

IT

Segregation of duties is commonly used in IT organizations so that no single person is in a position to introduce fraudulent or malicious code or modify data without detection. Strict control of software and data changes demand that the same person performs only one of the following roles:

- Identification of a requirement or change request; e.g., business analyst/program manager
- Authorization and approval; e.g., governance board or manager
- Design and development; e.g., a programmer or developer
- Review, inspection and approval; e.g., a second developer or manager
- Implementation in production; i.e., software change or system administrator

To successfully implement segregation of duties in IT a number of concerns need to be addressed:

- Ensure a person's authorization rights in the system allows the least privilege required to do their job.
- Use strong and secure authentication methods (i.e., knowledge of a password, possession of an object (key, token) or biometrics).
- Circumvention of rights in the system can occur through vulnerabilities in database administration access, user administration access, tools that provide back-door access or supplier installed user accounts. Specific controls such as a review of an activity log may be required to address this specific concern.



University of Michigan

Office of University Audits

We are committed to supporting the University with objective assurance and advisory services that assess risk and promote a strong internal control environment.

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Additional Resources:

University Audits

<http://www.umich.edu/~uaudits/internalcontrol/financial.internal.html>

University of Michigan Statement on Stewardship

<http://www.hr.umich.edu/stewardship.html>

University of Michigan Standard Practice Guide

<http://spg.umich.edu/pdf/501.07-1.pdf>

<http://spg.umich.edu/pdf/519.03.pdf>

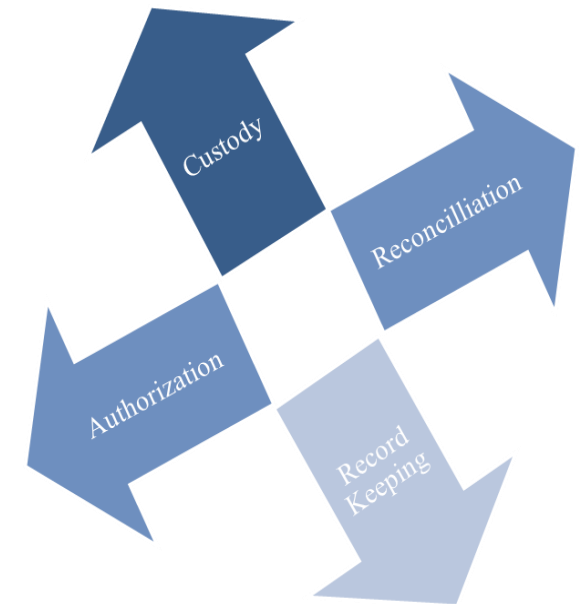
<http://spg.umich.edu/pdf/507.01.pdf>

<http://spg.umich.edu/pdf/601.24.pdf>

Office of Internal Controls

<http://www.umich.edu/~avpf/InternalControls.htm>

Segregation of Duties





Segregation of duties is a key management tool. When properly segregated, tasks and associated privileges for a specific business process are distributed among multiple employees.

Why Segregation of Duties?

Provides many benefits:

- Detects most normal clerical errors and even systemic errors
- Prevents unauthorized or questionable transactions before they occur
- Supports University stewardship
- Deters and detects fraud
- Protects innocent employees from wrongful accusations

What is Segregation of Duties?

- No single individual should have control over two or more phases of a transaction or operation
- Management should assign responsibilities to ensure duties are properly segregated
- Segregated roles: Authorization, Custody, Record Keeping, and Reconciliation

Authorization: the process of reviewing and approving transactions or operations.

- Approving purchase requisitions, non-PO vouchers, P-Card expenses, and PeoplePay payments

- Approving time sheets, leave requests, new hires, and personnel changes
- Verifying cash collections and daily balancing reports

Custody: access to or control over any physical asset such as cash, checks, equipment, supplies or materials.

- Access to any funds through the collection of funds or processing of payments, including petty cash custodian
- Access to safes, lock boxes, file cabinets, equipment rooms, or other places where money, checks or other valuable items are stored
- Receiving any goods or services
- Maintaining inventories
- Handling or distributing paychecks or other payments

Record keeping: the process of creating and maintaining records of revenues, expenditures, inventories, and personnel transactions.

- Preparing cash receipt deposits, invoices, purchase requisitions, personnel or payroll changes
- Entering charges or posting payments to an accounts receivable system
- Maintaining inventory records
- Payroll time-keeping
- Acting as systems administrator

Reconciliation: verifying the processing or recording of transactions to ensure that all transactions are valid, properly authorized, and recorded.

- Comparing collections to amounts deposited per the accounting records and bank deposits
- Comparing source billing documents to system-generated billing summaries
- Comparing time sheets to gross pay registers
- Performing physical inventory, supplies or equipment counts
- Comparing P-Card expenses to receipts
- Reconciling Statements of Activity

In addition, these additional controls should be put in place to make segregation of duties more effective:

- Review by a higher administrative authority of reconciliation of Statements of Activity and Gross Pay Registers
- Review of purchasing and inventory
- Preapproval for purchasing, travel, and hosting
- Review of transaction logs
- Review of exception reports
- Follow prescribed, written procedures
- Ensure system authorization rights are in line with job roles

In small departments when duties can not be fully separated, at a minimum, custody (receiving/management of assets) should be separate from approval and reconciliation. The additional controls listed above will provide more assurance for the segregation of duties.

