RUTGERS

THE STATE UNIVERSITY OF NEW JERSEY

RUTGERS POLICY

Section: 70.2.12

Section Title: Legacy UMDNJ policies associated with Information Technology

Policy Name: IT Change Management

Formerly Book: 95-01-04-01:01

Approval Authority: Vice President for Information Technology & Chief Information Officer

Responsible Executive: Vice President for Information Technology & Chief Information Officer

Responsible Office: Office of Information Technology (OIT)

Originally Issued: 5/2001

Revisions: 7/1/2013

Errors or changes? Contact: oitpolicy@rutgers.edu

1. **Policy Statement**

   The policy ensures that service availability is maximized and that Rutgers, The State University of New Jersey, business processes are not adversely disrupted by undesirable changes to technology systems and components.

2. **Reason for Policy**

   To establish a change control policy for the University's, Information Technology (IT) environment. This policy addresses changes involving systems that process Financial, Healthcare and Secure Electronic Information, including but not limited to changes of operational systems, application systems, network infrastructure, hardware installation, operating procedures and maintenance.

3. **Who Should Read This Policy**

   This policy applies to any individual responsible for the management, operation, and/or maintenance of the legacy UMDNJ information technology services and/or environment. If you are uncertain whether this policy applies to you, please contact your direct supervisor.

4. **Related Documents**

   N/A

5. **Contacts**

   oithelp@rutgers.edu

6. **The Policy**

70.2.12 IT CHANGE MANAGEMENT

    I.   General Principles:

                All computer and communications systems used for production IT at the University must employ this formal change control procedure to ensure that changes are coordinated, authorized and communicated between all interested and affected parties. This change control policy must be used for all changes to the Departments, Schools and Units production IT environments as defined above.

    II.   Requirements:

          A.   To ensure the integrity and high availability of the production IT environment, all changes must be submitted to the University Change Management System (CMS), via internal web interface, that contains key information as shown in Exhibit B – Change Management System Form. Changes should be submitted at the point when they are ready to be implemented in the production environment.

          B.   Testing should not be done in the production environment. Further, internally developed production changes should not be implemented by the development team or staff. The development team and production team should always be separate to avoid conflicting responsibilities. In areas where this cannot be accomplished, approval should be granted by the Department, School or Unit IT Director or equivalent.

          C.   All changes should be properly planned and scheduled to ensure the following:

                1.   Full testing, where possible, has been completed

                2.   Multiple conflicting changes are not targeted for the same time period

                3.   Conflicts can be reconciled prior to communication and commitment to the user community

                4.   Adequate implementation planning has taken place

                5.   All personnel involved are notified of the proposed change, especially if the change results in a significant outage affecting entire Departments, Schools, Units or campuses

                6.   Resources required to implement and rescind the change can be made available

                7.   No conflict exists with the activities of an area outside of the change request

                8.   Change is implemented smoothly and efficiently without incurring excessive down time and service interruption

                9.   Ample time to circulate a list of planned changes for review by the Change Management Committee.

          D.   Once a change request is submitted by the initiator it will be reviewed by the Change Control Coordinator and then routed for approval(s) by the Department, School or Unit based on the Department, School or Unit approval procedures. Initiators should allow sufficient time for approvals.

E. A second round of review and approval takes place at a meeting of the Change Management Committee every Wednesday. Representatives of each Department, School and Unit vote to approve planned changes. Questions, clarifications and scheduling conflicts may be discussed and resolved. If conflicts between representatives cannot be resolved at the meeting, then the Change Control Coordinator must escalate such conflict to the accountable IT management for resolution. (See the Policy Statement section above.)

The Change Management Committee meeting is not the forum to review whether or not a project has merit, but rather how and when a project should be implemented, to minimize impact to the production environment. Planned changes have already been approved by the Department, School or Unit that sponsored and funded the change.

F. Every Wednesday at noon, the Change Control Coordinator will issue a weekly report of approved upcoming changes to a group of IT professionals in the Departments, Schools and Units.

G. It is the responsibility of each IT professional to read the weekly report of upcoming changes, identify potential conflicts and resolve any potential conflicts before implementation.

H. Emergency changes require an IT management approval in addition to normal approval(s) and in lieu of approval by the Change Management Committee.

I. Events should be reported as soon as possible in order capture the impact of the event on service delivery, and to inform IT staff of unexplained variations in service delivery.

III. Responsibilities:

A. Each Department, School or Unit responsible for any part of the University IT environment will write procedures to implement this policy. All procedures must be submitted to the OIT Change Control Coordinator who shall review them for completeness. Any subsequent changes to procedures must also be submitted to the OIT Change Control Coordinator. At a minimum, these procedures should:

1. Identify who is responsible for each stage of change management. The roles to be assigned to one or more individuals include:

a. Initiator: prepare and submit a change request to the University CMS prior to the requested implementation date. Report events that impact service delivery.

b. Change Approver 1: review and approve or reject change requests.

c. Change Approver 2 (optional)

d. Change Approver 3 (optional)

e. Implementer:

i. Read the weekly report of upcoming changes for potential conflicts and resolve potential conflict(s) before implementation.

ii. Notify the applicable business and user communities of the impact of the change.

     iii. Follow procedures and methodologies required by Department, School or Unit and project management.

     iv. Approve change requests after implementation, or reject changes prior to or during implementation.

    f. Verifier: review and approve or reject change requests after implementation.

  2. Specify an Emergency Change Approval Process

  3. Specify requirements for documentation of testing in CMS

  4. Specify requirements for providing a Back out Plan in CMS

  5. Identify who will represent the Department, School or Unit on the Change Management Committee.

 B. OIT will provide:

  1. Change Management System (CMS)

   a. Apply Department, School or Unit rules to assign resources for approval, implementation and verification.

   b. Route request to the Change Control Coordinator.

  2. Change Control Coordinator

   a. Administer the CMS

   b. Serve as the point of contact for Departments, Schools and Units IT staff regarding Change Management.

   c. Review change requests for clarity and completeness and approve or reject the change request.

   d. Assign resources for approval, implementation and verification (if not already automatically assigned by the CMS).

   e. Manage the Change Committee Review Procedure (see below).

   f. Manage the Notification Procedure (see below).

 C. Change Management Committee members will:

  1. Review the list of scheduled changes

  2. Attend a weekly meeting either in-person, by video or telephone conference.

  3. Prepare for the weekly meeting by inviting representatives from business or user groups, technical support staff and vendors to the weekly meeting as necessary to resolve potential conflicts.

  4. At the meeting, affirm acceptance of planned changes on behalf of the Department, School or Unit or state potential conflicts and work to resolve them. Stated positions will be required and recorded.

D.   Internal Audit reviews will determine the effectiveness of internal controls, adherence with applicable laws and regulations, and reliability of financial reporting.

IV.   Procedures

A.   Change Management Committee Review

1.   The Change Control Coordinator will:

2.   Distribute a list of scheduled changes to the Change Management Committee every Tuesday at 4:00 PM.

3.   Arrange, conduct, record attendance and record votes at the Change Management Committee meeting.

4.   The Change Committee will meet every Wednesday at 10:00 AM and agree to a list of scheduled changes.

B.   Notification

1.   Each Wednesday the Change Control Coordinator will circulate a weekly report of approved upcoming changes to a group of IT professionals in the Central Administration Departments, Schools and Units.

2.   Emergency changes that are approved in advance of implementation will be communicated as an update to the original communication.

3.   Events and emergency changes that are approved after implementation will be communicated as soon as possible.

V.   Exhibits

A.   Clarification of Change Management Requirements with Respect to Virtual Environments

B.   Change Management System Form.

EXHIBIT A

Clarification of Change Management Requirements with Respect to Virtual Environments

Introduction

The clarification of the change management requirement for virtual environments was developed because there was confusion about how the policy should apply in the virtual environment. It was written and agreed over the course of many months by a working group made up of technical experts in virtual environments.

When using virtual environment technology, certain changes should be considered changes to the active production environment and should be scheduled in accordance with the IT Change Management policy. Other changes may be made in such a way as not to impact the production environment, and are therefore exempt from the IT Change Management policy.

This Exhibit A applies only to virtual environments, not to systems in general. Exemptions are offered for cases where a change cannot impact the production environment.

Note: Clustered pair server technology is not considered part of a virtual environment. Although service fails over from one server to another, there is a momentary lapse of service in the active production environment, as well as a risk of not restoring full redundancy.

Virtual Servers: VMWare

The terms host and guest describe the physical and virtual machines. The physical computer on which we install VMware Workstation software is called the host computer, and its operating system is called the host operating system. The operating system running inside a virtual machine is called a guest operating system.

OIT provides a host server service. If there are changes in interface connectivity or service availability of the host, then **OIT** will schedule such changes per the IT Change Management policy. However, routine maintenance, such as operating system patching, is done without impacting interface connectivity or service availability, is not considered part of the active production environment, and is therefore exempt from the IT Change Management policy. Detailed records of such routine maintenance are stored in the VMWare environment.

OIT also provides guest server service. Changes to guest servers may impact service to the production environment and therefore should be scheduled in accordance with the IT Change Management policy.

Virtual Applications: Xen Server and Citrix

OIT provides an application service. If there are changes in interface connectivity, service availability, the user experience or integration with other applications, then such changes are said to impact the production environment and **OIT** will schedule such changes per the IT Change Management policy.

Routine maintenance, such as server operating system patching and application patching, which does not impact interface connectivity, service availability, the user experience or integration with other applications, is not considered part of the active production environment, and is therefore exempt from the IT Change Management policy.

EXHIBIT B

Change Management System Form

The following information is collected from users via a form in the Change Management System.

Date of Change Section
Start Date/Time: The date and time that the change to the production environment begins. *Required field. Published in the weekly report of changes.*

End Date/Time: The date and time that the change to the production environment ends. For example, if you reboot a server, this time might be 30 minutes after the Start Date/Time. *If an end date is entered, it is published in the weekly report of changes.*

Support Ticket Information Section
HEAT Ticket #: Number assigned by the Helpdesk Expert Automation Tool (HEAT).
Vendor Ticket #:
Work Order Ticket #:

Change Information Section
Category: All changes are categorized as Hardware, Software or Training. *Required field.*
Site-Campus: Identifies the campus(es) affected by the change. *Required field.*
Class: There are seven classifications of changes at Rutgers. *Required field.*
Type: A subset of class. A lookup list is provided, based on the class already selected. *Required field.*

Impact Section
School / Unit: Based on permissions, this field will be filled in for you with the name of your Department, School or Unit. *Required field. Published in the weekly report of changes.*
Priority: There are three priority options: routine, non-routine and emergency. *Required field.*
Impact Statement: What, if any, is the production service impact? Will any user(s) be affected? If so, what groups and how will they be affected? For example "University Hospital Care Coordination and Medical Records Department will not have access to the Canopy application." *Required field. Published in the weekly report of changes*
Peak Users Affected: Specify the number of peak users that will be affected by this request.
Off-Peak Users Affected: Specify the number of off-peak users that will be affected by this request.
Parent Request: Identifies the parent request of the current request, used to establish relationships among requests.

Comments Section
Title: Summarize the change in one short statement to be read and understood quickly by IT professionals throughout Rutgers. *Required field. Published in the weekly report of changes.*
Details: Provide concise, accurate and clearly defined steps. Define acronyms. *Required field. Published in the weekly report of changes.*
Test Results: Summarize test results. Use file attachments as appropriate.
Back Out Plan: Summarize the back out plan. Use file attachments as appropriate.

Change Management System Form

Additional Information Section
Device or Application Changed: A lookup list is provided, based on the "Type" already selected above. *Required field. Published in the weekly report of changes.*
Specify OTHER: Use this field if you have selected "Other" for the "Type" field or the "Device or Application Changed" field above.
New Server Name: Use this field if the change request is to commission a new server. You should have selected "New Server" for the "Device or Application Changed" field above. Enter the name of the new server here.
Decommission? (Y if Yes): Use this field if you plan to decommission one or more servers listed in the "Device or Application Changed" field above.
Primary Contact, phone(s), E-mail: Who to contact about the change. *Required field. Published in the weekly report of changes.*
Secondary Contact, phone(s), E-mail: Another person to contact about the change. *If a secondary contact is entered, it is published in the weekly report of changes.*
Downtime: How many minutes or hours will a service be unavailable to users? When in doubt provide the worst case estimate. *Required field. Published in the weekly report of changes*
List if More Than One School/Unit Affected: A lookup list is provided. You may select multiple entries from the lookup list.
List if More Than One Campus Affected: A lookup list is provided. You may select multiple entries from the lookup list.
Search Keyword: Enter a keyword that you plan to use in future searches of the change management database.
Software Version: Enter software version if you are changing an application with versions.
Customer / Requester: Identify who requested the change.
Assigned Staff: Identify who is assigned to the project to make the change.
Voice System Notes: Details about voice systems.