Name**
- **SignerId** – The User ID of the Party
- **FieldID** – The ID number associated with the specific PDF signature field.
- **Documents** – The information relating to the document being signed.
- **Reason** – Specific to FDA 21 CFR 11 workflows. Displays the reason for the signature, and also whether it was chosen by the signer or the submitter.

Document Signed

This audit event records when SIGNiX actually digitally (cryptographically) signs a document.

where a user is required to re-enter their Signing PIN when they agree to or acknowledge reading a document to clearly communicate their agreement or acknowledgement. For these types of endorsement tasks, there are two specific audit events recorded for EACH endorsement task: *User Entered PIN* and *User Acknowledged Viewing Document*. This represents the input of the Signing PIN and the actual Agree/Acknowledge step.

For lower forms of authentication—email verification and shared Q&A—SIGNiX uses a simpler endorsement process that does not require the entry of a Signing PIN for each signature. For these tasks, only one event is recorded for each endorsement: *User Acknowledged Viewing Document*.

User Acknowledged Viewing Document

This audit event records when a user agrees to or acknowledges viewing a document presented to him or her.

2013-06-28 06:51:05 PM GMT		User Acknowledged Viewing Document		!!Demo!!BSmith2851
SessionId	W/1201/13F8C12C7CE/CEFA1584			
Party Name	Bob Smith			
Documents	Document Id	Document Refid	Document Title	
	PDF:13f85a8f1f24dc82008a5a-na8urt		Commitment Letter Release	

The event contains the Party Name as well as the Document Id, Reference ID and title of the document being agreed to or acknowledged.