



MDMS UPDATE

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FROM THE PROGRAM MANAGER

By Michael Ott, MDMS Program Manager, USACE—Huntsville Center

Welcome to our April - May 2018 issue of the *MDMS Update*, designed to keep you informed on the growth and latest developments of the Meter Data Management System and the Army Metering Program.

While the MDMS Upgrade was planned for the spring of 2018, the provisioning and configuration of the hardware required to support the MDMS Upgrade within the DISA hosting environment took a little longer than what was previously estimated. The article below provides an update on the MDMS Upgrade schedule.

Progress continues to be made on the MDMS gateway regionalization efforts that are expected to improve meter network reliability. For more insight on the latest status of our regionalization activities, see the "Update on Regionalization Efforts" on page 2.

All MDMS program-managed servers are required to move to Windows Server 2012

R2 by June 30, 2019. To learn more about the process, schedule, and status of this effort, please see our article on page 3

There are more than 2,500 meters that have not reported to MDMS in over two years. These are factored into the calculation of the Army's meter network reliability metric shown in the Meter Status Dashboard (percent consistency). The AMP Branch Chief will send a list to each MACOM'S Energy Manager for action. If there is no action, then they will be removed from MDMS. See our article on page 3 to see what you should do about it.

As always, our mission is to improve the MDMS experience for end users. Your input is valuable, and we welcome your feedback at:

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THE MDMS UPGRADE SCHEDULE UPDATE

Previous newsletters indicated the launch of the MDMS Upgrade was planned for the spring of 2018. Spring has sprung, but the provisioning and configuration of the hardware required to support the MDMS Upgrade within the DISA hosting environment took a little longer than what was previously estimated. The current schedule for the launch of the upgrade is now July 2018.

During May and June, archived historical meter data dating back to December 2015 will be processed into the new MDMS Upgrade hardware environment. Note the word "processed." Populating the MDMS Upgrade with historical meter data from MDMS v1 is not a simple copy-paste operation. The historical data must be processed by the MDMS Upgrade in the same way it processes real-time meter data, including vetting for reliability and applying Validation Estimating and Editing (VEE) as explained in the February-March newsletter. Even though the historical meter data will be fed into the MDMS Upgrade at a much faster pace than real-time meter data, the many terabytes of historical meter data will require weeks to process.

The MDMS team has completed testing of the MDMS Upgrade within its stand-alone Development Testing and

Training System (DTTS) using only historical meter data. No live meter data can be streamed to the DTTS for cybersecurity reasons. Hence, final testing of the MDMS Upgrade must be performed on the new hardware within the DISA environment to include both historical and live meter data.

After all historical meter data has been processed within the new the MDMS Upgrade environment, the real-time meter data feed to the existing MDMS v1 servers will be simultaneously routed to the MDMS Upgrade hardware. Testing and any required debugging of the MDMS Upgrade will be conducted using both historical and real-time meter data. Once the testing is complete, the web portal for the MDMS user interface will be re-directed from MDMS v1 to the MDMS Upgrade. We are getting close to that long-awaited day.

Five (5) training webinars for the MDMS Upgrade will be offered beginning July through September 2018. Beyond September, additional training webinars will be scheduled at least once every two months. Updated video tutorials on how to run reports within the MDMS Upgrade will also be available for user access.



MDMS UPDATE

UPDATE ON MDMS GATEWAY REGIONALIZATION

As stated in the June – July 2017 MDMS Update Newsletter, regionalization of the Network Enterprise Centers (NECs) should improve reliability of the Army’s meter network. At least one MDMS gateway server per installation/site currently collects and transmits meter data to the enterprise MDMS. The updated regionalization plan is enabling single MDMS gateway servers to obtain meter data from multiple sites, thereby greatly reducing the number of gateway servers requiring maintenance. The end state will be 12 regional NECs. Recall that we noted that fewer NECs will streamline the coordination between the MDMS team and the responsible NEC when troubleshooting meter network outages. Hardware and software upgrades are also being implemented as part of this effort.

The MDMS team continues to work with NETCOM engineers, as well as Regional Cyber Centers (RCC), Joint Regional Security Stacks (JRSS) and local NEC personnel to make the required changes to Ports and Protocols Services (PPS). Once implemented, the PPS changes will re-direct the meter data transmission from each site’s Enterprise Energy Data Reporting System (EEDRS) or accredited Utility Monitoring and Control System (UMCS) to the new appropriate regional MDMS gateway.

Those MDMS servers that have been regionalized and are in the process of being returned to the MDMS Gateway Team are:

- Anniston Army Depot
- Fort Buchanan
- Fort Irwin
- Fort Jackson
- Fort Polk
- Fort Rucker
- Pine Bluff Arsenal
- Presidio of Monterey
- Rock Island Arsenal
- Sierra Army Depot
- West Point
- Yuma Proving Ground

The regionalization completion status as of 23 April 2018 is shown below.

MID ATLANTIC REGION Aberdeen Proving Ground (RNEC)* Adelphi Laboratory Center Carlisle Barracks Fort Detrick (IMCOM) & Forest Glen Letterkenny Army Depot Scranton Army Ammunition Plant* Tobyhanna Army Depot	NORTHEAST REGION Fort Drum (RNEC) Fort Buchanan* Fort Devens* Fort Hamilton Natick Soldier Systems Center West Point USMA Watervliet Arsenal	JOINT BASE LEWIS MCCHORD Joint Base Lewis-McChord Yakima Training Center
NATIONAL CAPITAL REGION Fort Belvoir (RNEC) Fort A P Hill Fort McNair Fort Myer	SOUTH ATLANTIC REGION Fort Lee	SOUTHWEST REGION Joint Base San Antonio* Corpus Christi Army Depot* McAlester Army Ammo Plant* Red River Army Depot
FORT BLISS REGION Fort Bliss White Sands Missile Range* Yuma Proving Ground	SOUTHEAST REGION Fort Stewart (RNEC) Fort Gillem* Fort Gordon* Fort Jackson MOT Sunny Point	CENTRAL REGION Redstone Arsenal (RNEC) Anniston Army Depot Detroit Arsenal Fort Polk Fort Rucker Iowa Army Ammunition Plant Pine Bluff Arsenal Rock Island Arsenal
BLUEGRASS REGION Fort Campbell (RNEC) Bluegrass Army Depot Holston	MIDWEST REGION Fort Riley (RNEC) Fort Leonard Wood* Fort McCoy Fort Sill Lake City*	
WEST REGION Fort Carson 1 UMCS GW Fort Carson 2 (RNEC) Dugway Proving Ground Fort Irwin Fort Hunter Liggett Hawthorne Army Depot Presidio of Monterey Sierra Army Depot		

- <- (White w/ BOLD) PPS and Integration Complete
- <- (White w/ Asterisk*) In Process
- <- (Gray) Tested and ready to be regionalized



MDMS UPDATE

MDMS GATEWAY 2012 R2 UPGRADE

Based on OPORD 2015-344, Migrating Army Systems to the Latest AGM OS, section 3.e.(9)(c), the ARCYBER direction determined that the required migration date to install Windows Server 2012 R2 for all program-managed systems is June 30, 2019. This deadline applies to all MDMS program-managed servers, including its gateway servers that reside within the various NEC domains.

The current process is for the MDMS Gateway Team to identify the MDMS servers that require the upgrade and coordinate touch labor—either local support or contracted—at each site to facilitate the upgrade. The MDMS Operations Team configures new hard drives with the Windows 2012 R2 software installed and properly hardened with the latest STIGs (Security Technical Implementation Guides). The hard drives are then shipped to the site for replacement of the old drives. The MDMS Gateway Team then follows up with the NEC to verify the successful swap-out of the drives and re-start of meter data transmission to the MDMS.

In some cases, the MDMS Gateway server requires replacement as part of the hardware refresh cycle. These replacement servers will also have the 2012 R2 software installed and hardened by the MDMS Gateway Team before shipping it to the appropriate NEC.

The MDMS program has upgraded 15 of the 74 gateway servers to date. The MDMS Gateway Team conducts weekly working meetings with the Corps of Engineers, 21st Signal Brigade, 93rd Signal Brigade, 106th Signal Brigade (NETCOM) and Regional Cyber Center (RCC) to discuss the Windows Server 2012 R2 upgrade status. This coordination will expand to include additional Signal Brigades in the future. The MDMS program has a good head start on the Windows 2012 R2 upgrade and should finish early with the continued help of the regional and site NEC's.

**MDMS SPRING CLEANING
(NON-REPORTING METERS)**

There are more than 2,500 meters that have not reported data to MDMS in over two years. These are mostly gateway reporting meters separate from the approximate 5,000 utility privatization (UP) meters at Alaska garrisons for which the meter data stopped being supplied by UP contractors in 2015. The 2,500+ long silent meters are factored into the calculation of the Army's meter network reliability metric shown in the Meter Status Dashboard (percent consistency). Because that metric is based on the number of off-line meters times the duration that each meter remains off-line, meters that have long been, and continue to be off-line overshadow the Army's recent improvement in the reliability of its meter network.

The impending launch of the MDMS Upgrade will include a spring cleaning of meters that have not reported since 2015 as well as the Alaska garrison UP meters. When the MDMS Upgrade goes live, the new Meter Status Dashboard will show only those meters that have reported (or had data files supplied by UP contractors) since December 2015. The reporting consistency metric should increase as a consequence and serve as a more accurate indicator of the network reliability.

Not to worry if a "Van Winkle" meter wakes up and starts reporting data again. the MDMS Upgrade will reincorporate that meter data the same way it adds a new meter, but with one caveat. The historical meter data available within the MDMS Upgrade only reaches back to December 2015. A meter that stopped reporting data prior to December 2015 will have no readily available historical meter data. That is not much of an issue because having more than a 2-year gap in meter data would severely hinder most energy use analyses. The MDMS Team will be able to

extract pre-December 2015 meter data from the MDMS v1 archives, convert it for format compatibility and upload to the MDMS Upgrade. However, due to the time and effort involved, this will be done only as requested and approved on a case-by-case basis.

This would be a good time, and possibly the last opportunity, for installation Energy Managers (EM) and Resource Efficiency Manager (REM) contractors to review their off-line building meters using the MDMS Meter Status dashboard. As explained in previous newsletters and training webinars, off-line meters are listed starting with the longest off-line. Suggest Army Metering Service Desk help desk tickets be initiated for those buildings known to be in use/occupied, but where the meter data is no longer being transmitted. The AMP Branch Chief will send a list to each MACOM'S Energy Manager for action. If there is no action, then they will be removed from MDMS.

MDMS Meter Status drill-down screen example

Building	Meter	Commodity	Most Recent
E3331 ADMIN GEN PURP	APGM_E3331.WEM-15	Electricity	8/25/2015 4:00:00 PM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-04	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-05	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-07	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-08	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-09	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-10	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-11	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-12	Electricity	8/26/2015 8:00:00 AM
E3331 ADMIN GEN PURP	APGM_E3331.WEM-13	Electricity	8/26/2015 8:00:00 AM

