Change Management

Computing and Telecommunications Services
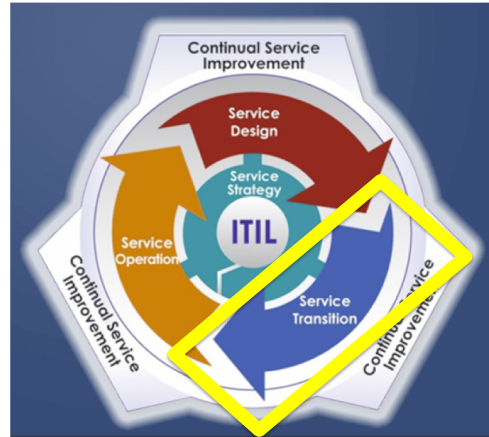
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Agenda

- Overview
- Definitions
- Types of Changes
- Risk Assessment
- Process
- Using ServiceNow

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Overview

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Definitions

- Change
  - The addition, modification or removal of anything that could have an effect on IT services.
  - Includes, but not limited to:
    - Hardware (e.g., servers, switches, phones, projectors, printers, etc)
    - Software (e.g., installing/upgrading/removing software from a server, "Patch Tuesday")
    - Code (e.g., making changes to application code)
    - Cabling
    - Applications (e.g., upgrading to Banner 9, deprecating DARS, ServiceNow upgrade to Kingston, etc)
    - Services (e.g., Home Base, Help Desk)

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Definitions

- Change Management
  - The process responsible for controlling the lifecycle of all changes, enabling beneficial changes to be made with minimum disruption to IT services. (ITIL ST, 306)

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Definitions

- Change Advisory Board (CAB)
  - A body that exists to support the authorization of changes, and to assist the change management process in the assessment, prioritization, and scheduling of changes.
  - Approval must be unanimous

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Definitions

- Change Advisory Board (CAB)
  - Standing meeting Wednesdays @ 2pm
    - May get rescheduled depending on schedule conflicts
  - Standing members:
    - Change Manager (Jonathan Jackson)
    - Chief Information Security Office (Mike Natale)
    - Director, Client Services (Kenny Coon)
    - Director, Information Services (Michael Stankas)
    - Director, Technical Services (Larry Fox)
    - Manager, Service Desk (Reid Allen)
    - Individual performing each Change on the agenda
      - Change Coordinator
    - Others as deemed necessary

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Definitions

- Emergency Change Advisory Board (eCAB)
  - Subset of the CAB responsible to review Emergency Changes, generally on an ad hoc basis, possibly virtual.
  - Emergency Changes require approval from Director-level or higher.

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Types of Changes

| Normal Change | Any change that is not a routine change or an emergency change. These types of changes do not have a pre-authorized/pre-approved procedure or work instruction, are not routinely performed, or are not considered low risk. Normal Changes must be approved by the CAB each time they are performed.

Example: Voicemail system upgrade, Upgrade to Banner 9 |
|---|---|
| Emergency Change | A change that must be implemented as soon as possible, either to resolve a major incident, prevent a major incident, or to mitigate a security vulnerability. |
| Routine Change
(Note ITIL calls this a Standard Change, so it's possible that terminology may appear in documentation, ServiceNow, etc) | A pre-authorized change that is low risk, relatively common, and follows a procedure or work instruction previously approved by the CAB.

Example: Firewall policy changes, add/move a printer |

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When is a Change a Change?

- Question usually comes up regarding very low risk Routine Changes
- If what you're doing changes:
  - Consumption
  - Use
  - Function
- It is a Change

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Risk Assessment

Dependencies + Impact + Priority + Scope = Risk Level

	Value			
	1	**2**	**3**	**4**
Dependencies	Change can not be backed out, or testing/validation must be performed on production services	Complex implementation or validation/testing; or required extended change window, or change exceeds 2.0 hours in length	Moderate implementation or validation/testing.	Change is easily validated or backed out
Impact	Affects all services, servers, and/or networks.	Affects services, servers and/or networks of multiple departments/buildings	Affects services, servers, and/or networks of a single department/building	Services, servers, and/or networks will be usable during the change.
Priority	Service outage for major systems.	Service outage for critical systems.	Service outage of a non-critical system.	No service outage is expected.
Scope	75% or more users will be affected	50-75% of users will be affected	25-50% of users will be affected	Less than 25% of users will be affected
	Higher risk			Lower risk

Risk Level	
4-8	High
9-12	Medium
13-16	Low

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Deadline for Change Submission

Change Deadline	
Risk Level	**Deadline**
1 - High	4 CAB meetings prior to planned start date.
2 - Moderate	2 CAB meetings prior to the planned start date
3 - Low	1 CAB meetings prior to the planned start date

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Periods of Minimal Changes

- We are not calling these "blackout windows". Changes can still occur during these times.
- Changes occurring during times that are critical to the business of the university will receive additional scrutiny; and the CAB may require they be performed outside of these times.
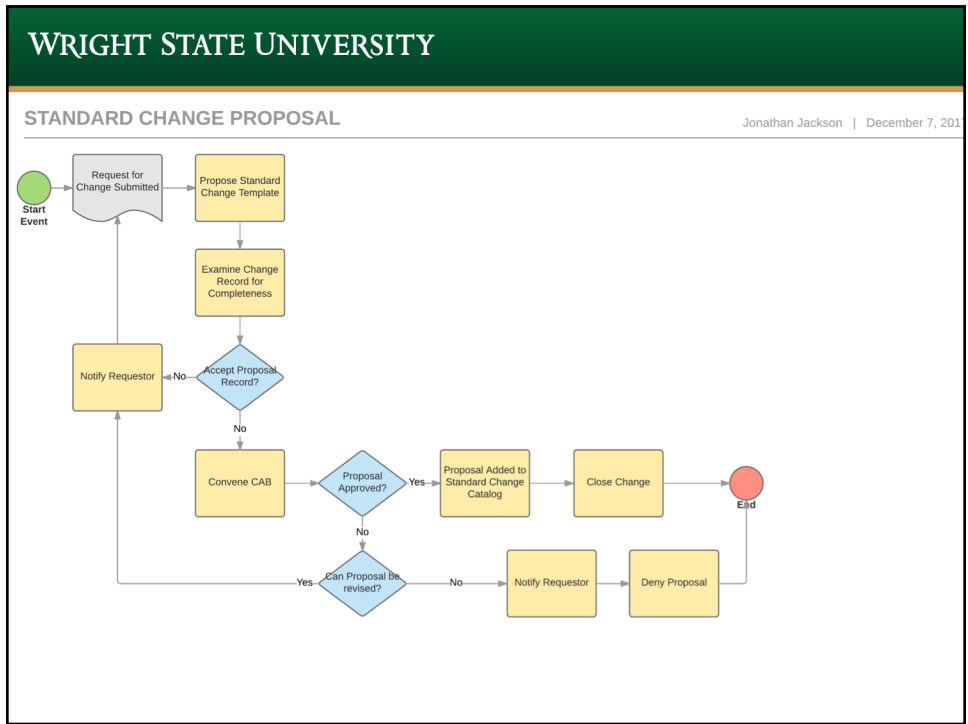- Flexibility is key. Want to avoid increased risk, but still permit necessary changes.

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Periods of Minimal Changes

Beginning of the Semester	Begins:	12:01am on the day 1 week prior to the first day of Fall or Spring semester
	Ends:	11:59pm on the day 1 week after the first day of Fall or Spring semester
End of the Semester	Begins:	12:01am on the day 1 week prior to the start of finals week
	Ends:	11:59pm on the day of the final grade submission deadline, as determined by the Office of the Registrar.

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Maintenance Windows

- Changes should be performed at the following times:
  - Every Tuesday: 5:30am - 7:30am
  - First Sunday of each month: 6:00am – Noon
  - Second Sunday of each month: 6:00am – Noon

- The CAB may authorize changes to occur outside of a maintenance window if it is deemed necessary.
- The CAB may authorize Routine Changes to be performed at times other than the defined maintenance windows, including authorizing Routine Changes to be performed at the discretion of the Change Coordinator.

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WRIGHT STATE CHANGE MGMT - NORMAL CHANGE   Jonathan Jackson | February 19, 2018
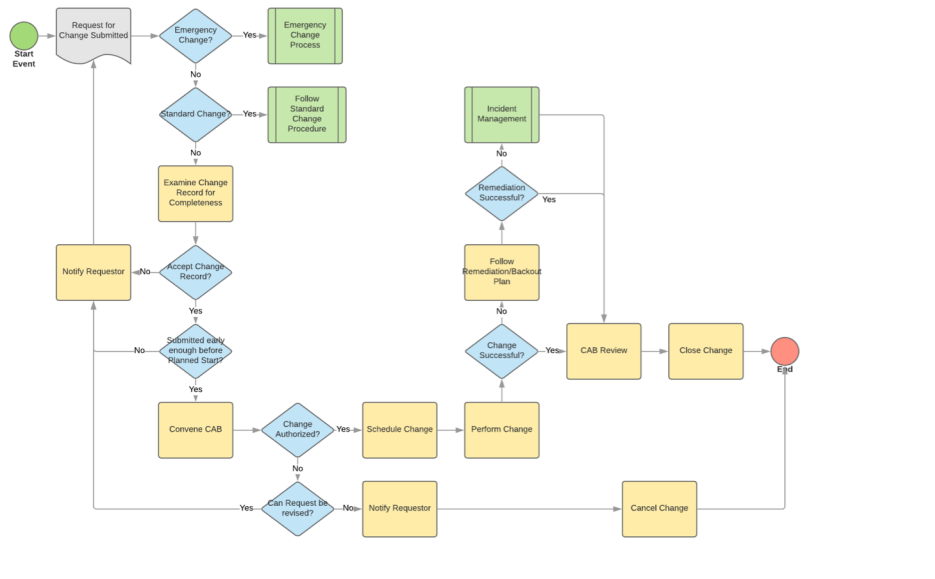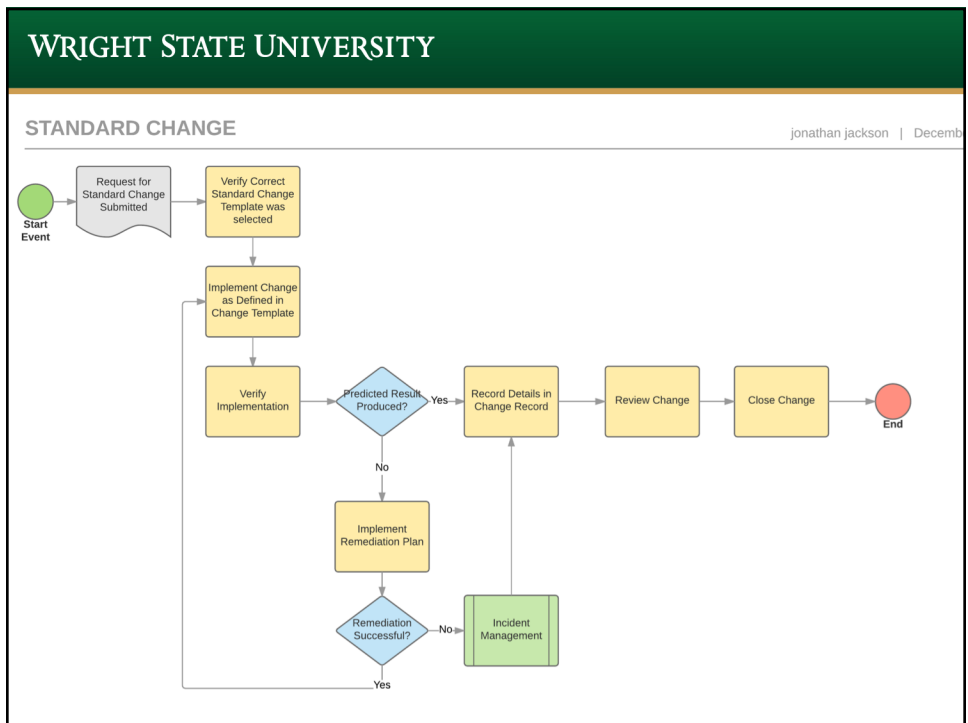
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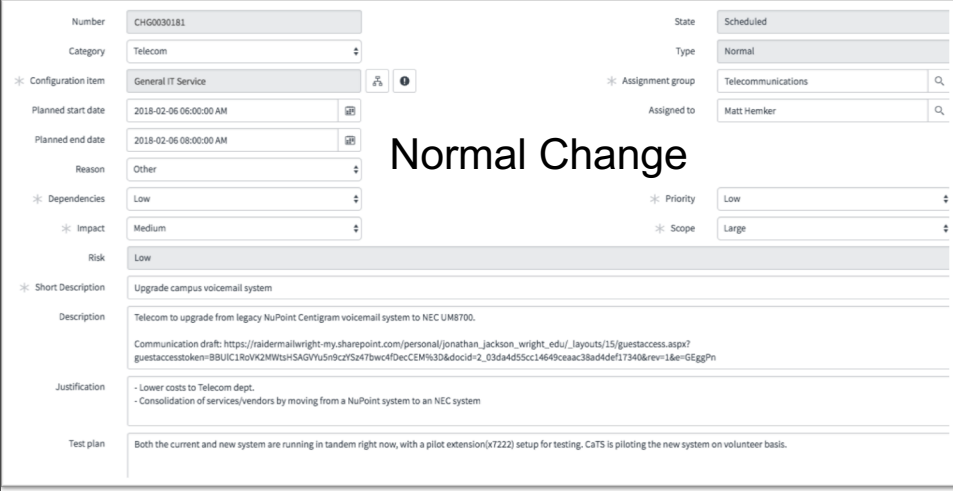
Change Record

- All Changes recorded in ServiceNow

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Change Record

Normal Change

Slide 1

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Change Record

Normal Change

Implementation plan	- Have users set up their voicemail boxes prior to cutover, and continue to use the Centigram system - On cutover: - remove serial MCI connection and plug directly into PBX via IP - redirect UM8700 to PBX IP address - System extensions will flip: x7222 will call the Centigram system, x1010 will call the NEC system - Any phones that are forwarded to x7222 on morning of cutover, will be re-forwarded to x1010 automatically (CaTS volunteer testers)
Backout plan	If cutover fails, the serial MCI connection to the PBX will need to be reinstalled and system extensions be flipped back to prior production status(Centigram x1010, UM8700 x7222).
Additional comments (Customer visible)	
Work notes	

CAB Details | CAB Review | Closure Details | Comments/Notes/Activity Stream

CAB date	2018-01-17
CAB recommendation	

Implement | View Calendar | Update | Cancel Change | Copy Change

Slide 2

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Change Record

Normal Change States

New ✓ > Assess ✓ > Authorize ✓ > **Scheduled** > Implement > Review > Closed > Canceled

State	Description	State	Description
New	Change has not yet been submitted	Scheduled	Change has been approved and is on the schedule
Assess	Change record is being reviewed by change manager for completeness	Implement	Change is being implemented
Authorize	Change record is being reviewed by CAB for authorization	Review	Change has been completed, and needs post-change review by CAB
		Closed	Change has been Closed

11

Change Record

New ✓ | Assess ✓ | Authorize ✓ | **Scheduled** | Implement | Review | Closed | Canceled

- Only New/Assess and Implement/Review need to be performed by Change Coordinator
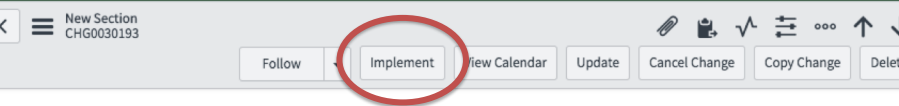
New Section
New record
Submit

New | Assess | Authorize | Scheduled | Implement | Review | Closed

Change Record

New ✓ | Assess ✓ | Authorize ✓ | **Scheduled** | Implement | Review | Closed | Canceled

New Section
CHG0030193
Follow | **Implement** | View Calendar | Update | Cancel Change | Copy Change | Delete

- Click "Implement" when you start performing the change

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Change Record

New ✓ Assess ✓ Authorize ✓ **Scheduled** Implement Review Closed Canceled

New Section
CHG0030193

Follow | Complete Change | View Calendar | Update | Cancel Change | Copy Change | Delete

ⓘ Risk Condition applied: Calculate Risk; Risk: Moderate; Impact: Medium ✕

New ✓ Assess ✓ Authorize ✓ Scheduled ✓ **Implement** Review Closed Canceled

- Click "Complete Change" when you finish performing the change

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Change Record

New ✓ Assess ✓ Authorize ✓ **Scheduled** Implement Review Closed Canceled

- Close code and Close notes are required to complete a change

CAB Details | CAB Review | Closure Details | Comments/Notes/Activity Stream

Close code: Successful with issues

Close notes: The updates have been applied to all servers. In the future we'll need to be aware that cognos doesn't use the system version of httpd, although we've put measures in place to nullify this going forward. We'll also need to bear in mind that when servers running PHP are updated, we need to monitor the messages file for SELinux alerts that PHP isn't able to use something (i.e. domain name resolution) and resolve that quickly. Would be helpful to have test scenarios for the various servers that need to be updated to verify a successful update, but my requests for this have been for the most part unanswered.

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Routine Change Proposal

- All routine changes must first receive CAB approval to be considered routine.
- Changes must have a defined and consistent process to implement.
- Must be low risk

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Routine Change Proposal

- Easiest way to create:
1. Create a Normal Change
2. Right-click in header, select "Propose Standard Change Template"

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Routine Change Proposal

- Routine Change Proposal will be reviewed by CAB
- Once approved, routine changes can be performed without further CAB approval
  - Only during agreed maintenance windows
  - Each Routine Change still gets logged

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Routine Change

- After a Routine Change has been approved, it will appear in the Routine Change catalog

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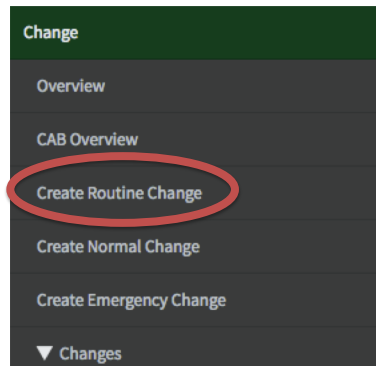
Routine Change

- Changes are placed into categories

3/30/18
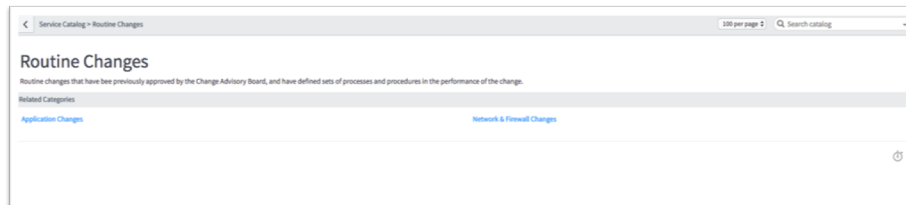
Routine Change

Service Catalog > Routine Changes > Application Changes

Application Changes

Items

☐ ads

☐ ServiceNow Release

☐ SN

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Routine Change

- Clicking a change created a new Routine Change record
- All information in the original proposal gets copied into the change record
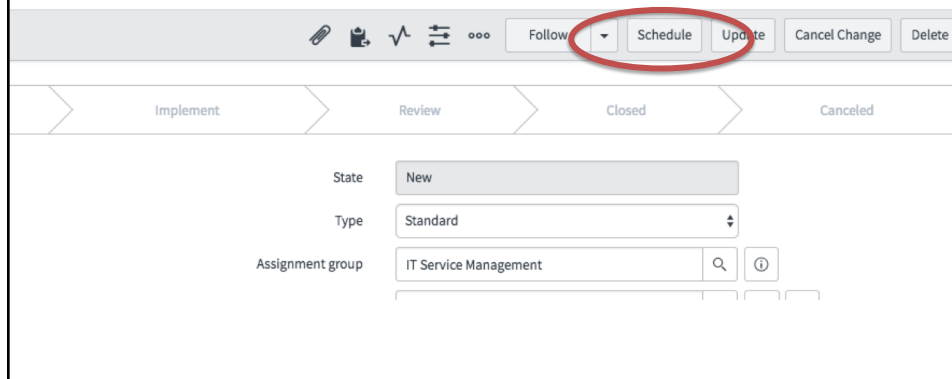
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Routine Change

- Click "Schedule" to schedule the change

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Routine Change

- Just like a Normal Change:
  - Click "Implement" when you start the change
  - Click "Complete Change" when you are done

3/30/18

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Viewing Change Records
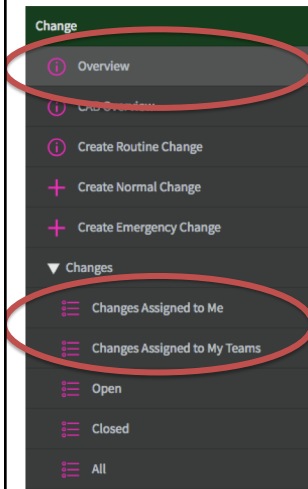
- **Overview:** dashboard of changes scheduled this week and last week
- **Changes Assigned to Me/Team:** list of changes assigned to you or to members of any of your teams/groups

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Viewing Change Records
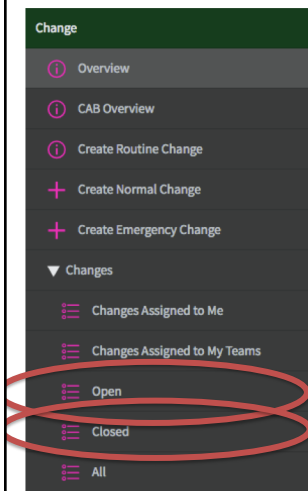
- **Open:** list of all changes in an Open state
- **Closed:** list of changes in a closed stated

20

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Viewing Change Records

- Overview

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Viewing Change Records

- List of Open Changes
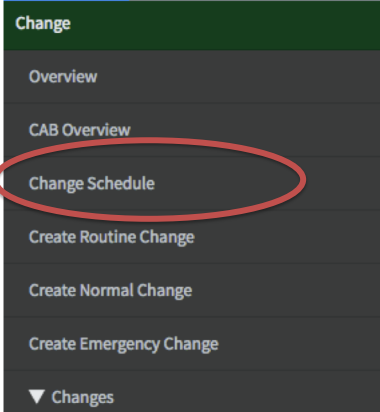
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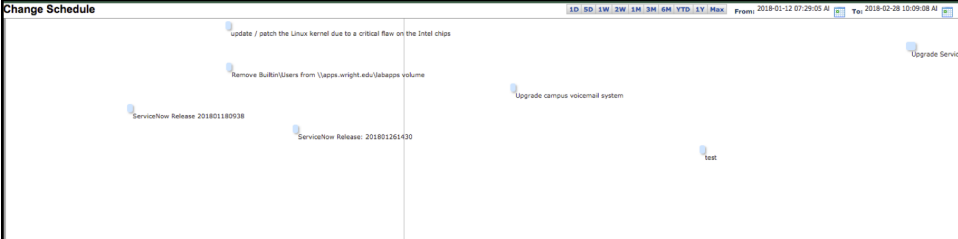
Change Schedule

- Shows a timeline view of changes

Slide 2

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Change Schedule