



Compliance with Global Technology Audit Guide - 14 Auditing User-Developed Applications (UDAs)

Our products comply with the Institute of Internal Auditors (IIA) Global Technology Audit Guide (GTAG) best practice standards for auditing user-developed applications, also commonly referred to as end-user computing applications or EUCs.

2.3 Risks Associated With User-Developed Applications

Best Practices	CIMCON Solution
Change management	Our EUC Insight Change Management product has workflow associated with UDAs so that each UDA follows a structured development process as well as a “review and approve” process for change management.
Separation of duties	Spreadsheets can be locked down on a cell or range level by user role so that only approved users can input sensitive data into the secure area.
Risk assessment	<p>Our EUC Insight Discovery product scans each UDA to score each for complexity based on criteria such as number of macros, hidden rows, formulas, errors to give a view of complexity for each file.</p> <p>Our XLAudit product can provide detailed reports on individual files to show where the complexity lies within a spreadsheet. The reports allow users to immediately remediate any issues or errors.</p>
Audit trail	<p>XLAudit provides detailed reports on a spreadsheet’s logic and dependency to allow new users to work with complex UDAs.</p> <p>The EUC Insight Change Management audit trail will track all changes to a spreadsheet, allowing any anomalies to be immediately reported.</p>
Version control	EUC Insight Change Management allows users to create new versions of files, and stores the old versions so that they can be used for comparisons or roll-backs.
Documentation	EUC Insight Discovery allows users to add notes to any UDA in the enterprise inventory.

	EUC Insight Change Management can have documentation files logically attached to UDAs.
Separation of duties	<p>EUC Insight Change Management can provide granular security to spreadsheets, locking input and output from specific cells or ranges. Access to those areas can be granted on a group, role, or user basis.</p> <p>The EUC Insight Change Management audit trail provides a detailed change log so that changes to specific files or parts of a file can be monitored. Alerts can be set up for any kind of change as well.</p>
Change management	EUC Insight Change Management workflow provides a platform where designated users perform the roles of developer, tester, and approver so that UDAs undergo formal testing before being used in production.
Spreadsheet analysis	<p>EUC Insight Discovery, during a scan of multiple UDAs, can detect many spreadsheet issues including hidden rows, columns, or worksheets.</p> <p>XLAudit, can provide detailed location information on spreadsheet issues and errors including hidden rows, columns, or worksheets on individual spreadsheets.</p> <p>The EUC Insight Change Management audit trail is a log of all Excel and Access changes and can notify business users if a UDA developer hides a column or worksheet.</p>

2.5 Compliance Challenges

Financial reporting controls	Our suite of products provide the industry's most comprehensive end-user computing solutions from discovery, risk assessment, analysis, and controls to archiving and record retention.
Complete model lineage	<p>EUC Insight Discovery contains a UDA map that shows the dependency links between all files or a subset of files in the enterprise. This can be used by auditors to ensure that they test not just a UDA, but the UDAs in the dependency map as well.</p> <p>EUC Insight Discovery also has a concept of policies that allows UDAs with similar criteria or properties to be grouped together.</p> <p>User Defined Risk - This feature can ensure that all files with a certain criteria are tested and controlled.</p>
Keywords within spreadsheets and databases	EUC Insight Discovery can identify UDAs with personally identifiable information by searching for keywords within the UDA. In addition, wildcards can be set up to look for keyword patterns such as a Social Security number (??-??-????) or credit card number.

	Files so identified, can have strict controls and security placed on them by EUC Insight Change Management. The security is on top of any NTFS permissions granted on a file level.
Security controls	Not only can security be applied down to the level of user and file, reports are available in EUC Insight Change Management to show the level of access to each UDA on a user or group level.

2.6 Internal Audit's Role

Risk ranking	Once EUC Insight Discovery has run its inventory and risk scan, there are several reports that can list UDAs by their level of criticality.
Risk policy	The risk factors used by EUC Insight Discovery can be configured separately for each department within an organization. A list of those risk factors and an audit trail of any changes to the factors is readily available within the application.
Risk profile	The reports within EUC Insight Discovery allow an auditor to select UDAs in the inventory by any attribute, including their risk score.
Controls based on risk profile	<p>EUC Insight Discovery has a certified files report that shows the controls placed on each UDA in the inventory.</p> <p>Our suite of applications provides an audit trail of changes and modifications, allows for versioning, archiving, and restoring, and enhances security on UDAs and their contents.</p> <p>In addition, auditors can review these controls through reporting and notifications on these controls and actions. The audit trail has several reports and can be set up for ad-hoc querying. There are logs for all version archive and restore sessions. XLAudit can run reports on individual spreadsheets to check for data integrity, and EUC Insight Discovery has a broken links report that will show any UDAs linking to data that has moved.</p>
Documentation	The notes contained in EUC Insight Discovery and file attachments in EUC Insight Change Management are readily available to auditors performing a documentation review.

3.1 Defining What Constitutes a Key User-Developed Application

Assessing criticality	During EUC Insight Discovery's inventory and risk assessment, risk is automatically scored based on materiality and complexity of the UDA. Once knowledge of the inventory is
------------------------------	---

	<p>available, users can enter user defined business risk information for each file a group of files. It is easy to create these groups using EUC Insight Discovery policies that assign UDAs together based on criteria such as Keywords, Highest Value in the UDA, department, file name, file location, file dependency, or any user-defined field.</p> <p>The business risk attributes can further the understanding of which UDAs are key to an organization.</p>
--	---

3.2 Determining and Defining the User-developed Application Population

Ability to search inventory	Any UDA that is tagged internally or by EUC Insight Discovery can be identified and grouped together by a policy that queries the desired criteria.
Identifying user comments	EUC Insight Discovery has user defined fields to assign manual business risk parameters. A review of any UDAs with these parameters is available through EUC Insight Discovery's ad-hoc reporting.

3.3 Defining Risk Factors

Risk based on materiality	An EUC Insight Discovery scan finds by value or keyword, the highest number in a UDA to represent the materiality of a UDA.
Risk based on frequency of use	<p>Any UDA can be tagged with a 'Time To Live' parameter. When that parameter is reached, the file can be automatically archived and placed out of the organization's live inventory.</p> <p>EUC Insight Change Management can report on the number of changes to a UDA and rank all UDAs by the number of changes. So, any UDA with a high number of modifications could be placed under tighter controls.</p>
Risk based on number of users	EUC Insight Change Management can report on the number of users for any UDA, and can rank UDAs by the number of users. So, UDAs with a high number of users can be monitored more closely.
Risk based on data links	EUC Insight Discovery's risk assessment is based on the complexity of the UDA. This could include the number of forms or queries in and Access database, or the number of external links and formulas for a spreadsheet.

3.4 Risk Ranking

Overall risk ranking	The risk assessment made by EUC Insight Discovery combines risks scored for materiality, complexity and criticality to come up with an aggregate rating for each UDA.
Risk based on business process	Policies can be used to group files with similar attributes together. Based on the files within each policy, and a criticality multiplier for each policy, each business process can be grouped together and assigned a risk evaluation.

4.1 Tool Attributes and Capabilities

Spreadsheet and database analysis	EUC Insight Discovery scans UDAs for over 50 mechanical or logical errors. Any UDAs found with these errors can be tagged for remediation. XLAudit would then perform an analysis on a single file to pinpoint UDA issues.
UDA and data archiving	Through EUC Insight Change Management, UDAs can be automatically or manually archived or removed from inventory. A full log of this process is available, and archived versions or files can be restored at any time.
Electronic signature	EUC Insight Change Management provides a workflow engine that allows for an approval process. Approvals are done electronically and are stored within the UDA's audit trail. In addition, approvals can be done on a file basis, or a cell-level audit trail basis.
Manage linked spreadsheets	The EUC Insight Discovery UDA Map shows a full graphical dependency map of not just spreadsheets, but any data source or data container.
Documentation	XLAudit can run detailed reports on spreadsheets showing all data inputs and outputs. In addition, the report is capable of listing all formulas, showing the location and current values.
Change management, version control and security	The EUC Insight Change Management audit trail provides a full log of UDA changes, notifications, workflows, version control, security, and reports, providing a structured UDA change management process.
Reporting	EUC Insight Change Management and EUC Insight Discovery come with over 70 out-of-the-box reports and provide ad-hoc reporting, to monitor the controlled environment.

4.2 Best Practices for Controls Over User-developed Applications

<p>UDA security</p>	<p>EUC Insight Change Management provides a wide range of role-based access controls at the cell, sheet, workbook or folder level which can be managed centrally or departmentally. These are described as follows:</p> <ul style="list-style-type: none"> • Restricting complete access to specific files and folders so that users are unable to view files on a shared drive even in read-only mode • Formula locking - EUC Insight Change Management automatically detects formula cells and locks them down from changes • Control of Excel menus (e.g. access to macro menu can be controlled) • Cell level controls where ranges of cells can be locked from any changes • Sign-off roles to ensure segregation of duties - users can be assigned specific roles for executing an e-signature (e.g. Controller Review or CFO Approval) based on their job function • EUC Insight Change Management provides a read-only copy function where read-only copies can be created and emailed to specific users
<p>Logic inspection</p>	<p>XLAudit can be used as a logic inspection tool for individual spreadsheets ensuring that best practices for spreadsheet programming are adhered to.</p> <p>EUC Insight Change Management will also monitor UDAs for any changes and alert the necessary users if those changes are exceptions to company guidelines.</p>
<p>Quality control</p>	<p>EUC Insight Change Management’s workflow engine can be configured to have separate tasks for a UDA’s request, documentation, and testing. Each task can also be configured to ensure the proper separation of duties by users.</p>
<p>Archiving</p>	<p>Historical files and versions can automatically be archived to a network server that is read-only and serves only as a back up or as needed resource.</p>
<p>Documentation</p>	<p>EUC Insight Discovery and EUC Insight Change Management help facilitate documentation by keeping notes and file attachments associated with key UDAs.</p>