

**CHANGE MANAGEMENT PROCESS
FOR CHANGES TO THE PRODUCTION ENVIRONMENT
SUMMARY DOCUMENT**

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D*R*A*F*T

Note: This document is a summary of the steps required for changes to be made to the Production Environment. For a more complete explanation, please refer to the following documents: Recommendations for Production Turnover Procedures (edavid, 3/17/2004); Turnover to Production – Internal Approval Process (collated by Pam Heath-Johnston, Apr. 22, 2004); Enhanced Change Management Process (developed by Nic Lovelace); Change Log Documentation – Template Requirements (template found in Project Management public folder), Entering Change Orders in the Events Calendar on Exchange (developed by Ann Nunes).

1. **Proper approval for change.** All non-emergency changes to the production environment, must be approved using the approval process determined by the individual's manager prior to implementation of the change. (See Turnover to Production - Internal Approval Process document for the specific process to be followed for your area.)
2. **Documentation of change.** All changes (planned and emergency) to the production environment (excluding administrative changes) are to be entered into the USD system as a Change Order.
3. **Notification of change.** All Change Order records involving proposed changes to the production environment are to be distributed to PEOG members. (Note: IF the change is being distributed to CHGLOG members, then you no longer need to distribute to PEOG, since all PEOG members are also included in CHGLOG membership.) All planned changes must be recorded in USD at least 3 days (and preferably 7 days) prior to expected implementation date. All emergency changes must be recorded in USD within 24 hours of implementing the change.
4. **Scheduling the change.** Once a Change Order record has been created, a UITS – Events Exchange Calendar entry must be created that corresponds with the date entered into the “Scheduled Date” field (see below). To access this calendar, log on to your Exchange account, open the folder list, and click on **public folders** ↙ **all public folders** ↙ **Univ Info Tech Svcs**. Click on **UITS – Events**. Click on **NEW** to bring up an Untitled - Appointment box. In the subject line, enter Change Order number followed by a brief description of the change (you may use the same information that was entered into the Order Summary field of the Change Order, followed by either the word scheduled (in the case that the Change Order status field is Scheduled) or tentative (in the case that the Change Order status field is Open). For example, “CO3021 – Move Easytrieve 6.4 to Production – Scheduled”. The Start time and End time fields must also be included to correspond with the Scheduled Date entered on the Change Order. (See the

“Entering Change Orders in the Events Calendar on Exchange” document for more complete information on updating the UITS – Events calendar.)

- Once the date of the change is confirmed (i.e. the status changes from Open to Scheduled), the Calendar entry must be updated to indicate Scheduled.
 - If a Scheduled date changes, update the Calendar entry with the new Scheduled date. Be sure to also change the Change Order and notify the appropriate individuals of the change in date.
 - If a Change Order is put on HOLD or CANCELED, update the status of Change Order, notify the appropriate individuals and delete the Calendar entry.
5. **Testing the change.** Prior to implementation in the production environment, changes must be tested using a documented test plan. The test plan must also be included with the Change Order record in the USD system. (See 7(a) below for further information on test plans.)
6. **Assessing the change.** Prior to implementing a change to the production environment, the following considerations should be given to the proposed change:
- Who will the change impact (both internal to UITS and external)?
 - Are there other areas that need to be contacted to discuss this change?
 - What type of impact might this change have (both in the case that the change is successful and in the case that the change is unsuccessful).
 - Has consideration been given to the timing of the change in terms of other planned changes, the university’s calendar (e.g., classes scheduled, grades to be submitted, end of year processing, etc.), day and time of change (e.g. weekday vs. weekend; work hours vs. evening or early morning) so as to minimize the impact on the University community while ensuring staff availability during and after the change?
 - What procedures will be followed in case there are problems with the change? **There must be a documented backout plan for all (non-administrative) changes to the production environment.** (See 7(a) below for further information on backout plans.)
7. **Required information.** Change Orders must include the following information:
- **Requestor:** Name of individual/group making request (lower case) or initiating change order.
 - **Affected End User:** Name of customer (individual or department) who is affected by the change.
 - **Category:** Choose from one of the following valid categories:
 - **application** – miscellaneous application software
 - **hardware** – miscellaneous hardware equipment
 - **Hardware.pc.install** – install PC hardware
 - **hw.huskypc.deinstall** – deinstall a huskypc package
 - **hw.huskypc.install** – install a huskypc package

- **hw.huskypc.move** – move/relocate a huskypc
- **hw.huskypc.upgrade** – upgrade a huskypc
- **hw.networkhardware.deinstall** – network hardware removal
- **hw.networkhardware.install** - network hardware installation
- **hw.networkhardware.move** – network hardware move
- **hw.networkhardware.upgrade** – network hardware upgrade
- **hw.printer.deinstall** – printer removal
- **hw.printer.install** – printer installation
- **hw.printer.move** – printer move
- **hw.printer.upgrade** – printer upgrade
- **hw.server.deinstall** – server hardware removal
- **hw.server.install** – server hardware installation
- **hw.server.move** – server hardware move
- **hw.server.upgrade** – server hardware upgrade
- **renovation** – to be used for renovation projects
- **software** – miscellaneous software equipment
- **Software.pc.install** – Install PC software
- **sw.networksoftware.deinstall** – network software removal
- **sw.networksoftware.install** - network software installation
- **sw.networksoftware.maintenance** – network software maintenance
- **sw.networksoftware.upgrade** – network software upgrade
- **sw.server.deinstall** – server removal
- **sw.server.install** – server installation
- **sw.server.maintenance** – server maintenance
- **sw.server.upgrade** – server upgrade
- **sw.sys.acf2** – acf2 system software
- **sw.sys.cics** – CICS system software
- **sw.sys.deinstall** – system software removal
- **sw.sys.install** – system software installation
- **sw.sys.maintenance** – system software maintenance
- **sw.sys.upgrade** – system software upgrade
- **Priority** – This field is used to provide information on the impact of the change on our customers. The options are:
 - **Sys Down:** System unusable. No alternative available.
 - **Critical:** System unusable. Alternative available.
 - **Limited Use:** System degraded. Functions are limited.
 - **Not Critical:** System unusable. Not critical
 - **No impact:** No impact to users (i.e. system is available to users)
 - **Unknown:** Priority unknown (This option should rarely be used. In general, individuals making changes should be able to ascertain the impact on the user community.)

- **Assignee:** Name of the person responsible for updating and tracking the change order.
- **Group:** Name of the group responsible for updating and tracking the change order.
- **Created by:** filled in with name of individual who opens Change Order
- **Status** – This field is to be used to indicate the status of the change. The options are:
 - **Open:** The default status when a change is created.
 - **Scheduled:** Change has been scheduled for production implementation. Once the date has been scheduled/finalized, the status should be changed from open to scheduled. The UITS-Events calendar entry must also be updated to indicate that the date is now scheduled
 - **Modify / Update:** Change was made to the original USD record – notification is needed. The status should be changed to modify/update if a substantial change has been made to the record (e.g. date/time change; scope change; etc.) If the status is changed to modify/update PEOG members need to be alerted to allow for further discussion at the PEOG meetings. It may also be helpful to update the Order Summary field to indicate what has been updated. For example, ‘Reboot WebCT server – note date change’.
 - **Hold:** Idle; waiting for information, equipment, etc. This option is to be used if the change will eventually take place, but the date is no longer accurate and a new date is not yet known. This requires that appropriate individuals be notified and that the UITS – Events calendar entry be deleted.
 - **Cancel:** Cancelled change. This requires that appropriate individuals be notified and that the UITS – Events calendar entry be deleted.
 - **Closed:** Completed change. It is assumed that the change was successful (i.e. that the backout plan was not implemented). It may turn out that at a future time, problems with this change are encountered. If so, the problem log or future change log record should cross-reference this change log.
 - **Unsuccessful:** Change failed during implementation. It is assumed that the backout plan was implemented.
- **Open Date:** filled in with date/time when Change Log is opened
- **Scheduled Date:** The date on which the change is to take place. {Note: A UITS-Events Exchange Calendar entry must be made to correspond with the date entered in this field. Refer to “Scheduling the Change”- above.}
- **Impact:** This field is used to differentiate between emergency and different types of planned changes. The options for this field are:
 - **Emergency:** Emergency change – required within 24 hours.
 - **P-Enhance:** An enhancement to the system
 - **P-Upgrade:** A vendor upgrade

- **P-Maint:** Normal maintenance
 - **P-ProdProb:** Correction of a production problem. In most cases the problem was documented in a Problem log. In such a case there should be a cross-reference between the problem log and the Change log.
 - **P-Chgfix:** Modification resulting from other change. In this case, there should be a cross-reference between the original Change log and this Change log
 - **Close Date:** Displays the date and time when the change order was closed.
 - **Call Back Date/Time:** Used to indicate the date for which a Status Page or Upcoming Change page entry is to be made. If a date/time is filled in, the Help Center will look at the Change Log documentation template file (see 7(b) below) to determine which web page is to be updated and the verbiage to be used on that web page. Calling or email Ann Nunes (or any other individual at the Help Center) to notify them that there is a need to include information on a web page is **not a substitute** for using this field.
 - **Order Summary:** Summary of the change. Note that this is the subject line for emails sent from the USD system.
 - **Order Description:** Full description of the change.
8. **Updating the Status or Upcoming Changes Web Page.** Any change that might cause outage, potential outage or result in a change in service for our external customers must be indicated on either the status or upcoming changes web page, **even if the change is expected to only affect a defined population who have already been notified of the change** (e.g. “Planned upgrade to the Bishop Center LAN equipment.”) Since such changes may in fact impact others, especially if there are problems with the change causing a ‘rippling affect’ on additional services, it is important that notification be given of these changes to the University community via the web pages.
9. **Additional Required Information:**
- **Test and Backout Plans:** All changes to the production environment must have a test plan and a backout plan. These plans may either:
 1. be attached to the Change Order (preferred method),
 2. be filed in a Public Folder within Exchange (the link must then be included within the Change Order, under ‘Order Description’),
 3. be included in the body of Change Order under ‘Order Description’ (used for brief statements, such as ‘Job will be tested as T- job and then P-job.’)

In the case where either test plan is not appropriate (e.g. no test system exists on which to test the change, then within the body of the Change Order, under ‘Order Description’, you should write test plan –n/a.

b. Change Log Documentation Template: This template is located in the Project Management folder on Exchange. Staff should copy this template to

their own machine, creating their own template. The template should be filled out for each change order and attached to its applicable change order. This template provides important information on staffing requirements, predicted effects on service during and after change, a gauge of the risks involved in the change, and the information that is to be included on either the status web page or the upcoming changes web page (see 7 above).