



AUDIT TRAIL

Compliance under CARO 2020
and practical Challenges

SESSION AGENDA FOR DISCUSSION

MEANING OF AUDIT TRAIL

REGULATORY IMPLICATIONS

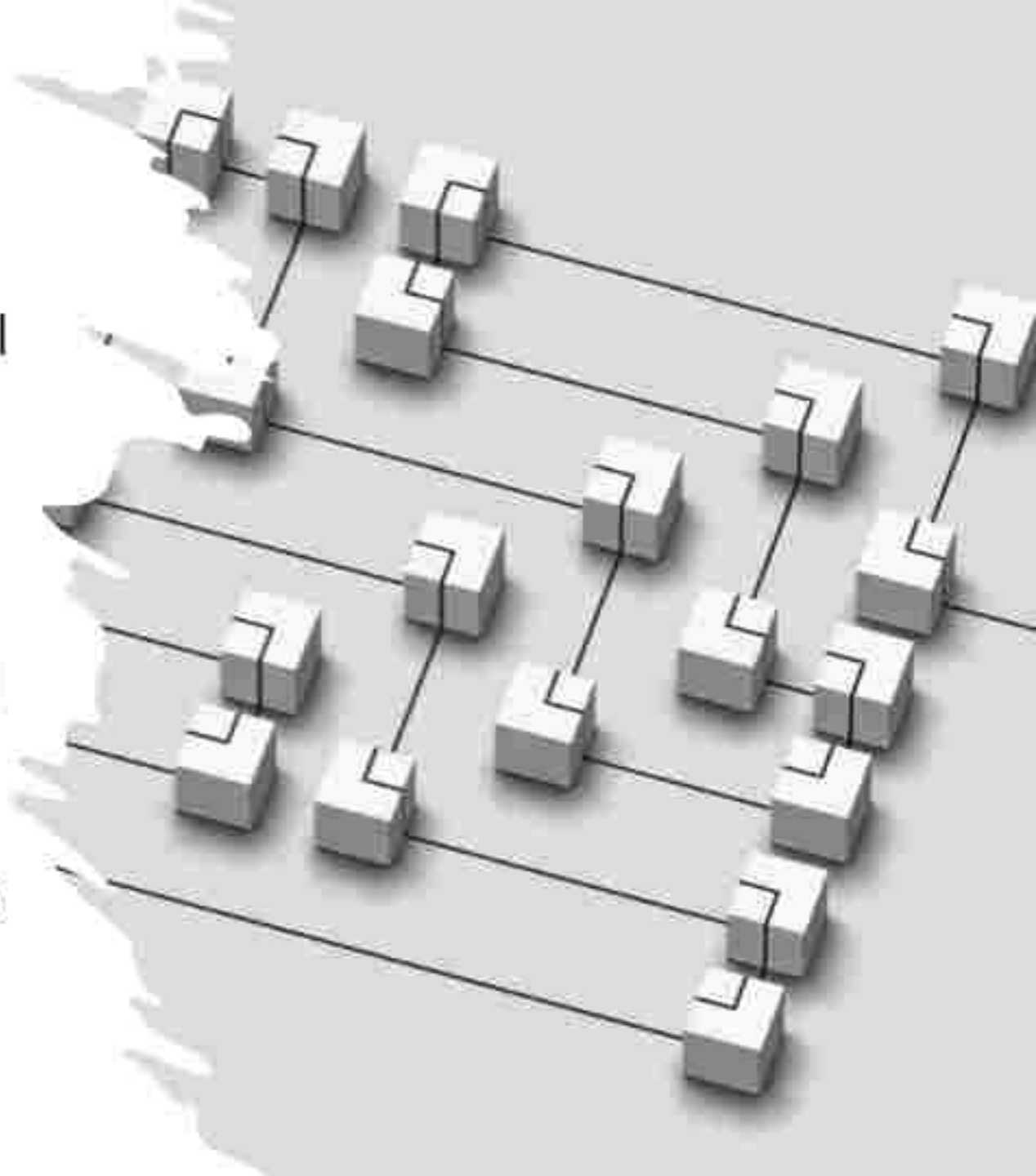
**CASE STUDIES AND
PRACTICAL CHALLENGES**



<https://www.youtube.com/watch?v=HvhwywuufMA> (9.19 to 13.26)

WHAT IS AUDIT TRAIL?

- Audit Trail (or Edit Log) is a visible trail of evidence enabling one to trace information contained in statements or reports back to the original input source.
- Audit trails are a chronological record of the changes that have been made to the data. Any change to data including creating new data, updating or deleting data that must be recorded



- Various types of logs: debug messages, exception Stacktraces, etc
- Useful for history review

- Logged queries
- Change data capture
- Change tracking functionality
- Audit trail functionality

Application logs

Database logs

Application-specific audit trail

- business-relevant events
- logged in text files or in separate database tables
- allow history review

Audit Trail
in IT context

Operating system logs

- Security / System logs

Network logs

- routers / firewalls activity

Access logs

- Access per user / IP

SEBI (Prohibition of Insider Trading) Regulations, 2015- AUDIT TRAIL FOR DIGITAL DATABASE

- "unpublished price sensitive information" means any information, relating to a company or its securities, directly or indirectly, that is not generally available which upon becoming generally available, is likely to materially affect the price of the securities and shall, ordinarily including but not restricted to, information relating to the following: –(i)financial results;(ii)dividends;(iii)change in capital structure; (iv)mergers, de-mergers, acquisitions, delistings, disposals and expansion of business and such other transactions; (v)changes in key managerial personnel.
- The board of directors or head(s) of the organisation of every person required to handle unpublished price sensitive information shall ensure that a structured digital database is maintained containing the nature of unpublished price sensitive information and the names of such persons who have shared the information and also the names of such persons with whom information is shared under this regulation along with the Permanent Account Number or any other identifier authorized by law where Permanent Account Number is not available. Such database shall not be outsourced and shall be maintained internally with adequate internal controls and checks such as time stamping and audit trails to ensure non-tampering of the database



S.No	Nature of UPSI	Project Name	Date of Sending	Name of Sender	Action
UPSI-1	Dividends, Financial results	Sdd Project	Sep 20, 2022	sdd@demo.com	  
UPSI-2	Dividends, Financial results	Sdd Project	Sep 20, 2022	sdd@demo.com	  

As per Law, SDD shall contain:

Log of UPSI Transfer

Details of communication of Identified Unpublished Price Sensitive Information (UPI) /

Identifiers of parties

Full or partial identifiers of the sender and recipient of UPSI to be stored



Details of UPSI

Nature of UPSI and the purpose of which the UPSI was shared with the recipient

Audit trail

Date and time of making entries in SDD to be captured along with the actual date and time when the UPSI was shared. Audit trail shall be

Information systems audit policy for the banking and financial sector -RBI Guidelines on IS Audit and Cyber Security

The IS auditors should verify whether:

- a) The audit trail report generates the user ID of the operator and the official for any addition / modification / deletion of the transaction data effected in the database.
- b) Audit trail report is generated daily. Entries are scrutinized and verified.
- c) Audit trail report indicates the evidence/information of unauthorized access outside application menu.
- d) List of the cancelled entries is scrutinized and reasons for cancellation are recorded.

Compliance Implications for CA/CS professionals

- Educate the Client on Implication and Road Map for Implementations
- As per Section 92 of the Companies Act, 2013 (the Act, 2013), the Annual Return is required to be signed by a Company Secretary and in the absence of a Company Secretary by a PCS. The annual return discloses the facts correctly and adequately and that the company has complied with all the provisions of this Act
- Signing of Balance Sheet by full time CS in Employment as KMP
- The details in respect of adequacy of internal financial controls with reference to the Financial Statements to be reported in Directors report as per Rule 8(5) of the Company Account Rules, 2014.
- That the directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively-Section 134.
- Explanations or comments by the Board on every qualification, reservation or adverse remark or disclaimer made by the auditor in his report & by the company secretary in practice in his secretarial audit report.
- Obtain Management Representations while signing and certifying
- Rely on Work of IT Experts and Reports, if required
- Reporting by Statutory Auditors on Compliance as per Rule 11(g) in Audit Report
- Filing of AOC-5 for Books of Accounts location



NEED FOR AUDIT TRAIL

- Curb back-dating of transactions
- System Transparency
- User Accountability
- Reconstruction of Events in case of digital forensics or fraud investigation
- Minimizing Fraud
- Data is secure, and users are doing what they're supposed to

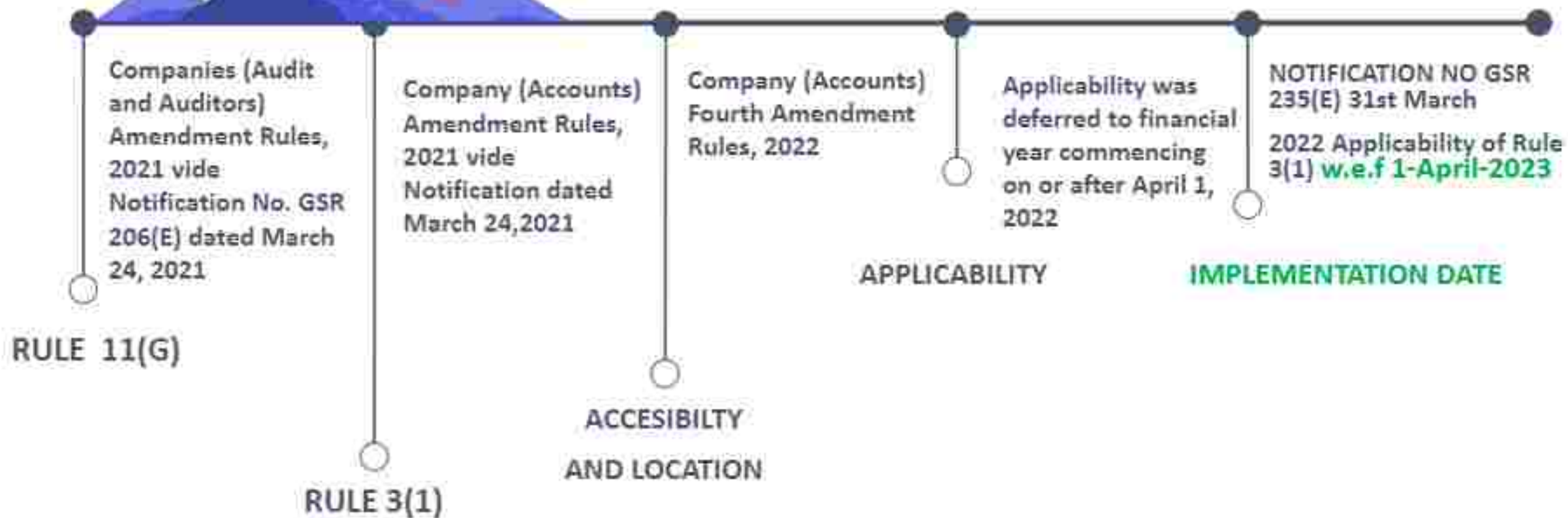
KEY ACCOUNTINGS RISKS ILLUSTRATIONS- FROM TRIAL TO TRAIL?

- Adjustments in related Party Transactions to Adjust/avoid Omnibus Approval Limits
- Negative cash balance in accounting software subsequently rectified by the accountant by entering cash receipts on a later date in back date
- Cash transactions entered after the year end to adjust the profits
- Back dated entries after year end to adjust the profits
- Cancellation of vouchers at the year end to reduce income or reduce expenses
- Splitting the transactions subsequently to avoid disallowances under income tax





JOURNEY SO FAR



RULE 3(1) OF COMPANIES (ACCOUNTS) RULES, 2014

(1) The books of account and other relevant books and papers maintained in electronic mode shall remain **[accessible in India, at all times]** so as to be usable for subsequent reference.

[Provided that for the financial year commencing on or after the ⁶[1st day of April, 2023] every company which uses accounting software for **maintaining its books of account**, shall use only such accounting software which has a feature of **recording audit trail of each and every transaction**, creating an **edit log of each change** made in books of account along with the date when such changes were made and ensuring that the **audit trail cannot be disabled.**]

Provided that the back-up of the books of account and other books and papers of the company maintained in electronic mode including at a place outside India if any shall be kept **in servers physically located in India on a ⁵[daily basis].**

(e) where the **service provider is located outside India**, the name and address of the person in control of the books of account and other books and papers in India.]





Definition of Books of Accounts as per Section 2(13) of the Act

"Books of account" includes records maintained in respect of-

- (i) all sums of money received and expended by a company and matters in relation to which the receipts and expenditure take place;
- (ii) all sales and purchases of goods and services by the company;
- (iii) the assets and liabilities of the company; and
- (iv) the items of cost as may be prescribed under section 148 in the case of a company which belongs to any class of companies specified under that section;

Key Definitions Information Technology Act, 2000

- “electronic record” means data, record or data generated, image or sound stored, received or sent in an electronic form or micro film or computer generated micro fiche
- The authentication of the electronic record shall be effected by the use of asymmetric crypto system and hash function which envelop and transform the initial electronic record into another electronic record.
- Section 7: Retention of Electronic records: The electronic record is retained in the format in which it was originally generated, sent or received or in a format which can be demonstrated to represent accurately the information originally generated, sent or received

IS IT APPLICABLE TO ALL CLASS COMPANIES AND LLP?

- The reporting requirements have been prescribed for audit of financial statements prepared under the Act.
- Auditors of all class of companies including section 8 companies would be required to report on these matters.
- As per the Companies (Registration of Foreign Companies) Rules, 2014, the provisions of "Chapter X of the Act: Audit and Auditors" and Rules made there under apply, mutatis mutandis, to a foreign company as defined in the Act.
- Reporting on compliance with Rule 11(g) would also be on the basis of the reports of the statutory auditors of subsidiaries, associates and joint ventures that are companies defined under the Act.
- **IS IT APPLICABLE TO LLP? No**

- ✓ All Public and Private Limited Companies
- ✓ One Person Companies (OPCs)
- ✓ Companies owned by Government of India
- ✓ State Government Companies
- ✓ Not-for-Profit Companies/Organization
- ✓ Nidhi Companies

Management Responsibility as per Proviso to Rule 3(1) of Companies (Accounts) Rules,

- The amendments require every company that uses an accounting software to use such software that has a feature of **audit trail** which **cannot be disabled**.
- Management, who is primarily responsible for ensuring selection of the appropriate accounting software for ensuring compliance with applicable laws and regulations (including those related to retention of audit logs).
- Any software that maintains records or transactions that fall under the definition of **Books of Account as per the section 2(13) of the Act** will be considered as accounting software
- Accounting software may be hosted and maintained in India or outside India or may be on premise or on cloud or subscribed to as Software as a Service(SaaS) software

Matters to be included in Auditors Report

- Section 143(3) of the Companies Act, 2013 ("the Act") provides various matters on which auditors are required to report in their auditor's report. Clause (j) of Section 143(3) states that auditor's report shall also state such other matters as may be prescribed. Rule 11 of the Companies (Audit and Auditors) Rules, 2014 specifies such other matters that are to be reported by the auditor.




125,058	110,000	95,054	124,500
125,487	150,000	97,511	125,000
124,000	35,000	99,011	154,000
150		99,216	95,000
		101,090	154,200
		101,684	110,000
		101,962	89,000
			50,000
			12,700

Companies (Audit and Auditors) Amendment Rules, 2021- Rule 11(g)

(g) Whether the company has used such accounting software for maintaining its books of account which has a feature of recording audit trail (edit log) facility and the same has been operated throughout the year for all transactions recorded in the software and the audit trail feature has not been tampered with and the audit trail has been preserved by the company as per the statutory requirements for record retention.”.

[F. No.1/33/2013.CL-V (Part)]


24/3/2021
K.V.R. Murty,

Joint Secretary to the Government of India

AUDITORS RESPONSIBILITY UNDER RULE 11(g)

Specific assertion in the audit report under the section 'Report on Other Legal and Regulatory Requirements on below parameters:

1. Whether the audit trail feature is configurable
2. Whether the audit trail feature was enabled/operated throughout the year?
3. Whether all transactions recorded in the software are covered in the audit trail feature?
4. Whether the audit logs can be tampered?
5. Whether audit trail is enabled for such transactions which result in a change to the books of account?
6. Whether the audit trail has been preserved as per statutory requirements for record retention?

(Section 128(5) of the Act, which requires books of account to be preserved by companies for a minimum period of eight years, the company would need to retain audit trail for a minimum period of eight years i.e., effective from the date of applicability of the Account Rules (i.e., currently April 1, 2023, onwards).

Auditor's responsibility under the Audit Rules includes transactions which have been recorded in the accounting software and subsequent changes made to those transactions?

MAPPING OF SYSTEMS AND SOFTWARE IMPACTING FINANCIAL RECORDS

Name of the Accounting Software	Records Maintained (Books Of account)	Hosting Location	Maintained In House or Outsourced	Data Base	Operating System	Audit Trail Enabled
TALLY ERP	Journal entries, Subledgers and General Ledger	Company Data Center, Mumbai	In-House	ASP.NET	Windows 10	Yes
ZOHO	Inventory and Payroll	Saas/On Cloud	Outsourced Maintained by Service provider	Java	Windows 10	Yes
FAR	Fixed Assets	Saas/On Cloud	Outsourced Maintained by Service provider	Java	Windows 10	Yes
Payroll and Biometric System	Payroll ,Employee Master details and Attendance Records	Saas/On Cloud	Outsourced Maintained by Service provider	Java	Web Based	No



DO WE HAVE DIFFERENT IMPLEMENTATION DATE FOR 11(g) AND RULE 3(1)?

- As per the requirements as mentioned in Rule 11(g) audit reporting will be triggered for financial years commencing on or after April 1, 2022, however, the applicability of the Account Rules 3(1) will commence on or after April 1, 2023.
- For the financial year 2022-23 where in absence of compliance requirement for the companies are auditors require to report under the Audit Rules?
- Are rule prospective or retrospective?
- Auditor may refer this in F.Y 2023-24 audit for opening balances review.

"As proviso to rule 3(1) of the Companies (Accounts) Rules, 2014 is applicable for the company only w.e.f. April 1, 2023, reporting under this clause is not applicable"

Compliance Checkpoints

- Identify the records and transactions that constitute books of account under section 2(13) of the Act
- identify the software i.e., IT environment including applications, web-portals, databases, Interfaces, Data Warehouses, data lakes, cloud infrastructure, or any other IT component used for processing and or storing data for creation and maintenance of books of account;
- Ensure such software have the audit trail feature
- Ensure that the audit trail captures changes to each and every transaction of books of account
- ensure that the audit trail feature is always enabled (not disabled);
- ensure that the audit trail is enabled at the database level (if applicable) for logging any direct data changes
- ensure that the audit trail is appropriately protected from any modification
- ensure that controls over maintenance and monitoring of audit trail and its feature are designed and operating effectively throughout the period of reporting

• changes were made

WHEN



• made those changes

WHO



• data was changed

WHAT



Compliance Checkpoints

- Obtain Logs for year end or reporting Data Balance for Key Transactions reported or certified like Cash Balance, related Party Balances, Stock Balances, Fixed Assets etc.
- Review Ageing Report Balances
- Data Splitting and EOD Run for F.Y 21-22 Balances to review the opening balances audit logs (To Note the Split date for reporting perspective?)
- Auditors to have separate login IDs in system to view the audit trails from the applications
- Check policy on Book Closure date and Hard Closure in System to avoid back dated entries beyond specific period.



IT CONTROL CHECKPOINTS

Controls to ensure that User IDs are assigned to each individual and that User IDs are not shared

Controls to ensure that changes to the configurations of the audit trail are authorized and logs of such changes are maintained.

Controls to ensure that access to the audit trail (and backups) is disabled or restricted and access logs, whenever the audit trails have been accessed, are maintained.

Controls to ensure that periodic backups of the audit trails are taken and archived as per the statutory period specified under Section 128 of the Act.

The management of the company may have put in place certain controls such as restricting access to the administrators and monitoring changes to configurations that may impact the audit trail.



Audit Trail in Accounting Applications- Illustrations

Tally

ZOHO

SAP

Oracle

Core Banking Solutions (Finacle)

Block Chain Technology

Robotic Process Automation

Artificial Intelligence and Machine Learning Tools

Activity Logs

Activity Logs

[+](#) [Share](#) [↑](#) [🗨](#)[Filter](#) [Sort](#) [Add](#) [Delete](#) [More](#)

<input type="checkbox"/>	<input type="checkbox"/>	Date & Time ↑	Performed By	User Id	Category	Action	Workspace Name	View Name	More Details	Remarks	IP Address
1		19 Oct, 2021 20:02:35	linda@zyllker.com	108	View Actions	MODIFYVIEW	Workspace - Sales	Sales vs Cost		Modified a View	fe80:0:0:0:7923:82
2		19 Oct, 2021 20:02:13	monica@zyllker.com	108	View Actions	CREATEORMODIFY	Workspace - Sales	Cost Analysis Dashboard	{"USEDIT":true}	Created/Modified Dashboard	fe80:0:0:0:7923:82
3		19 Oct, 2021 20:01:46	johnm@zyllker.com	108	Table Actions	UPDATEROW	Workspace - Sales	Sales	{"MODIFIEDROWS":1}	Modified Row(s)	fe80:0:0:0:7923:82
4		19 Oct, 2021 20:00:47	linda@zyllker.com	108	Share	SHAREVIEWS	Workspace - Sales		{"EMAILIDS":["britto@zyllker.com"],"Sales and Cost for Years and Product Category by Region"}	Shared Views	fe80:0:0:0:7923:82
5		19 Oct, 2021 19:59:35	johnm@zyllker.com	108	Export and Email	EXPORT	Workspace - Sales	Sales Analysis Dashboard	{"VIEWNAMES":["Sales Analysis Dashboard"],"EXPORTTYPE":["HTML"],"MULTIVIEW":{"false"},"SETPASSWORD":{"false"}}	Views exported	fe80:0:0:0:7923:82
6		19 Oct, 2021 16:04:44	linda@zyllker.com	108	View Actions	CREATEORMODIFY	Audit logs	Access log Analytics	{"USEDIT":true}	Created/Modified Dashboard	fe80:0:0:0:7923:82

[Rows: 10](#)

Differences Between Edit Log Versions

Version : 5		Version : 6	
Activity : Resaved (No changes)		Activity : Altered	
Username : Admin	Date & Time : 10-Mar-22 9:34	Username : Clinton	Date & Time : 10-Mar-22 15:30
Particulars	Value	Particulars	Value
Date	15-Apr-21	Date	16-Apr-21
Bill of Lading Date		Bill of Lading Date	16-Apr-21
GST registration type	Regular	GST registration type	Regular
VAT Dealer Type	Regular	VAT Dealer Type	Regular
State Name		State Name	Chandigarh
Voucher type name	Sales	Voucher type name	Sales
Narration	The item needs to be dispatched via Dombey Courier Services.	Narration	The item needs to be dispatched on 16-April -2021 through Dombey Courier Services to be delivered within 5 days.
Country of Residence	India	Country of Residence	India
Party GSTIN		Party GSTIN	04AABCU9603R1ZV
Place of Supply		Place of Supply	Chandigarh
Party name	Circumlocution Brothers Limited	Party name	Circumlocution Brothers Limited
Party ledger name	Circumlocution Brothers Limited	Party ledger name	Circumlocution Brothers Limited
Party Mailing Name	Circumlocution Brothers Limited	Party Mailing Name	Circumlocution Brothers Limited
Party Pincode	160022	Party Pincode	160022
Consignee GSTIN	04AABCU9603R1ZV	Consignee GSTIN	04AABCU9603R1ZV
Consignee Mailing Name	Circumlocution Brothers Limited	Consignee Mailing Name	Circumlocution Brothers Limited
Consignee Pincode	160022	Consignee Pincode	160022
Consignee State Name	Chandigarh	Consignee State Name	Chandigarh
Voucher number	7	Voucher number	8
Base party name	Circumlocution Brothers Limited	Base party name	Circumlocution Brothers Limited

Workload in System QE1

☐ Full Screen On/Off ☐ Save view

Expert mode

- Workload
- Systemview QE1_30
- Time

Instance	TOTAL	First record	13.06.2019	00:00:00
Period	13.06.2019	Last record	13.06.2019	23:59:59
Task type	NONE	Time period	1	Days 00:00:00

☐ Time ☐ Database ☐ Parts of consumed time ☐ SQL-Statements ☐ All data

☐ Task type ☐ Aggregation ☐ Single Records

Transaction profile: Times: T Total time (s), Ø Time/step (ms)

Report or Transaction name	Name of background job	# Steps	T Response Time	Ø Time/Step	Min	Max	Avg. Resp. Time	T CPU	Ø CPU	T DB Time	Ø DB Time	T Time	Ø Time	T All total Time
SAT		30	11,094	201,667.1	5,366	127,788.8	6,364	127,277.3	3,078	73,563.2	0.0	0.0		16
SAPICSO		14,330	2,090	498.0	6,190	435.4	1,145	60.5	680	43.7	0.0	0.0		0
TOPKATIONALV		406	6,521	16,060.0	5,723	14,308.3	5,718	14,063.7	727	1,791.6	0.0	0.0		71
UFAHREIST		317	5,030	14,925.4	4,379	12,966.6	1,722	5,188.6	518	1,540.3	0.0	0.0		141
AutoAAP		576	2,645	6,327.3	1,611	6,208.4	198	330.2	27	48.4	0.0	0.0		0
ISTROWABH		513	1,800	1,908.7	184	203.1	8	13.2	8	0.0	0.0	0.0		906
SESSION_MANAGER		160	600	5,009.6	764	4,772.4	5	32.1	7	15.0	0.0	0.0		25
SAPMCTP		6,203	507	81.7	448	72.4	263	42.4	58	6.1	0.0	0.0		3
SAPLSTUB		280	162	301.3	167	308.5	40	211.9	0	0.0	0.0	0.0		0
WEC		402	360	308.2	38	95.2	32	79.2	45	118.9	0.0	0.0		77
STMS		60	158	8,330.3	52	206.8	8	122.4	8	86.0	0.0	0.0		100
ADMS		187	129	769.7	11	61.5	18	57.9	7	12.3	0.0	0.0		115
[MATCH]		2,210	120	54.1	66	38.7	38	18.1	22	9.7	0.0	0.0		0
SWMC_TOOL_STARTER	SAP_COLLECTOR_PERFORM_RSDWRFV	12	98	4,427.4	57	4,394.8	56	4,317.2	0	37.5	0.0	0.0		6
SE00N		257	87	100.0	11	29.8	9	25.5	2	5.8	0.0	0.0		44
VA22		273	56	202.9	27	99.2	23	79.8	14	41.6	0.0	0.0		13
SWMC001		24	55	2,270.8	43	1,308.8	40	1,455.2	12	492.5	0.0	0.0		0
SWMC_TOOL_STARTER	SAP_COLLECTOR_PERFORM_SWMC001	24	50	2,069.3	49	2,031.1	0	16.7	1	21.0	0.0	0.0		0
SWMC_TOOL_STARTER	SAP_COLLECTOR_PERFORM_RSDWRFV	24	49	2,033.8	48	2,005.4	47	1,971.8	1	24.1	0.0	0.0		0
SWMC_TOOL_STARTER	SAP_COLLECTOR_PERFORM_RSDWRFV	24	39	1,812.5	22	934.8	22	804.2	16	573.9	0.0	0.0		0
SAPMS00		22	35	1,812.0	17	754.4	1	40.5	1	41.6	0.0	0.0		18

Analysis View

- Workload Overview
- Transaction Profile
 - Standard
 - EarlyWatch
 - Time Profile
 - Running Lists
 - Memory Use Statistics
 - WEC Profile
 - User and Settlement St.
 - Ag. User Profile
 - Settlement Statistic
- Frontend Statistics
- Speed Statistics
- Response Time Display
- Load from External View

NATIONAL STRATEGY ON BLOCKCHAIN TECHNOLOGY TOWARDS ENABLING TRUSTED DIGITAL PLATFORMS- MINISTRY OF INFORMATION AND TECHNOLOGY

- Data and transactions stored in blocks of Blockchain are secured against tampering using cryptographic hash algorithms.
- Each block contains details of transactions, hash of the previous block, timestamp etc.
- It is difficult for an adversary to modify the stored details at majority points. Therefore, Blockchain provides better security when compared with a centralized system.

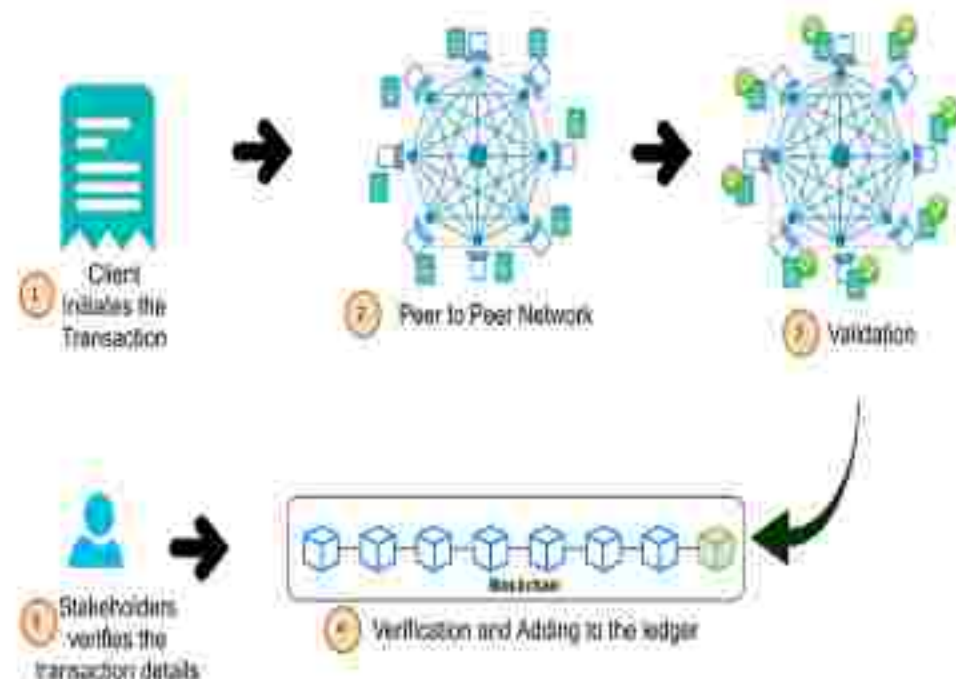


Figure 2.2 Blockchain Network and the Process of Adding New Transaction to Ledger

COMPANY AUDITOR REPORT ORDER 2020

Reporting IMPLICATIONS

- **Whether the company is maintaining proper records showing full particulars, including quantitative details and situation of Property, Plant and Equipment; [Paragraph 3(i)(a)(A)]**
- **Whether the company is maintaining proper records showing full particulars of intangible assets; [Paragraph 3(i)(a)(B)]**
- **Whether maintenance of cost records has been specified by the Central Government under sub-section (1) of section 148 of the Companies Act and whether such accounts and records have been so made and maintained; [Paragraph 3(vi)]**

LET ME JUST CHECK MY EVENT LOG HERE A



IT'S GONE

PRACTICAL CHALLENGES

- Multiple Source systems and interfaces connected to a core system may have an implementation issue from system design and IT Infrastructure
- The size of the audit log may breach a configured percentage of the allocated storage space (For instance If one Voucher is opened and saved 5 times it will increase data by 0.01 KB,if one single change done like narration it will increase storage by 0.03 MB)
- Challenge for several small-sized companies where the volume of transactions may be low.
- Anti forensic Tools are readily available to attackers and red team, or systems compromised with lack of end point security tools.
- Evidences of event logs manipulations is hard to find even in digital forensics.

Risk and Implications of Non-Compliance to Rules

- Section 128 (6): If the managing director, the whole-time director in charge of finance, the Chief Financial Officer or any other person of a company charged by the Board with the duty of complying with the provisions of this section, contravenes such provisions, such managing director, whole-time director in charge of finance, Chief Financial officer or such other person of the company shall be punishable with fine which shall not be less than fifty thousand rupees but which may extend to five lakh rupees

THANK YOU

CA CISA TAHER A PEPERMINTWALA

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