

National Aeronautics and Space Administration

Communications Service Office (CSO) Mission Operations Status

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Agenda

- MONS Filter Training Status
- Mission Backbone Equipment updates
 - RAD Power Supply Status
 - IP Mux Updates
- DMS replacement completion
- MOVE
 - Version 2.0.3
 - Keypset Retrofit
 - System Engineering Concerns Status
- IONet Security Status
 - KACE on the Mission Network
 - MSGRS
 - New IONet Security Services
- NRRP Status
- SCD Status
 - High Availability SCD
 - SCD Release 7.1

Mission Outage Notification System Training Initiative

- Many Customers have complained that Mission Outage Notifications are not useful because they receive too many that have nothing to do with their Sites or Projects.
- The Mission Outage Notification System has always had filter capability similar to AOPNS.
- Operations is standardizing the wording of the MONS messages and has provided training to all Mission Communications Managers (MCMs) on using the MONS Filters so they can train customers.
- MONS Training
 - Will consist on how to apply for a MONS account, set up a MONS account, and provide specifics on how to selectively filter and receive only those MONS which impact the customer specifically.

Mission Outage Notification System

- MONS Filtering (three ways)
 - Filter by Exact Phrase
 - Any Outage Notification that contains the EXACT submitted Phrase in any field will be sent to you
 - Filter by Key Words
 - Any Outage Notice that contains any one of the submitted word(s) in any field will be sent to you
 - Filter by Words to Exclude
 - Any Outage Notice that contains any one of the submitted word(s) will NOT be sent to you
- Contact your Mission Communications Manager or Mission Service Manager to schedule training.

RAD-2100 Channel Bank Power Supply Replacement Project

- RAD is replacing power supplies that have been identified as having defective capacitors within a range of serial numbers made in 2005.
- CSO and AT&T have
 - Determined the extent of the problem by contacting the sites with RAD-2100 channel banks to obtain S/N of power supplies to cross reference with the vendor list.
 - 126 power supplies require replacement network wide.
 - Begun shipping replacement Power Supplies to sites and returning the defective Power Supplies to RAD for Refurbishment.
- To date six batches of replacement power supplies have been shipped from the vendor for our deployment throughout the network
 - Every RAD in the Network now has at least one good power supply

RAD-2100 Channel Bank Power Supply Replacement Project

- 87 Power supplies have been replaced throughout the network to date with 39 power supplies remaining.

- Completed locations:

JSC	WLPS
MSFC	Glenn
White Sands	APL
NASA Hq.	Suitland

- Remaining locations:

GSFC: 18 power supplies
JPL: 8 power supplies (on site)
Hanger AE: 2 power supplies
Poker Flat: 2 power supplies
Vandenberg AFB: 2 power supplies
Lockheed Missile & Space: 1 power supply

Palestine: 1 power supply
Goldstone: 1 power supply
Schreiver AFB: 1 power supply
Penn State: 1 power supply
Sioux Falls: 1 power supply
Berkley: 1 power supply

RAD Ipmux-16 Software Upgrade to V6.05

- Background
 - Occurrences were noted of connectivity appearing to down by GCC but active by AT&T.
 - The software upgrade was recommended to improve IPmux-16 CPU stability.
 - The software upgrade solves a limitation which may compromise the stability of the device including Remote Management access (via PING, Telnet, SNMP and Terminal access).
- Benefits of the upgrade:
 1. Improved Jitter Buffer deviations statistics
 2. Improved internal switch
 3. Solves an issue sometimes seen with Telnet becoming inaccessible after Telnet Service Monitoring
 4. Solves an issue we have seen with “False” T-1 AIS Alarm traps observed for disabled T-1 ports, even when unmapped
 5. Adds T-1 loopback enhancement

RAD Ipmux-16 Software Upgrade to V6.05

- 21-devices needed to be upgraded at 8 locations.
11 in-service devices, ten spares.

GSFC: two in-service, two spares

White Sands: two in-service, two spares

JPL: two in-service, one spare

JSC: one in-service, one spare

MSFC: one in-service, one spare

KSC: one in-service, one spare

Goldstone: one in-service, one spare

VAFB: one in-service, one spare

- Activities started on May 12th and all devices were completed on July 18th

DMS replacement completion

- Two (2) new DMS UCS 2910 switches were transitioned to an operational status on June 19, 2012.
- The new switches, one in GSFC, Building 14 room S181, which is the same location as the prior Telenex 2700 switch, and one in GSFC, Building 32 room N005, provide the same functionality as the prior switch and also provide redundancy, which was not previously available.
- All transition activities and operational testing have been satisfactorily completed.

MOVE Version 2.0.3

- 2.0.3 Software Addressed fixes for
 - 12 systemic Maintenance Tickets (MTs)
 - 9 Test Discrepancy Reports (TDRs).
 - 3 FUSA internally discovered issues
- Problems Fixed
 - Documentation updates
 - Discrete line Key Volume function
 - Phantom Line Key appearance
 - Audio Routing with VAID enabled for all line keys
 - External T1 resync on line errors
 - Behavior when deleting a keyset
 - Degraded LSA response when duplicating keyset users
 - Several issues relating to conference merge behavior
 - Unexpected audio from conference merge
 - Several issues relating to indicators/permissions for Restricted Talk Conferences
 - Type B keyset microphone mapping to LSA settings
 - Keyset Interface reset during Remote Conference Access
- Version 2.0.3 currently installed on GSFC Switch 2 for testing

MOVE Keyset Retrofit Status

SITE	Planned Keyset Quantity	Actual Keyset Quantity	Delivered To Date	% Complete
	2856		2372	83%
GSFC	419	419	419	100%
JSC	911	911	911	100%
WFF	401	285	285	71%
STGT/WSGT/GRGT	261	195	195	75%
KSC	229	229	229	100%
JPL	324	60	60	19%
ARC	35	35	35	100%
MSFC	126	123	123	98%
PFRR	71	66	65	92%
GDSCC	23	22	22	96%
CDSCC	34	6	6	18%
MDSCC	22	22	22	100%

Concern: The WSC, WFF, and JPL locations advise that mission support requirements have contributed to the significant delay in completing their Type-D keyset retrofit. It is costly for FUSA to maintain the required resources to support an overextended retrofit activity. GSFC Code-300 (safety and mission assurance) and Code-400 (flight projects) have been advised.

MOVE Project Close Out Concern Status

- Dan Duffy assigned as the CSO Service Element Manager for Mission Voice
- Statement of Work issued to the NICS Contractor and to SES to provide Systems Engineering support for the Agency MOVE systems and the responses are being evaluated.
- SES Task can be extended long enough for the new task to be put in place

KACE on the Mission Network

- KACE (Dell Corporation product) is a NASA Agency mandated end-user computer software patch management and configuration reporting tool (stand-alone server / appliance).
- Due to many issues with the underlying software and platform the KACE product was developed on, there are security vulnerabilities and potential risk to hosts.
- KACE is not being deployed on the Mission Network at this time. Renewal of the Patchlink licenses for Mission Networks has been completed for one year to provide the vendor (and Agency) time to address the vulnerabilities and risks.
- An investigation ticket has been opened with the SOC.
- A waiver request is going to be submitted for the Mission Network's Approving Official to accept the continual use of PatchLink.

MSGRS

- The Mission Secure Gateway Request System (MSGRS) Project has been initiated to address issues:
 - existing system's operating system is end of support/life
 - hardware platform the system is running on is end of support/life
 - web applications are not supportable or scalable to meet the latest requirements for a consolidated system
- The MSGRS will be more centralized than the current model, with multiple networks' firewall rules managed by the same request system.
- System improvements:
 - users will log into the system via Access Launchpad using their Access Launchpad credentials
 - A prime and backup system configuration will be used with automatic switch in case of failure with prime system
 - System will be 'network' aware removing the need for customers to know what firewalls are between point A and B.

IONet Security Services

- Windows Server Update Service (WSUS) allows customers to download Windows software updates from a local server.
- Symantec Antivirus – Customers can download and install antivirus clients for Windows, MAC and Red hat.

Nortel Router Replacement Project Status

Operational support:

- default route for Closed IONet, IPTX and replacement network are via the NRRP Network
- Landsat7 Dev MOC string moved to NRRP. Unicast only project. Prime and Backup string scheduled for week of Sept 10.
- 5 CDM SCD subnets moved to NRRP. TESTCD 4,6,7,8 and BLT in Bldg 25. Receiving real data from IPTX and transmitting test data to IPTX test SCDs via Multicast Gateways .
- 2 CDM management subnets moved to NRRP.
- High Density SCDs at JSC installed on NRRP. Receiving real data from IPTX and test sources via Multicast Gateways from legacy network.

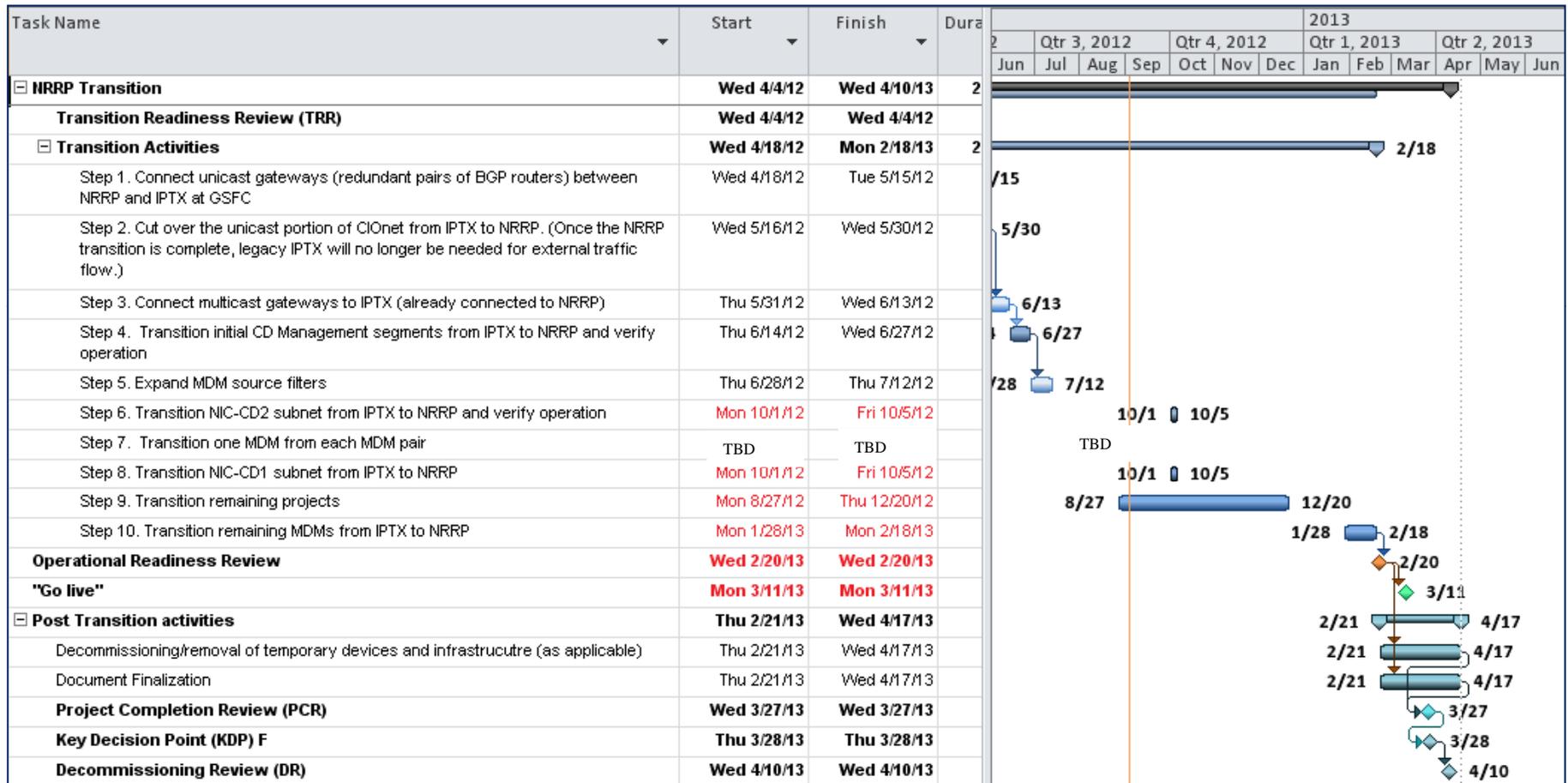
Upcoming Transition Activity

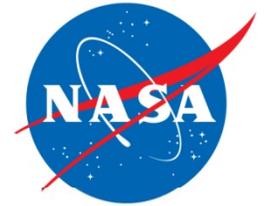
- 09/17/12 – WSC 10 channel MDM
- 09/19/12 – Begin transitioning multicast customers (other than MDMs)
- 09/21/12 – Complete transition of Landsat 7 to NRRP
- TBD – one MDM from each MDM pair

NRRP Transition Contingency Planning

- The NRRP approach to transition contingency planning is based on a parallel infrastructure implementation providing constant fallback capability to mitigate contingencies during Transition
- The fallback capability is inherent in each step at the subnet level
- The parallel network will be decommissioned after ORR

NRRP Overall Project Schedule





SCD High Availability (HA) Software

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- High Density SCDs delivered to JSC and are being tested as MDM replacements
 - Software release intended to facilitate High Density SCD to replace JSC MDMs
 - Backup system cannot be used for other SCD services.
 - Startup Resolution – Determines which system will be the Prime or Backup. Prime runs necessary scripts and starts the SCD.
 - Automatic transfer of SCD configuration file whenever changes are made on the Prime.
 - Prime machine monitors SCD processes for failures.
 - Automatic detection of Prime failure using heartbeats (Unicast UDPIP) and pings. Backup system will then become Prime and run any necessary scripts and start the SCD.
 - Any Serial interfaces will have to be switched during failover.
 - Heartbeat Request and Response messages contain all current HA system and status information.
 - Release currently in Development
 - Projected delivery to Operations 2/15/2013
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Small Conversion Device

Release 7.1

- CCSDS/SLE Capability
 - CCSDS Space Link (SL)
 - CCSDS Space Link Extension (SLE)
 - Version negotiation (2 and 4)
 - Provider
 - User (legacy) - the SLE Legacy User can receive forward command data from the various formats as well as return data
 - Provider or User can be TCP/IP Client or Server
 - RAF, RCF, FCLTU, Command Echo, Status
 - Can convert to legacy protocols (i.e., 4800 bit block or unblocked/raw) and transport via serial, UDP/IP and or TCP/IP
 - Strict adherence to BLUE Books
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Small Conversion Device Release 7.1

- Status
 - Currently in System Test Phase
 - Anticipate pre-delivery network testing
 - Schedule
 - Delivery Date: December 14, 2012
 - Risks/Dependencies/Issues
 - None
 - Evaluating Provider Proxy capability (possible air gap solution) for future release
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