All redactions per (b)(3) unless otherwise indicated

From:
Sent: Thursday, July 14, 2016 9:32 AM
To:
Cc:

Subject: RE: ACES-- security findings and going "live" on [ ] ---SECRET//NOFORN---
Attachments: [ ] ACES POAMItemWorkSheet approved.xlsx

Classification: ~~SECRET//NOFORN~~

Classified By: [ ]
Derived From: INCG dated 20120213
Declassify On: 20411231
===

Good Morning [ ]

Seems there is quite a bit of misunderstanding around this asset. I received a call last week, as did [ ] inquiring as to why they have not on-boarded with enterprise security services. To understand the findings, one needs to understand the configuration and architecture. Below is the definition from the SSP. The first paragraph is the IOC, which is authorized; and the second is the FOC, which I understand will be funded soon.

Responses to [ ] questions are included below in red. Also, attached POAM that includes all [ ] liens.

Regards,
[ ]

From: [ ]
Sent: Wednesday, July 13, 2016 5:33 PM
To:
Cc:
Subject: FW: ACES-- security findings and going "live" on [ ] ---SECRET//NOFORN---

Classification: ~~SECRET//NOFORN~~

Classified By: [ ]

1

```
Derived From: INCG dated 20120213
Declassify On: 20411231
==========================================================
```

[ ]

Can you please dig into this and provide me an answer back soonest.

V/r

[ ]

From: [ ]
Sent: Tuesday, July 12, 2016 5:16 PM
To: [ ]
Subject: FW: ACES-- security findings and going "live" on [ ] ---SECRET//NOFORN

```
Classification: SECRET//NOFORN

Classified By: [ ]
Derived From: INCG dated 20120213
Declassify On: 20411231
==========================================================
```

[ ] --

This is an example of one of the systems that I discussed with Martha last week when we talked about how we're doing assessments and ICD 503 implementation here at NRO. We'll probably chat about this one again on Thursday.

Can you and your team provide me with nitty gritty details of ACES? I'm assuming it aligns with the "Advanced Collaboration Enterprise Services" system ([ ] ?

- What is the current status of the system? [ ]
- What does the heat map assessment look like? [ ]
  [ ]
- Is there a tear sheet for the system? [ ]
- How in-depth was the assessment? Did they use the RFI methodology to assess? [ ]
  [ ]
- How did the documentation (SAR, RAR, etc) look? [ ] total findings broken out as;
  - [ ]
  -
  -
  -

Section	Description	Planned Close

2

(b)(1)
(b)(3)

I'm not sure who provided Martha with the write-up below, and I'm not sure who provided the "ISSE Comments" (column L) in the attached spreadsheet.

Thanks,

From:
Sent: Tuesday, July 12, 2016 8:05 AM
To:
Subject: FW: ACES-- security findings --- ~~SECRET//NOFORN~~

Classification: ~~SECRET//NOFORN~~

Classified By:
Derived From: INCG dated 20120213
Declassify On: 20411231
===

ACES was only given a [   ] Given these findings and the fact that they want to connect to [   ] and [   ] certain issues need to be addressed and rectified prior to being allowed on either network.

From their documentation:

(b)(1)
(b)(3)

(b)(1)
(b)(3)

Therefore, it is imperative that systems be tightened as much as possible to ensure the security of the networks on which they will reside.

Here is a list of the DAO findings that are the most troublesome:

(b)(1)
(b)(3)

3

(b)(1)
(b)(3)

(b)(3)

(b)(1)
(b)(3)

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Classification: ~~SECRET//NOFORN~~

===
Classification: ~~SECRET//NOFORN~~

===
Classification: ~~SECRET//NOFORN~~

===
Classification: ~~SECRET//NOFORN~~

From:
Sent: Wednesday, February 24, 2016 3:59 PM
To:

Cc:
Subject: RE: Missing UFC CODES --- SECRET//SI/TK//NOFORN

Classification: SECRET//SI/TK//NOFORN

Classified By:
Derived From: INCG dated 20120213
Declassify On: 25X1, 20661231
==

From:
Sent: Monday, February 22, 2016 7:45 AM

Subject: RE: Missing UFC CODES --- SECRET//SI/TK//NOFORN

Classification: SECRET//SI/TK//NOFORN

Classified By:
Derived From: INCG dated 20120213
Declassify On: 25X1, 20661231
==

What's a UFC code?

1

(b)(3)

From: [redacted]   (b)(3)
Sent: Friday, February 19, 2016 3:23 PM

(b)(3)

Subject: Missing UFC CODES --- SECRET//SI/TK//NOFORN

Classification: SECRET//SI/TK//NOFORN

Classified By: S//TK//REL5EYE
Derived From: INCG dated 20120213
Declassify On: 25X1, 20661231
===

DAO Reps,

The assets listed below have been approved through step 1 in Xacta but do not have a UFC code associated with one or many of the locations. This information is vital. I would appreciate your assistance in encouraging the program to add this information.

[redacted]   (b)(3)

Tracking Number	Name	Location

(b)(1)
(b)(3)

(b)(1)
(b)(3)

(b)(1)
(b)(3)

4

(b)(1)
(b)(3)

(b)(1)
(b)(3)

(b)(1)
(b)(3)

(b)(1)
(b)(3)

8

(b)(1)
(b)(3)

(b)(1)
(b)(3)

11

(b)(1)
(b)(3)

12

(b)(1)
(b)(3)

(b)(1)
(b)(3)

(b)(1)
(b)(3)

==

Classification: SECRET//SI/TK//NOFORN

==

Classification: SECRET//SI/TK//NOFORN

==

Classification: SECRET//SI/TK//NOFORN

15

ACES Architecture

Overview

A basic ACES system consists of five components:

- One **ACES Server**. The ACES server is the central node in the system. It maps the physical location and dimensions of every screen in the system, and routes commands to and from those screens regarding the information they are displaying.
- **ACES Display Client** software. Every screen in an ACES system, be it a desktop display, a tablet, or a single tile in a video wall, has its own client. (The client is software that runs on the device or on a small computer attached to the screen.) The client's job is to communicate with the ACES Server:
    - o The Client tells the Server about the various windows it is currently displaying
    - o The ACES Server tells a Client to change what its screen is displaying (eg, "move this window to the left", or "resize this window"). The ACES Server receives these commands from the web server.
- **ACES Desktop Client**. The desktop client performs the same role as the display client: displaying pixels at the request of the ACES Server. However, the desktop client also gives end users the ability to manipulate those pixels through a GUI.
- **ACES Ingest**. This is a special process that runs on ACES Video Ingest Workstations to provide a mechanism for ingesting and manipulating video feeds from various sources. is a specialized version of the ACES Desktop Client that includes the ability to ingest video feeds from other sources.

(b)(3)

- One **ACES Web Server**. The web server gathers information about each Client--its location and the windows it is displaying--from the ACES Server, and (as mentioned above) sends commands to the Clients through the ACES Server. The ACES Web Server is a web based interface provided to manipulate geospatial coordinates of pixel data.

ACES Server

The majority of ACES processing occurs on the ACES Server. The ACES Server runs as a single threaded process on a Linux machine under the name "ACES-server". The ACES Server is coded in Python and runs within a Python 3.x environment. The ACES Server process brokers messages among all ACES Clients. The ACES Server currently subscribes to ports 5566 (receiver) and 5567 (sender). We selected these ports to avoid conflicts with well-established ports such as those described in Service Port and Transport Registry and to avoid known malicious exploit ports described in this intrusion detection FAQ.

ACES Web Server

The ACES Web Server is the primary interface that ACES users use to interact with the system. The ACES Web Server content is also called the ACES Console. It presents a visual map of all of

the pixels registered with the ACES environment along with all of the content mapped to those pixels. The user may add, remove, move and/or resize content via the ACES Web Server.
The ACES Web Server runs as a single threaded process on a Linux machine under the name "ACES-webserver". The ACES Web Server is coded in Python and runs within a Python 3.x environment. The ACES Web Server presents information to users via a JavaScript-based web browser application. While configurable, the ACES Web Server currently listens for TCP requests on port 8888. Port 8888 is traditionally used by web servers to serve test pages. ACES Web Server communicates with the ACES Server via ports 5567 (receiver) and port 5566 (sender). We selected these ports to avoid conflicts with well-established ports such as those described in Service Port and Transport Registry and to avoid known malicious exploit ports described in this intrusion detection FAQ.

ACES Desktop Client

The ACES Desktop Client is a process that runs on a user's desktop machine to interact with the ACES environment. The ACES Desktop Client process runs as a single threaded process on a Linux machine under the name "ACES-desktop-client". ACES Desktop Client runs under the Linux KDE Plasma Desktop environment. It is coded in Python and runs within a Python 3.x environment. The ACES Desktop Client communicates with the ACES Server via ports 5567 (receiver) and port 5566 (sender). We selected these ports to avoid conflicts with well-established ports such as those described in Service Port and Transport Registry and to avoid known malicious exploit ports described in this intrusion detection FAQ.

ACES Ingest

The ACES Ingest process runs on specialized ACES Video Ingest Workstations. It allows for the ingest of video feeds from provided thick client desktops or other video sources. ACES Ingest runs under the Linux KDE Plasma Desktop environment. It is coded in Python and runs within a Python 3.x environment. The ACES Ingest communicates with the ACES Server via port 5568 but can be configured to communicate on any port. We selected these ports to avoid conflicts with well-established ports such as those described in Service Port and Transport Registry and to avoid known malicious exploit ports described in this intrusion detection FAQ.

ACES Display Client

The ACES Display Client is a visually interactive component of the ACES environment. Unlike the ACES Desktop Client, the ACES Display Client only presents visual information and is not interactive like a desktop. It functions as a blank canvas that manipulates pixels for displaying ACES content. The ACES Desktop Client process runs as a single threaded process on a Linux machine under the name "ACES-display-client". It is coded in Python and runs within a Python 3.x environment. The ACES Display Client communicates with the ACES Server via ports 5567 (receiver) and port 5566 (sender). We selected these ports to avoid conflicts with well-established ports such as those described in Service Port and Transport Registry and to avoid known malicious exploit ports described in this intrusion detection FAQ.

LOGINS: the default login is ACES/ACES. We have setup the environment so that the default user does not need to login - they are simply presented with a desktop without any login required. They can however lock there screen if they need to get up from there desk

Privileged users have individual/unique accounts on the photon compute server. In order to login as a privileged user, the user must login to the photon compute server either at console or via ssh from an ACES connected machine (i.e. logins from outside of the ACES network are NOT permitted). The privileged user has a private PKI key that matches a public key on all of the ACES machines. Once a privileged user logs in with their individual login, they can ssh root@<aces_node> to access privileged commands throughout the ACES network.
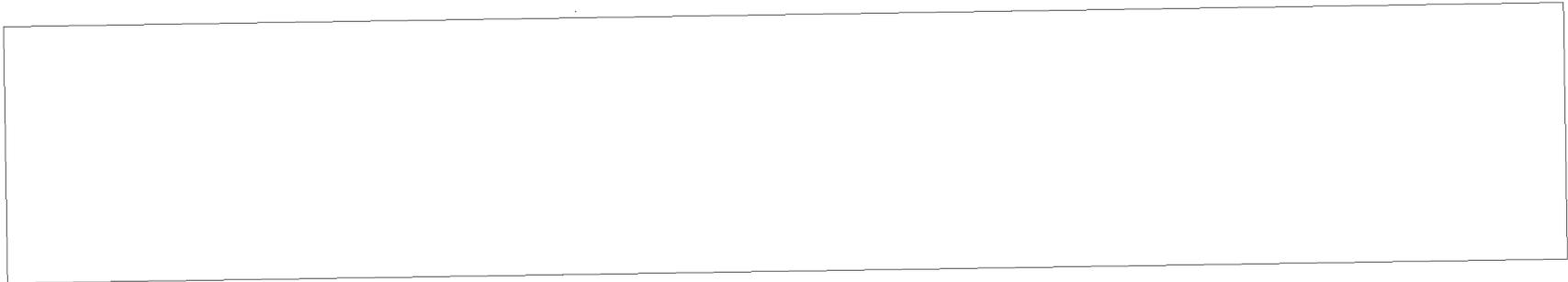
A functional diagram of the Blackmagic HDMI to SDI converter is below.

(b)(3)
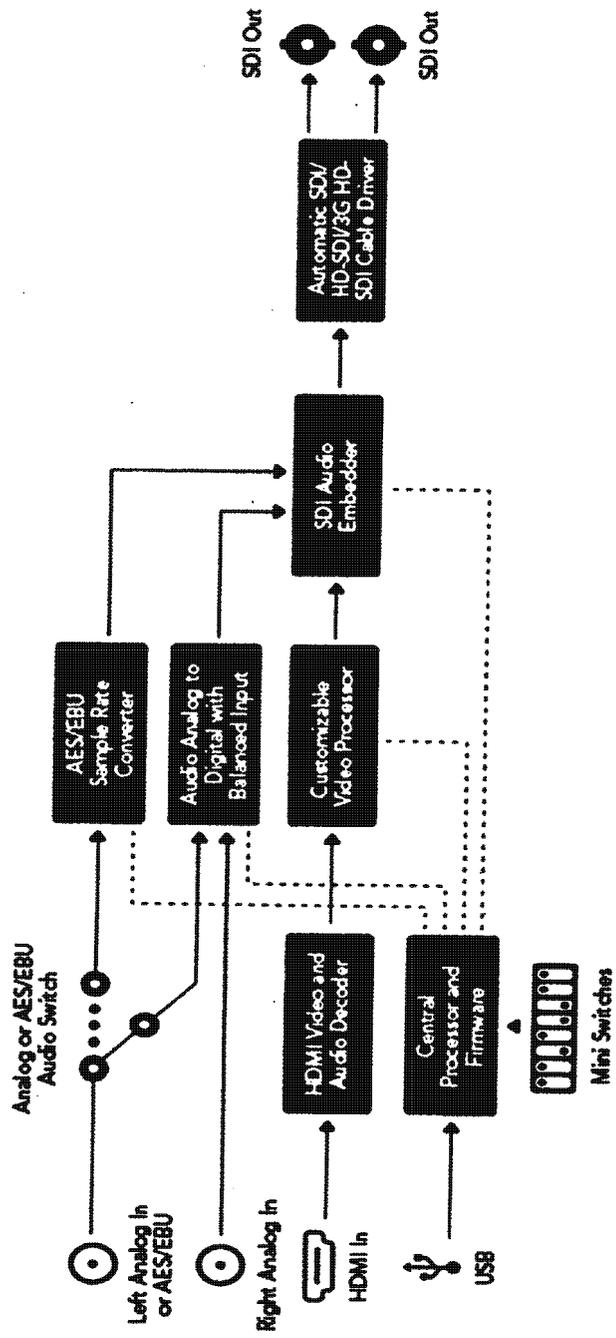
(b)(3)

(b)(3)

ACES

Advance Collaboration Enterprise Services (ACES)

Certified Test Plan (CTP)

17DEC2015

Table of Continents

Table of Contents

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(b)(3)

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Hardware
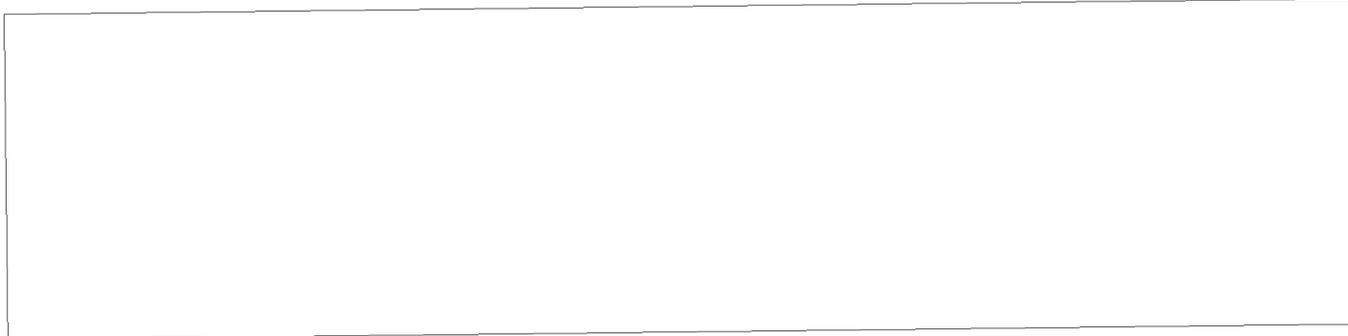
Networking
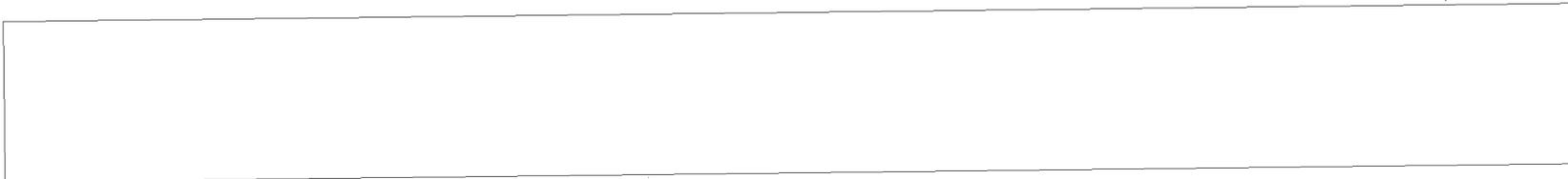
Separation of Roles

Show different roles are present on the system.

Procedure	Result
At the login screen, login as user "aces" with default password "aces"	
Start a terminal window (Start menu, type Terminal and enter)	
ssh <user>@photon.nro.aces-aoe.com	
ssh -i <private_key_file> root@photon.nro.aces-aoe.com	
User enters private key password	

Notes:
- Privileged User access is **only** granted on photon.nro.aces-aoe.com. In other words, Privileged Users cannot login directly from a workstation.
- This provides us a single point of auditability for all *root* user access.

Least Privileged Users

Show that administrators only have necessary privileges.

Procedure	Result
At the login screen, login as user "aces" with default password "aces"	
Start a terminal window (Start menu, type Terminal and enter)	
ls -al /root	
ssh <user>@photon.nro.aces-aoe.com	
ssh root@ws1.nro.aces-aoe.com. Enter the ssh private key password associated with <user>	
ls -al /root	

Audit Log

Show the Audit information generated by the operating system is collected in logs.

Procedure	Result
At the login screen, login as user "aces" with default password "aces"	
Start a terminal window (Start menu, type Terminal and enter)	
ls -al /var/log	

Password Policy

Strength of passwords

There is only one non-privileged user in the ACES environment. That user is 'aces' and has a password of 'aces'.

Each privileged user generates a public and private key pair for use within the NRO ACES environment. The public key is placed in the /home/aces/.ssh/authorized_keys file and the /root/.ssh/authorized_keys file. When a privileged user attempts to ssh into a Photon Linux machine, the privileged user's private key is compared against the public key in the candidate authorized_keys file. Privileged users on photon have PKI keys installed on every Photon Linux machine in the ACES environment.

Account Enforcement

Lock out user after ☐ failed login attempts.

ACES does not implement this policy.

Procedure	Result
NA	

Disabling Unnecessary Services

Minimizing services operating to those utilized.

Procedure	Result
At the login screen, login as user "aces" with default password "aces"	
Start a terminal window (Start menu, type Terminal and enter)	
systemctl --state=active	

Notes: ACES only enables necessary services. This test verifies the list of active services.

Access Control

Discretionary Access Control

Procedure	Result
NA	

Patch Verification

Patch level verification for the operating system.

Procedure	Result
At the login screen, login as user "aces" with default password "aces"	
Start a terminal window (Start menu, type Terminal and enter)	
dpkg –l	

Warning Banner

Legal notification banner issued to user prior to system access.

Procedure	Result
NA	

Malicious Code/ Antivirus Protection

**Virus detection.**

Procedure	Result
NA	

Video Ingest

Will complete after meeting with COMM & Cross Domain Solution (CDS) team
A functional diagram of the Blackmagic HDMI to SDI converter is below.
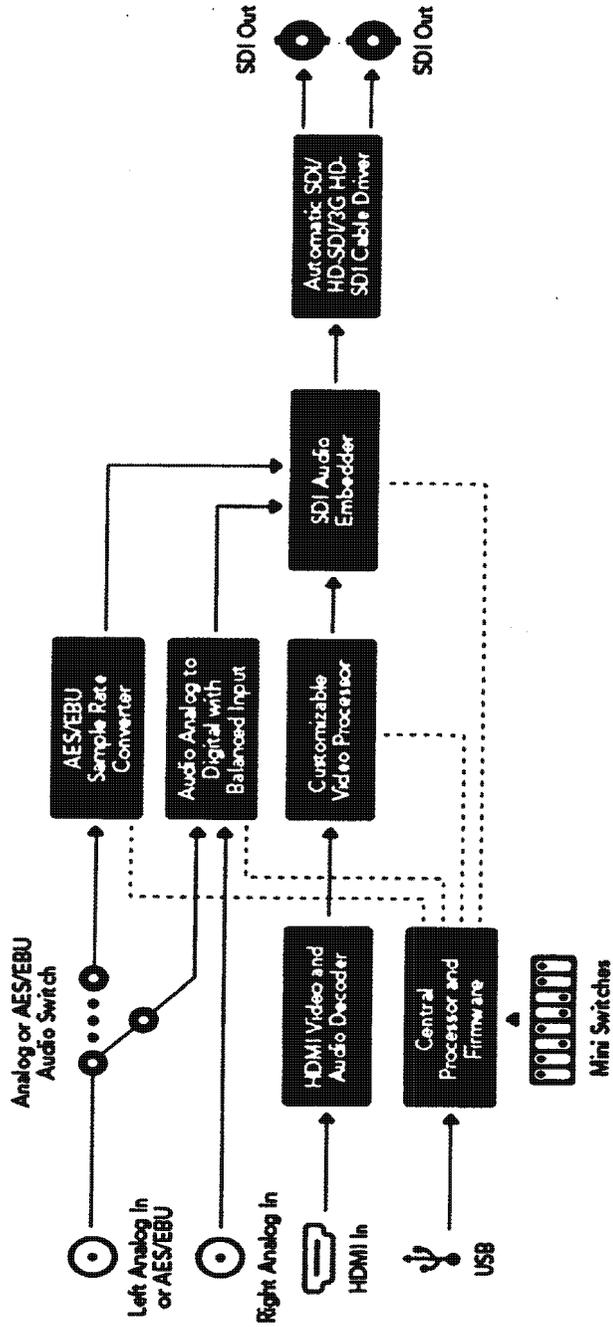
ACES JCC-WF
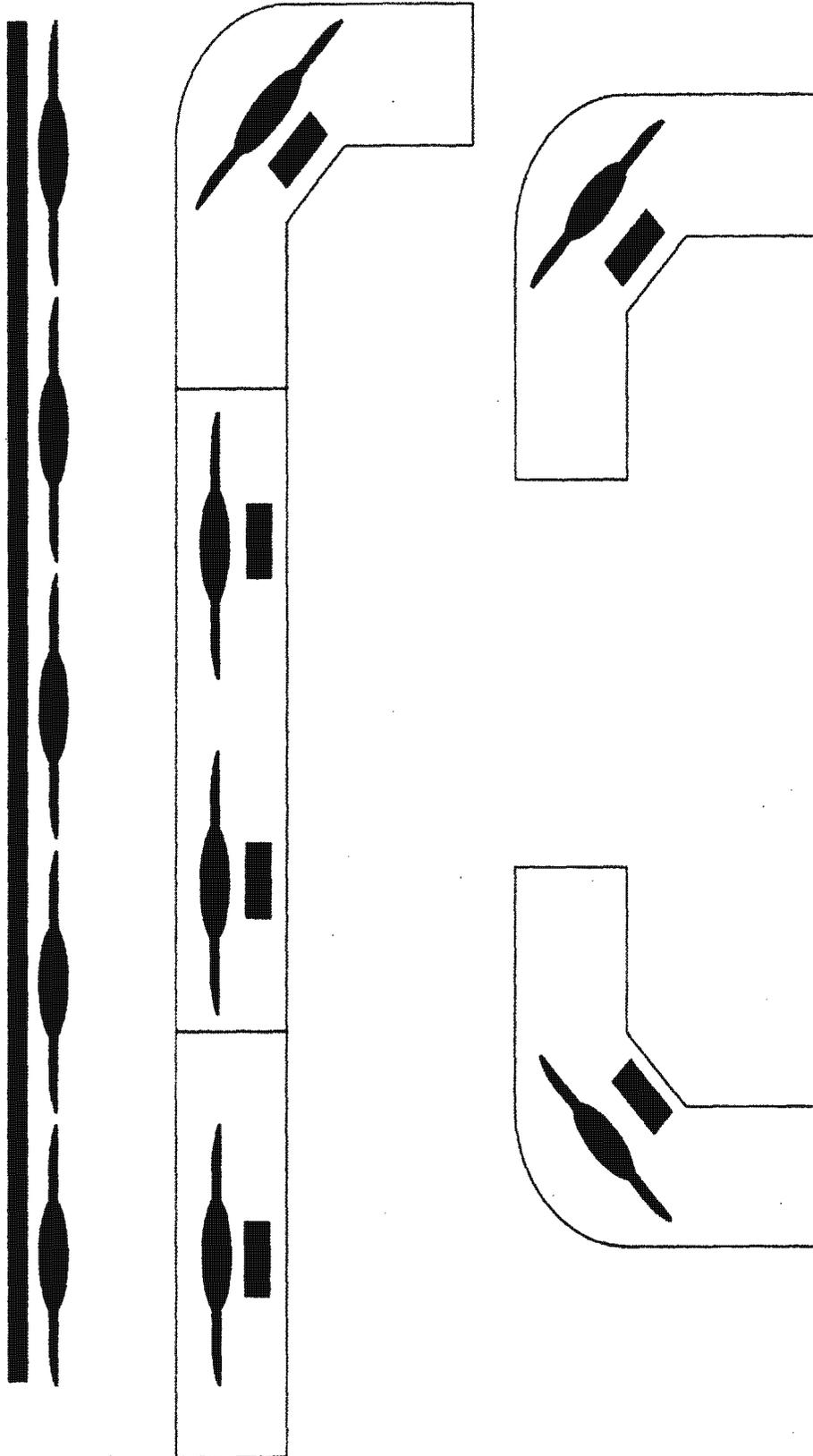
IOC Functional Capabilities

This section contains a list of the high-level functional requirements for the initial operating capability (IOC) version of ACES deployed to the JCC Westfields facility.

General ACES Capabilities
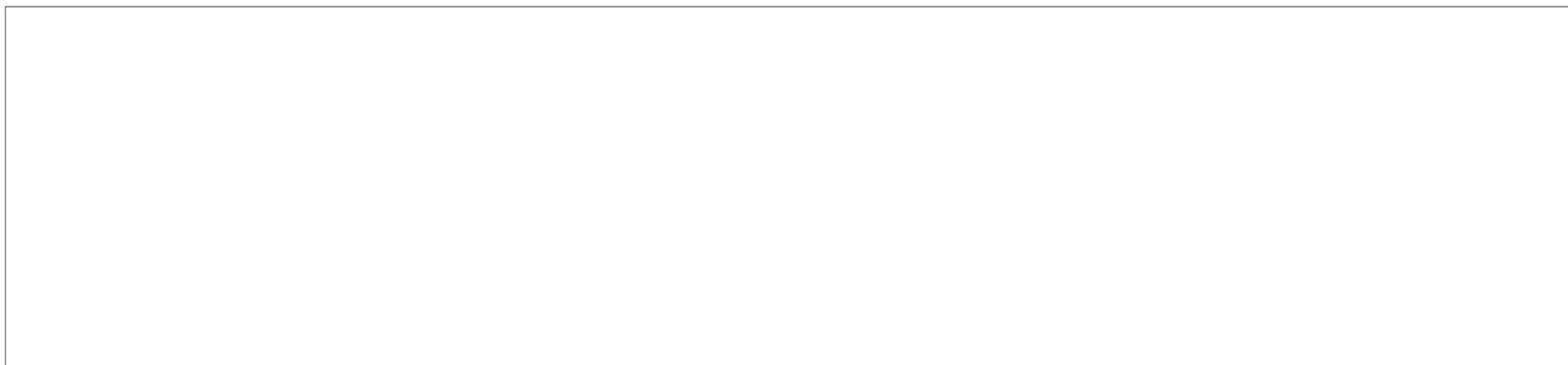
Video Ingest Workstation Capability
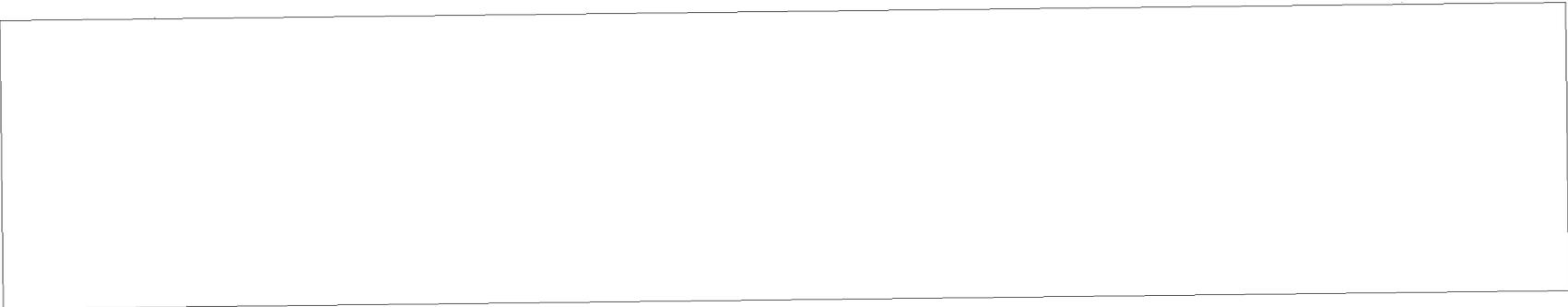
Explicitly out of scope for IOC

The following items are explicitly out of scope for IOC. This list is not exhaustive. If a capability is not listed above as explicitly supported, then it will NOT be implemented in IOC. This list is here for guidance only.

IOC equipment list

Below is the major hardware components of the initial operating capability for ACES JCC Westfields. Additional peripherals such as

Key items NOT included below that will be provided by NRO:
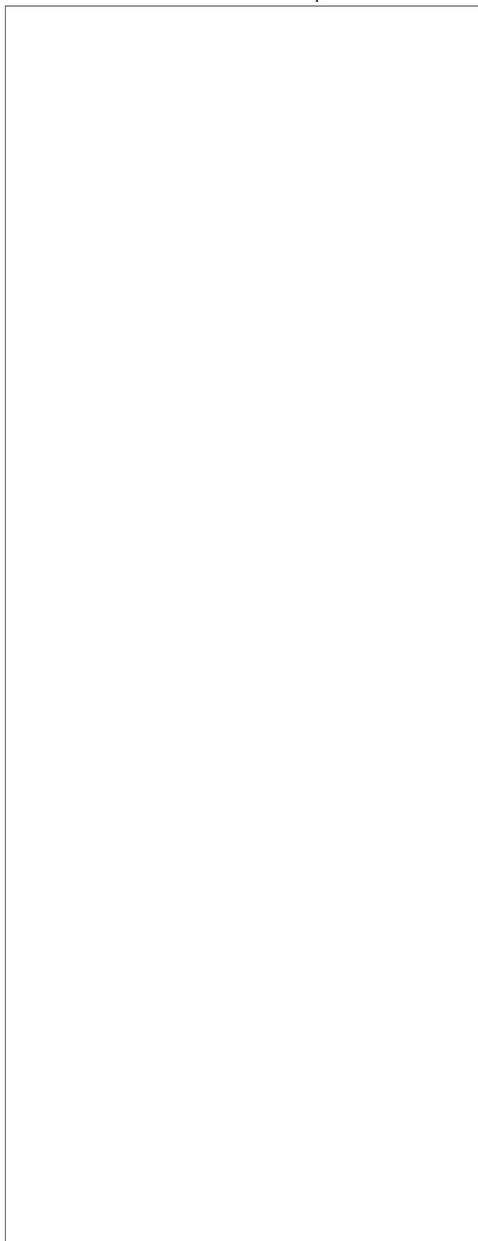
POA&M Nbr	Title	Creation Date	Weaknesses	CAT	POC	Resource Required	Scheduled Completion Date	Comments	ISSE Comments
1	AC-2.3 - Account Management								
2	AC-6 and AC-6.5 - Least Privilege								
3	AC-7.a-b, 7.1 - Unsuccessful Logon Attempts								
4	AU-2.a-d, 2.3, AU-3-3.2, AU-12.a-c, 12.1-2 - Audit Events								
5	AU-10-10..5 - Non-repudiation								
6	IA-2.5.a-b - Identification and Authentication								
7	AU-8, 8.1 - Time Stamps								
8	Public Key Enablement (PKE) {IA.5[2].1}								

POA&M Nbr	Title	Creation Date	Weaknesses	CAT	POC	Resource Required	Scheduled Completion Date	Comments	ISSE Comments
9	Enterprise Audit {AU-6[3]}	6/30/2016							
10	Enterprise Vulnerability Scanning Service (EVSS) {RA-5[1]}	6/30/2016							
11	Vulnerability Assessment / Scans {RA-5.a}	6/30/2016							
12	BIOS Security {CM-6.b}	6/30/2016							
13	Standard Security Banner {AC-8.a.1}	6/30/2016							
14	Information System Contingency Plan (ISCP) {CP-2.a}	6/30/2016							
15	Continuous Monitoring Report (CMP) {CA-7}	6/30/2016							

From:
Sent: Tuesday, September 27, 2016 1:01 PM
To:
Cc:
Subject: FW: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES)   --- UNCLASSIFIED/~~FOUO~~

Classification: UNCLASSIFIED/~~FOUO~~
==

NLT Thursday, please process a☐ week IATT extension for the ACES program.

From:
Sent: Tuesday, September 27, 2016 12:40 PM
To:
Cc:
Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES)   --- (b)(3)
UNCLASSIFIED/~~FOUO~~

Classification: UNCLASSIFIED/~~FOUO~~
==

Given that☐ out, I don't have a problem with extending their IATT until we can coordinate a recommendation with OS&CI.

From:
Sent: Tuesday, September 27, 2016 12:34 PM

Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES)   --- (b)(3)
UNCLASSIFIED/~~FOUO~~

Classification: UNCLASSIFIED/~~FOUO~~
==

Any issues if I extend the IATT for☐? With☐ out this week in☐, I don't want them to have to turn the system off, and back on again. It is disruptive to their operations.

1
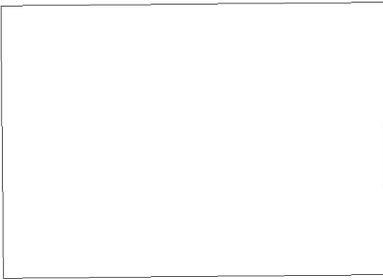
From:
Sent: Tuesday, September 27, 2016 11:46 AM

Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES) ---
UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO

==

I agree – any approvals should be clear that the approval is for the currently instantiated version and connectivity only. Any future changes/phases require additional review (and most certainly testing) prior to approval. Like CSCF, lets put a recommendation together and send it to Terry, [   ] and Martha for comments before we tweak it and send it forward.

From:
Sent: Tuesday, September 27, 2016 11:44 AM

Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES) ---
UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO

==

Absolutely! The ATO recommendation is ONLY for WF NROC at this point. They are working towards incorporating the POAM issues for Network Access, and we would address that capability when they can meet the requirements.

Please chime in if you feel that I am misstated anything.

V/r

2
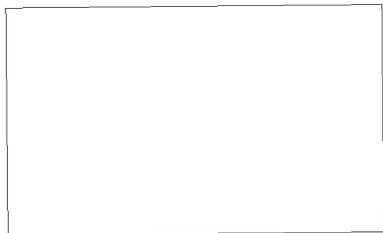
From: [ ]
Sent: Tuesday, September 27, 2016 11:39 AM

Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES) [ ] ---
UNCLASSIFIED//~~FOUO~~

Classification: UNCLASSIFIED/~~/FOUO~~
==

One thing that stood out on this is their plans for the future. I believe the instance as it is here at WF only and as currently configured is an acceptable risk. As they move forward with their additional plans to add West and potentially engage externally we should have them come back for reassessment and incremental approvals as each is potentially a security relevant change. Is that factored into your recommendation?

From: [ ]
Sent: Tuesday, September 27, 2016 11:25 AM

Subject: FW: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES) [ ] ---
UNCLASSIFIED//~~FOUO~~

Classification: UNCLASSIFIED/~~/FOUO~~
==

Sirs,
Any direction on how we should be proceeding with this? Their IATT expires Friday, the VIAB is done with their analysis of this system, however they are comparing this code to the suspect TDN code of yesteryear. (the coding is in separate languages, so both [ ] and I are doubtful that they will draw any similarities between the two.)

-If we withdraw the IATT they will be forced to turn the system back off. (reminder that the system is only at NROC WF today)
-We can extend the IATT. (Much like an ATO since it is being used operationally, it is either on or off to support the NROC mission)
-(my recommendation) We can reinstate the ATO, with their POAM in work, potentially adding the findings that VIAB presented. (This would need to be coordinated behind the scenes through OS&CI Director or Deputy Director)

As I recall from the our discussions with Mr. Duncan, he believed that the [ ] (which is what the original ATO covered) That being said, I would like someone above me to make the call, since they made the call to turn it off.

V/r

3
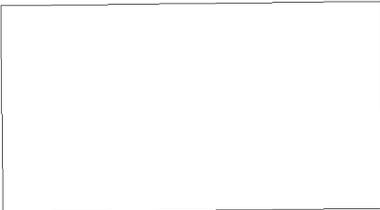
From: [ ]
Sent: Tuesday, September 27, 2016 10:35 AM

Subject: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES) [ ] ---
UNCLASSIFIED

Classification: UNCLASSIFIED
==

[ ]

As you know our IATT is set to expire [ ] We have not yet received the final determination from Mr. Duncan on the ATO. I'm requesting a [ ] day extension until the VIAB team can give the hot wash brief to Ms. Courtney whom will intern meet with Mr. Duncan.
Regards,
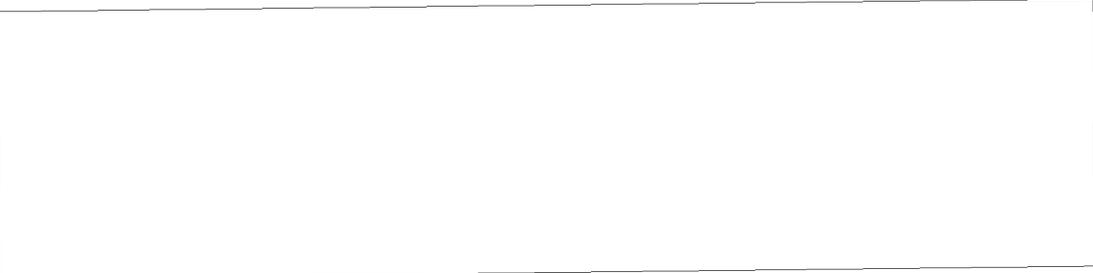
[ ]

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Classification: UNCLASSIFIED

==
Classification: UNCLASSIFIED//FOUO

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Classification: UNCLASSIFIED//FOUO

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Classification: UNCLASSIFIED//FOUO

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Classification: UNCLASSIFIED//FOUO

==
Classification: UNCLASSIFIED//FOUO

4

From:
Sent: Friday, July 15, 2016 9:28 AM
To:
Subject: RE: ACES-- security findings and going "live" on _____ --- ~~SECRET//NOFORN~~

Classification: ~~SECRET//NOFORN~~

Classified By: _____
Derived From: INCG dated 20120213
Declassify On: 20411231
==

Copy all _____ ..appreciate your support and am standing by (if needed)...

Best,

From:
Sent: Friday, July 15, 2016 9:08 AM
To:
Subject: RE: ACES-- security findings and going "live" on _____ --- ~~SECRET//NOFORN~~

Classification: ~~SECRET//NOFORN~~

Classified By: _____
Derived From: INCG dated 20120213
Declassify On: 20411231
==

Sir,
Not sure that would help...let things play out a little more. Only thing I really know is the Ms Courtney (D/OSCI) has a concern, and has not been willing to share what it is outside those not part of CIA...she is questioning us about the testing that was done, when it was her folks that did the testing. My bosses are trying to work this.

From:
Sent: Friday, July 15, 2016 8:50 AM

Subject: RE: ACES-- security findings and going "live" on _____ --- ~~SECRET//NOFORN~~

1

```
Classification: SECRET//NOFORN

Classified By: [    ]
Derived From: INCG dated 20120213
Declassify On: 20411231
=================================================
```

[   ]

[   ]

More than happy to set-up a meeting early next week with those who have questions and answer them. I'd like it to be a comprehensive Q&A though...I do not want to have to keep educating people over and over again about ACES like we've been doing for over 18 months.

Thank you.

Best,

[   ]

From: [   ]
Sent: Wednesday, July 13, 2016 5:36 PM
To: [   ]
Subject: FW: ACES-- security findings and going "live" on [   ] --SECRET//NOFORN

```
Classification: SECRET//NOFORN

Classified By: [        ]
Derived From: INCG dated 20120213
Declassify On: 20411231
=================================================
```

FYI.
Please take no action, nut be aware someone isn't a fan...

From: [   ]
Sent: Wednesday, July 13, 2016 7:50 AM
To: [   ]
Subject: FW: ACES-- security findings and going "live" on [   ] --SECRET//NOFORN

2

```
Classification: ̶S̶E̶C̶R̶E̶T̶/̶/̶N̶O̶F̶O̶R̶N̶

Classified By: [        ]
Derived From: INCG dated 20120213
Declassify On: 20411231
==========================================================
```

Heads up. [   ] will be asking for more details on this system.

From: [   ]
Sent: Tuesday, July 12, 2016 5:16 PM
To: [   ]
Subject: FW: ACES-- security findings and going "live" on [   ] ̶-̶S̶E̶C̶R̶E̶T̶/̶/̶N̶O̶F̶O̶R̶N̶

```
Classification: ̶S̶E̶C̶R̶E̶T̶/̶/̶N̶O̶F̶O̶R̶N̶

Classified By: [        ]
Derived From: INCG dated 20120213
Declassify On: 20411231
==========================================================
```

[   ]

This is an example of one of the systems that I discussed with Martha last week when we talked about how we're doing assessments and ICD 503 implementation here at NRO. We'll probably chat about this one again on Thursday.

Can you and your team provide me with nitty gritty details of ACES? I'm assuming it aligns with the "Advanced Collaboration Enterprise Services" system ([   ]?

- What is the current status of the system?
- What does the heat map assessment look like?
- Is there a tear sheet for the system?
- How in-depth was the assessment? Did they use the REL methodology to assess?
- How did the documentation (SAR, RAR, etc) look?

I'm not sure who provided Martha with the write-up below, and I'm not sure who provided the "ISSE Comments" (column L) in the attached spreadsheet.

Thanks,

[   ]

From: Courtney Martha K NRO USA GOV
Sent: Tuesday, July 12, 2016 8:05 AM
To: [   ]
Subject: FW: ACES-- security findings ̶-̶-̶S̶E̶C̶R̶E̶T̶/̶/̶N̶O̶F̶O̶R̶N̶

```
Classification: ̶S̶E̶C̶R̶E̶T̶/̶/̶N̶O̶F̶O̶R̶N̶

Classified By: [        ]
Derived From: INCG dated 20120213
```

3

Declassify On: 20411231

==

(b)(1)
(b)(3)

4

From:
Sent: Thursday, July 14, 2016 11:23 AM
To:
Cc:

Subject: RE: ACES-- security findings and going "live" on [   ] ──SECRET//NOFORN──

Classification: ──SECRET//NOFORN──

Classified By: [   ]
Derived From: INCG dated 20120213
Declassify On: 20411231
===

[   ] thanks for a very good overview.

From: [   ]
Sent: Thursday, July 14, 2016 9:32 AM
To:
Cc:
Subject: RE: ACES-- security findings and going "live" on [   ] ──SECRET//NOFORN──

Classification: ──SECRET//NOFORN──

Classified By: [   ]
Derived From: INCG dated 20120213
Declassify On: 20411231
===

Good Morning [   ]

Seems there is quite a bit of misunderstanding around this asset. I received a call last week, as did Sonny, inquiring as to why they have not on-boarded with enterprise security services. To understand the findings, one needs to understand the configuration and architecture. Below is the definition from the SSP. The first paragraph is the IOC, which is authorized; and the second is the FOC, which I understand will be funded soon.

1

Responses to [ ] questions are included below in red. Also, attached POAM that includes all [ ] liens.

Regards,

[ ]

**From:** [ ]
Sent: Wednesday, July 13, 2016 5:33 PM
To: [ ]
Cc: [ ]
Subject: FW: ACES-- security findings and going "live" on [ ] ---SECRET//NOFORN

Classification: SECRET//NOFORN

Classified By: [ ]
Derived From: INCG dated 20120213
Declassify On: 20411231
==

[ ]

Can you please dig into this and provide me an answer back soonest.

V/r

[ ]

From: [ ]
Sent: Tuesday, July 12, 2016 5:16 PM
To: [ ]
Subject: FW: ACES-- security findings and going "live" on [ ] ---SECRET//NOFORN

Classification: SECRET//NOFORN

Classified By: [ ]
Derived From: INCG dated 20120213
Declassify On: 20411231
==

[ ] -

This is an example of one of the systems that I discussed with Martha last week when we talked about how we're doing assessments and ICD 503 implementation here at NRO. We'll probably chat about this one again on Thursday.

Can you and your team provide me with nitty gritty details of ACES?

?

- What is the current status of the system?
- What does the heat map assessment look like?

- Is there a tear sheet for the system?
- How in-depth was the assessment? Did they use the RFL methodology to assess?

- How did the documentation (SAR, RAR, etc) look?

I'm not sure who provided Martha with the write-up below, and I'm not sure who provided the "ISSE Comments" (column L) in the attached spreadsheet.

Thanks,

From: Courtney Martha K NRO USA GOV
Sent: Tuesday, July 12, 2016 8:05 AM
To:
Subject: FW: ACES-- security findings --- ~~SECRET//NOFORN~~

Classification: ~~SECRET//NOFORN~~

Classified By:
Derived From: INCG dated 20120213
Declassify On: 20411231
==

ACES was only given a   Given these findings and the fact that they want to
connect to   certain issues need to be addressed and rectified prior to being allowed on either network.

From their documentation:

(b)(1)
(b)(3)

(b)(1)
(b)(3)

4

To:

Cc:

Date: 14- July 2016

Subject: Advanced Collaboration Enterprise Services (ACES)

System Boundary: Initial Operation Capability (IOC) - Authorized

(U//FOUO) ACES consists primarily of a server and video switcher that allows analysts the ability to change the presentation view by manipulating pixel space on a monitor from multiple display sources from [   ]. ACES eliminates the need for multiple monitors to view multiple screens of data. The display sources are generated from [   ]

System Boundary: Future Operation Capability (FOC) Not Authorized initially includes:

(U//FOUO) [   ] ACES installation does require [   ]. All of the ACES systems are self-contained on the ACES subnet.

Risk Analysis:

(U//FOUO) In June 2016, a Risk Assessment was performed to evaluate the security controls of the asset as High, Low, Low impact levels for Confidentiality, Integrity and Availability respectively. Analysis of the Risk Assessment Report and negotiations with the program resulted in [   ] **total** liens as follows.
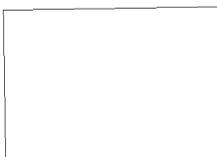
DAO Rep Recommendation:

(U//FOUO) Based on the agreed upon lien closure dates, recommend a [ ] year ATO with POAM for ACES. During this [   ] year period, the program needs to pursue an IATT to connect to [   ] to obtain enterprise security services to close many of the identified security weaknesses. Additionally, the program needs to begin immediately executing the Continuous Monitoring Plan to keep apprised, manage, and report the asset's security controls proactively.

From:
Sent: Thursday, July 14, 2016 3:37 PM
To:
Cc:
Subject: FW: Approved - ACES POAM --- UNCLASSIFIED//FOUO
Attachments: 200233 ACES RAR 14JUL2016.docx

Classification: UNCLASSIFIED//FOUO
===

Hello Sir-

Please note the Risk Assessment task was just approved by me, moving the asset to Program Acknowledgement. Also, given the visibility of this asset, I completed and loaded the attached RAR into Xacta.

Thanks.

From:
Sent: Tuesday, July 05, 2016 3:07 PM

Subject: FW: Approved - ACES POAM --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

All,
        Based on the Program's agreed upon POA&M, I grant the ACES system (asset   ), a   year ATO w/POA&M. This approval granted today,
        Working this approval in email (outside of Xacta) has been pre-coordinated with the SCA, DCA, DAO Rep, and DAO   (who is on vacation). It is still a requirement for this approval to be completed in Xacta.
        Any questions, please contact me at

From:
Sent: Tuesday, July 05, 2016 12:37 PM
To:
Cc:
Subject: FW: Approved - ACES POAM --- UNCLASSIFIED

1

From:
Sent: Tuesday, September 27, 2016 11:49 AM
To:
Cc:
Subject: FW: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES)⬚ — UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO
===

For your action. I'll get the findings from VIAB.

V/r

From:
Sent: Tuesday, September 27, 2016 11:48 AM
To:
Cc:
Subject: RE: Extension Request for IATT (Operational) for Advaced Collaboration Enterprise Services (ACES)⬚ — UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO
===

OK,
I'll incorporate the latest findings from VIAB into the recommendation and pass through you both before sending it up.

V/r

From:
Sent: Friday, September 23, 2016 1:39 PM
To:

Cc:

Subject: FW: 21-SEPT-2016 SETR on the ~~SECRET//TK//REL TO USA, FVEY~~ ACES assessment —
Attachments: Sept-21-2016-SETR.docx

Classification: ~~SECRET//TK//REL TO USA, FVEY~~

Classified By:
Derived From: INCG dated 20120213
Declassify On: 25X1, 20661231
===

Gentlemen,

We completed the SED SETR this week...assessment from [   ] below...great news as we work toward "normalizing" this capability over the longer-term...as we deploy this needed capability across [   ] in the short-term.

Next Step: MAEC

Best,

From:
Sent: Friday, September 23, 2016 1:32 PM

1

(b)(3)

Subject: 21-SEPT-2016 SETR on the [   ] ACES assessment --- ~~SECRET//TK//REL TO USA, FVEY~~   (b)(3)

Classification: ~~SECRET//TK//REL TO USA, FVEY~~

Classified By: [   ]   (b)(3)
Derived From: INCG dated 20120213
Declassify On: 25X1, 20661231
===

[   ]   (b)(3)

Please post the attached notes and the briefings to the NRO SETR web site for leaders and attendees to access.

SUBJ: (U) Major discussion points/notes from 21-SEPT-2016 SETR.

Topic #1: (U) [   ] process triage assessment/recommendations for; "**Mission Opportunity**   (b)(3)
2016-003: Advanced Collaboration Enterprise Services" [   ] **ACES)**   (b)(3)

(U) SUMMARY/OVERVIEW Topic -1:

(b)(1)
(b)(3)

~~(S/TK/REL)~~ (U) Comments/Discussion:

(b)(1)
(b)(3)

2

(b)(1)
(b)(3)

(U) RECOMMENDATION Topic-1:

(b)(1)
(b)(3)

(b)(3)

Regards;

3
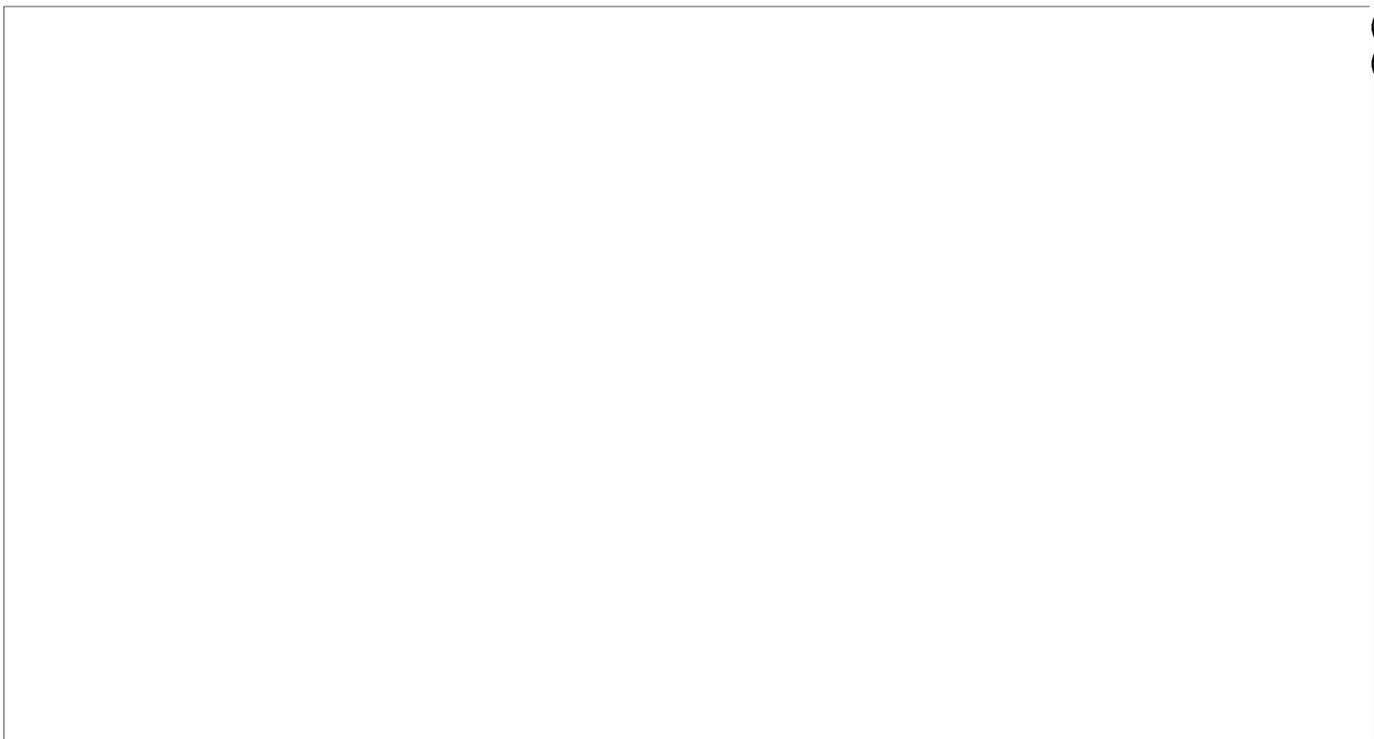
From:
Sent: Friday, December 18, 2015 12:09 PM
To:
Cc:
Subject: FW: IMPORTANT: ACES [   ] - SRT - Next Step --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

[   ] and [   ]

Request your earliest opportunity to meet with [   ] to discuss ACES [   ] referenced below). Hopefully during this meeting we will concur on a finalized network diagram including detailed connections and an equipment list. We are hoping to reach a decision on any cross domain issues that stem from ongoing concerns raised by multiple stakeholders.

Thank you,

From:
Sent: Thursday, December 17, 2015 3:45 PM

Subject: IMPORTANT: ACES - SRT - Next Step --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Hi [   ]

Thanks for the discussion today...here's what we agreed to do...

1) Schedule a meeting ASAP with DAO, [   ] ACES Engineer(s) and diagram the exact ACES capability (server room, [   ] being deployed O/A 29 Jan 16. Someone from DAO will do the actual diagramming so that it is done in a way that makes sense to all internal NRO stakeholders. ACES Engineers will be there to support. [   ] will be there to ask questions/receive answers.
2) Once diagramming is complete, DAO (or whomever you designate) will convert it into an appropriate format (e.g., visio, photo, etc.)

1

Please provide me a couple of dates over the next two weeks that work for DAO/ [ ] so that I can coordinate that with the ACES team and get it on the calendar. Let's be sure to invite [ ] from MOD and anyone else that would benefit from attending (e.g., [ ] etc.).

Please communicate directly with [ ] and [ ] in all communications as I will be out of the office beginning 23 Dec.

Best,
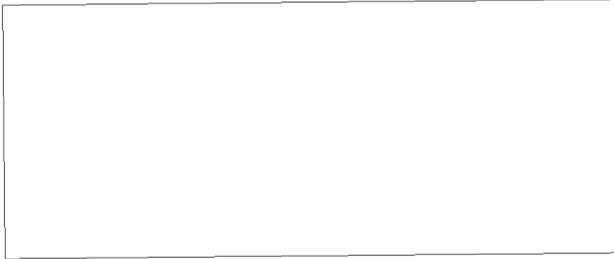
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Classification: UNCLASSIFIED

===
Classification: UNCLASSIFIED

From:
Sent: Thursday, December 17, 2015 1:48 PM
To:
Cc:
Subject: FW: IMPORTANT: Xacta Project [____] / ACES (Advanced Collaboration Enterprise Services) Installation --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

You were left off the attached. [____] is really pushing an [____] for ACES (Advanced Collaboration Enterprise Services) . [____] Director Sapp". I would recommend a meeting with [____] DAO (?), and [____] prior to a meeting with [____] so you can ensure everyone is on the same page.

For the meeting [____] is calling for below, I think it's reached a point that you need to bring the big guns [____] or [____] into the picture!!!

From:
Sent: Thursday, December 17, 2015 11:17 AM

Subject: RE: IMPORTANT: ACES Installation --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Hi [____] ...just following up... Can we meet tomorrow (before 1500)? Or, worst case next Monday or Tuesday morning?

I need to give the requisite ACES team members a heads up too (that will need to be at the meeting).

Thank you.

Best,

1

From: [_____]
Sent: Tuesday, December 15, 2015 11:17 AM

Subject: IMPORTANT: ACES Installation --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

Hi [_____]

Thank you for your time and assistance on the ACES installation. [_____] Director Sapp's Operations
[_____] is moving through the NRO SRT process with a projected installation approval in [_____] and the [_____]
[_____] O/A 29 Jan 15.

Between now and then, we need to prepare for the install which will be completed by [_____] and the ACES Team. Here
are key details regarding ACES install:

I'd like to get the ACES Team and [_____] team together ASAP to discuss this. Can we meet this week or on Monday or
Tuesday (at the very latest) of next week?

Thank you.

Best,

From: [_____]
Sent: Tuesday, December 15, 2015 10:06 AM
To: [_____]
Subject: --- UNCLASSIFIED

2

Classification: UNCLASSIFIED
==

From: [_____]
Sent: Thursday, December 10, 2015 7:12 PM

Subject: RE: Revised schedule for ACES install in MOD/NROC --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

[_____] - -

I appreciate you flagging this for our attention. In addition to DD/MS&O's note to you today, I wanted to let you know we are looking at this and will work to improve schedule on this high priority system.

What I found was the project initiated in roughly July with discussions of the basic needs. There were some problems noted early on to include Security approval for the displays. Nonetheless, we provided a ROM on 17 September and funding was eventually received on 13 November.

I will be tdy much of next week so either [_____] or myself will get back to you or [_____] on schedule.

V/R,

From: [_____]
Sent: Thursday, December 10, 2015 11:28 AM
To:
Cc:
Subject: Revised schedule for ACES install in MOD/NROC --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

[_____]

I need your help with an install project in the NROC. We have requested a set of fitment changes [_____] to the NROC collaboration spaces and our [_____] (called ACES) we are scheduled to install in late January. Our project POC, [_____] has

3

been in routine communication with your [ ] team concerning timelines but the current facility schedule dates (below) do not match up with our planned technology install plan. ACES is a high priority project for us and the timelines required extensive coordination with internal & external partners including the Headquarters Air Staff / A2 who is lead for ACES. I know your teams are extremely busy with a multitude of projects across Westfield, but I would appreciate any assistance you can provide to increase priority of this project since it has direct impact to our joint collaboration mission in MOD.

If you need any further detail or have questions, please contact me or [ ] Thank you for your consideration.

v/r,
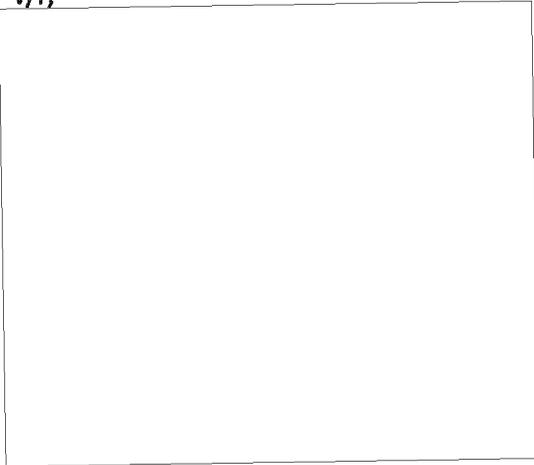
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Classification: UNCLASSIFIED

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Classification: UNCLASSIFIED

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Classification: UNCLASSIFIED

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Classification: UNCLASSIFIED

From:
Sent: Monday, September 28, 2015 2:06 PM
To:
Cc:
Subject: IMPORTANT: ACES Update - New RMF A&A Effort / Advanced Collaboration Enterprise Services (ACES) — UNCLASSIFIED

Classification: UNCLASSIFIED
==

I would like to brief you on the latest advanced effort coming out of NROC [MOD] called ACES **Advanced Collaboration Enterprise Services (ACES).**

1. This MOD asset is new and non-operational. Xacta Project
2. They gave the 1ˢᵗ initial brief to most of the stakeholders at the MOD ERB on 9 Sept. [   ] and I attended.
3. Description:
   a. (U//FOUO) ACES consists primarily of a server and video switcher that allows analysts the ability to change the presentation view by manipulating pixel space on the monitor. ACES eliminates the need for multiple monitors to view multiple screens of data. MOD's ACES installation requires
4. RMF Steps 1 & 2 have been closed in Xacta.
5. An IATT Approval Task is currently sitting in the SCAs queue for 1/5.
6. There is an ACES Demo scheduled for 5 Oct 2015 from 12-1400 at 1401 Wilson Blvd, Level B, Arlington, VA
7. [   ] has asked [   ] to facilitate a pre-brief prior to demo to respond to any questions we may have.

So I'm just letting you know that [   ] will have representation from some of the DCAs. [   ] and I will both be there. I have forwarded you the calendar invite. See additional comments below.

Please feel free to contact either [   ] or me if you have any additional questions or concerns.

VR,

1

[   ] 12:41 PM

I am going into surgery on Wednesday and will be out several weeks. THIS DEMO cannot wait for me...so, please coordinate and send me an email at [   ] or call me at [   ] this week with the date/time so I can make it hapen

From: [   ]
Sent: Monday, September 28, 2015 9:13 AM

Subject: RE: ACES Demo and Intro --- UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO
==

Hi [   ]

I think it would be helpful if the ISSM [   ] for ACES also was there to help facilitate the discussion and answer any upfront questions prior to the demo.

[   ] can you please get with [   ]

Thank you!

Best,

From: [   ]
Sent: Friday, September 25, 2015 9:43 AM

Subject: RE: ACES Demo and Intro --- UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO
==

Hi [   ]

Can you please give [   ] and myself an overview of your visit and what to expect with the ACES Demo and Intro? Thanks.

2

From: [redacted]
Sent: Monday, September 21, 2015 9:44 AM

Subject: RE: ACES Demo and Intro --- UNCLASSIFIED//FOUO

Classification: UNCLASSIFIED//FOUO

===

Hi [redacted]

I am also Ccing [redacted] (DAO Rep)...

Hopefully [redacted] gave you a summary of his visit to the ACES Lab in Arlington last week. [redacted] and we definitely want all relevant stakeholders to be ACES "smart" as we maneuver through the NRO SRT process to get it accredited and authorized.

We are holding another ACES demo for other NRO leadership on Monday, 5 Oct, from 1200-1400.

It would be great if you can attend...you are cordially invited! [redacted] ..you are reinvited as well as your leadership...the DAO).

Please let me know this week if you can make this demo. Thank you.

Best,

From: [redacted]
Sent: Monday, September 28, 2015 12:14 PM

Subject: IMPORTANT: ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED

===

Advanced Collaboration Enterprise Services (ACES)

3

Creating a Common Operating Environment (COE)

This is a bi-weekly status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**

4

Best,
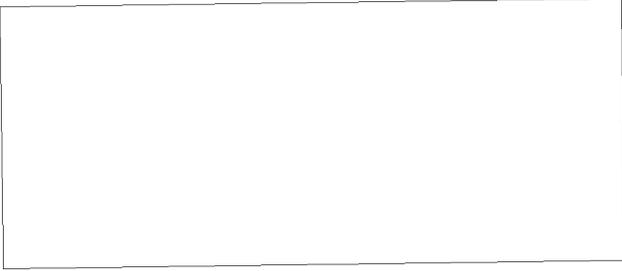
Classification: UNCLASSIFIED

Classification: UNCLASSIFIED

Classification: UNCLASSIFIED

From:
Sent: Thursday, January 14, 2016 1:48 PM
To:

Subject: IMPORTANT: ACES Update — UNCLASSIFIED

Classification: UNCLASSIFIED
===

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

Best,

===
Classification: UNCLASSIFIED

===
Classification: UNCLASSIFIED

2

From:
Sent: Tuesday, December 15, 2015 12:12 PM
To:

Subject: IMPORTANT: ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a bi-weekly status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

Best,

===
Classification: UNCLASSIFIED
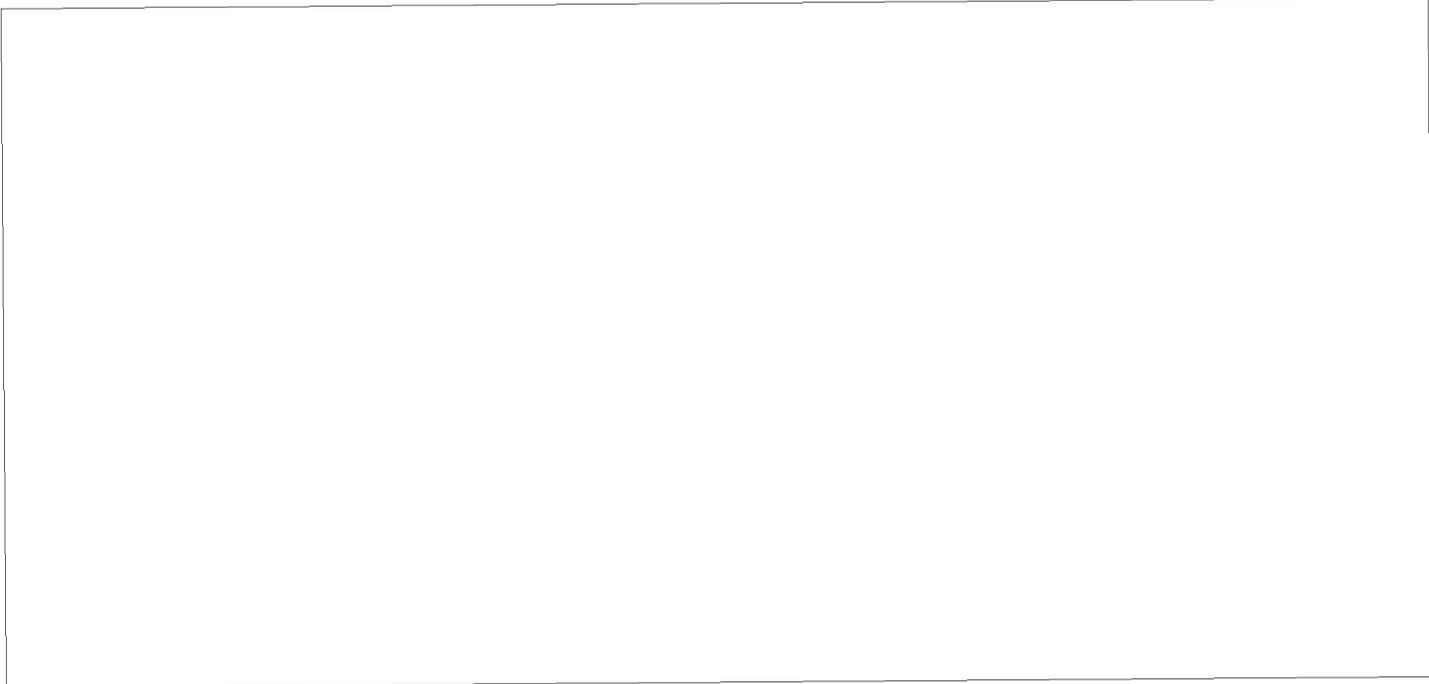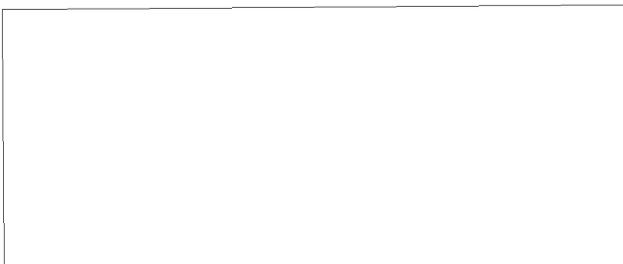
From:
Sent: Monday, November 30, 2015 9:45 AM
To:

Subject: IMPORTANT: ACES Update — UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE)

This is a bi-weekly status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

Best,

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Classification: UNCLASSIFIED

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Classification: UNCLASSIFIED

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Classification: UNCLASSIFIED
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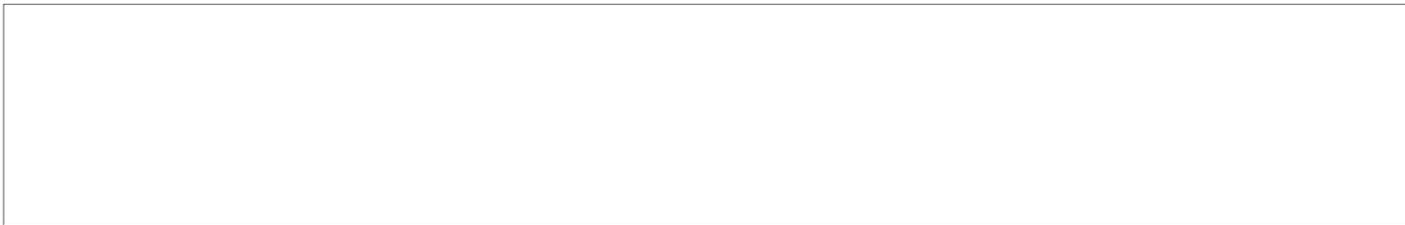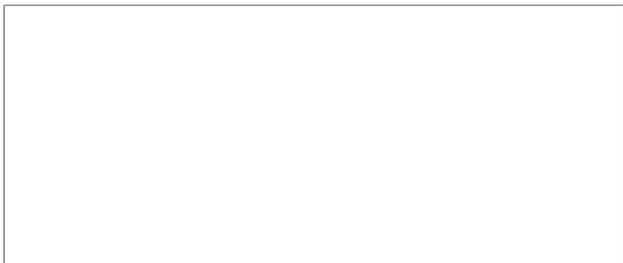
From:
Sent: Friday, November 06, 2015 11:58 AM
To:

Subject: IMPORTANT: ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

## Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE)

This is a bi-weekly status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

Best,

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Classification: UNCLASSIFIED

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=====================================================
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Classification: UNCLASSIFIED
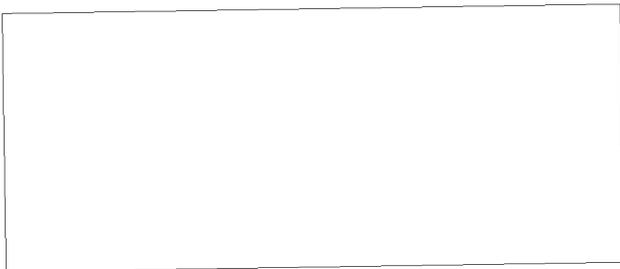
From:
Sent: Thursday, February 04, 2016 12:33 PM
To:

Subject: IMPORTANT: ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

Best,

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```
Classification: UNCLASSIFIED
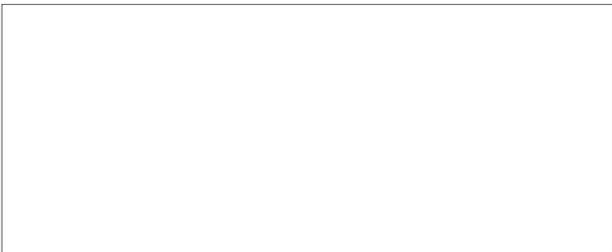
From:
Sent: Wednesday, July 20, 2016 3:15 PM
To:

1

To:

Subject: IMPORTANT: Weekly ACES Program Update---- UNCLASSIFIED --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for NRO enterprise operations

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

Best,

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Classification: UNCLASSIFIED

4
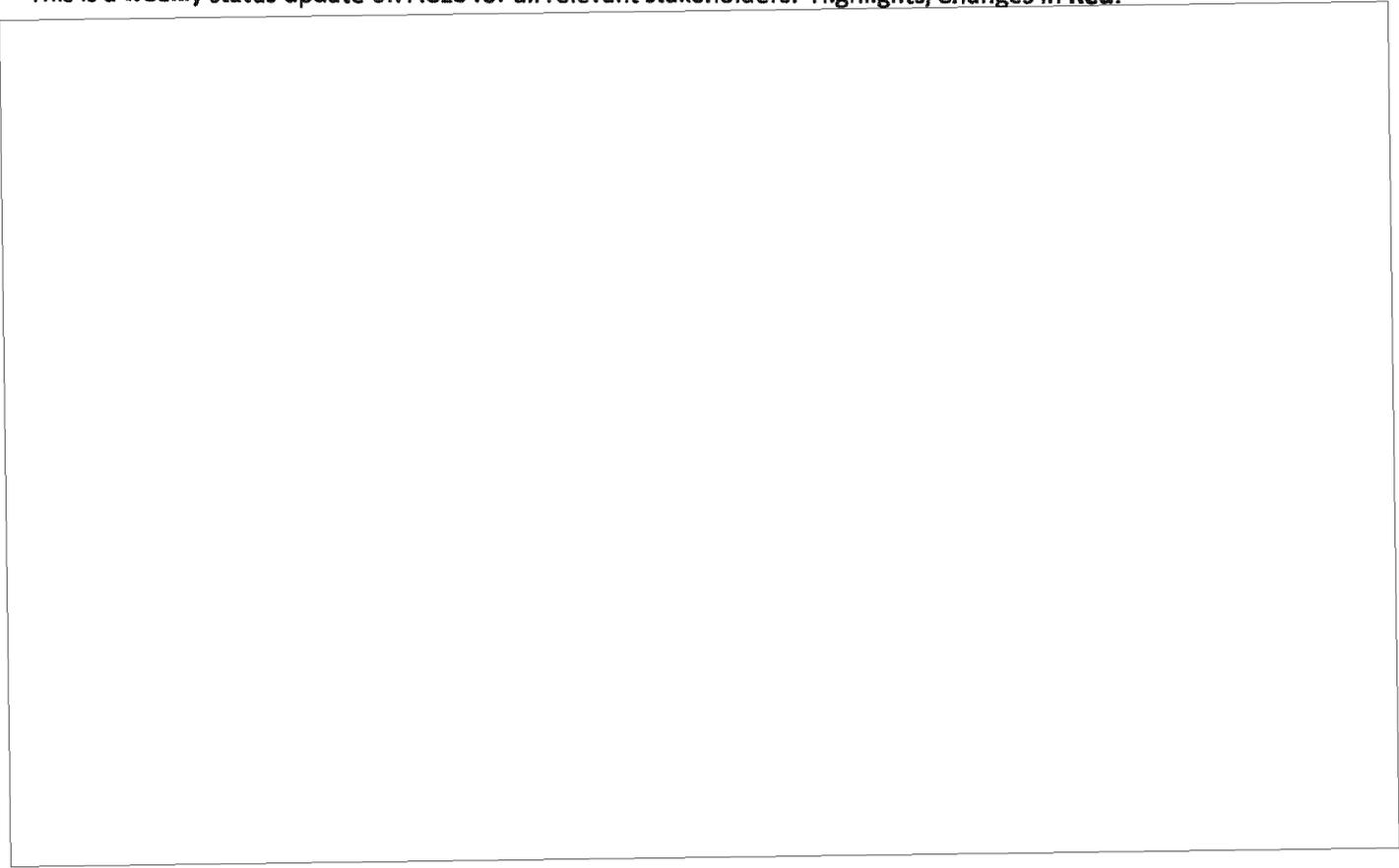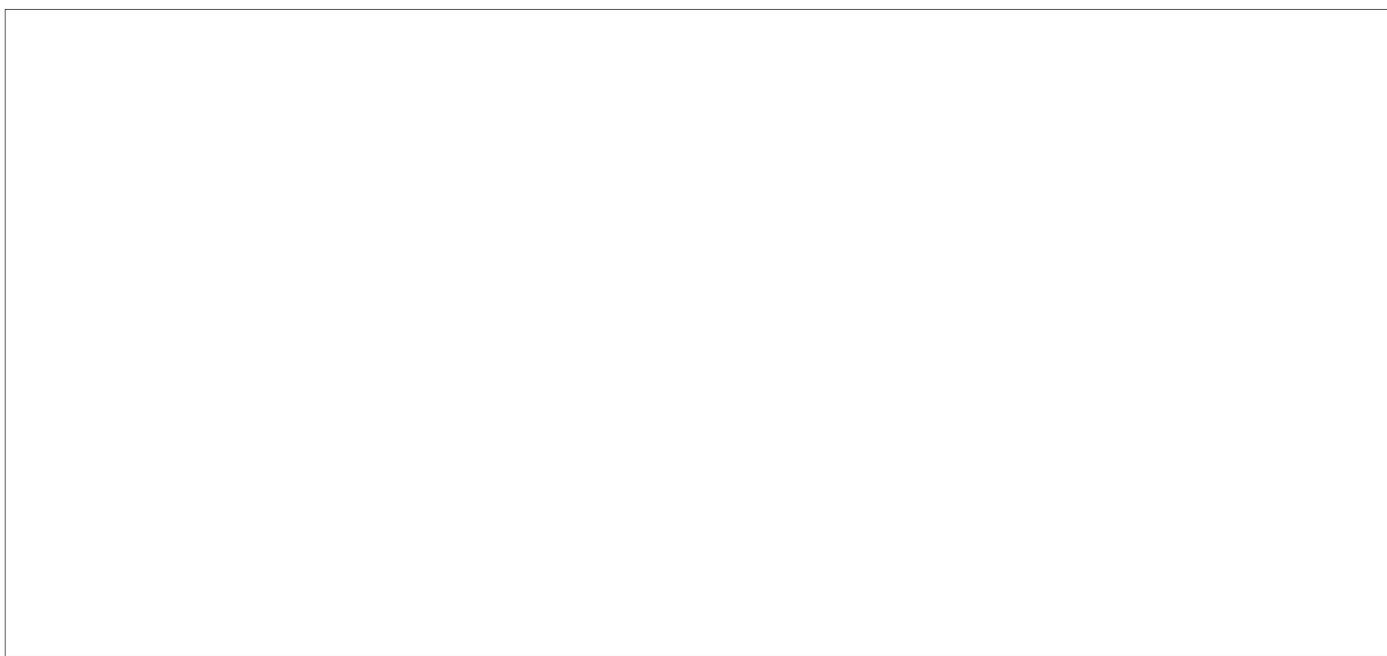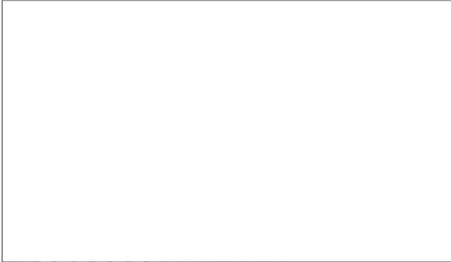
From:
Sent: Wednesday, July 06, 2016 3:07 PM
To:

1

To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

2

Best,

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Classification: UNCLASSIFIED
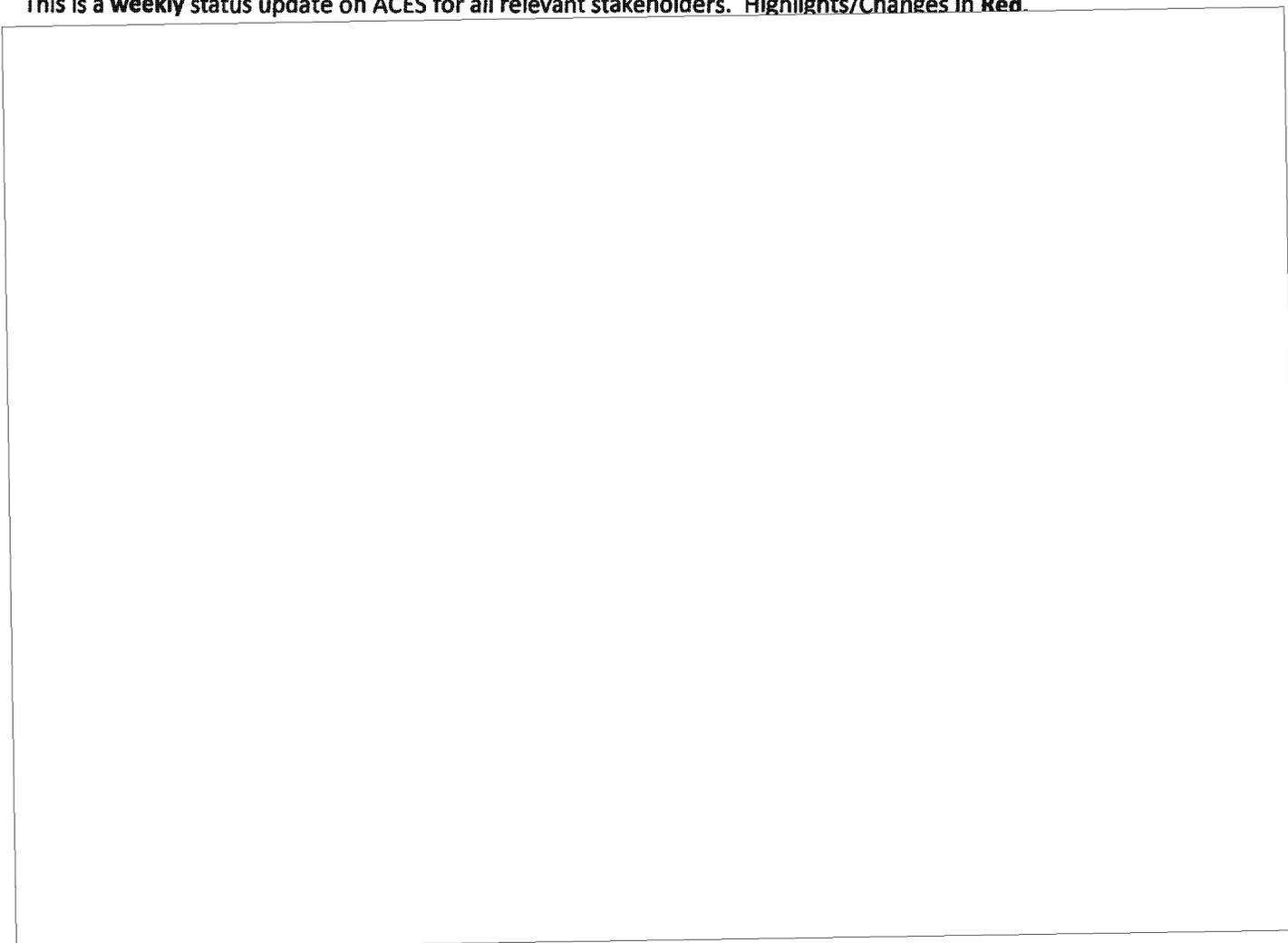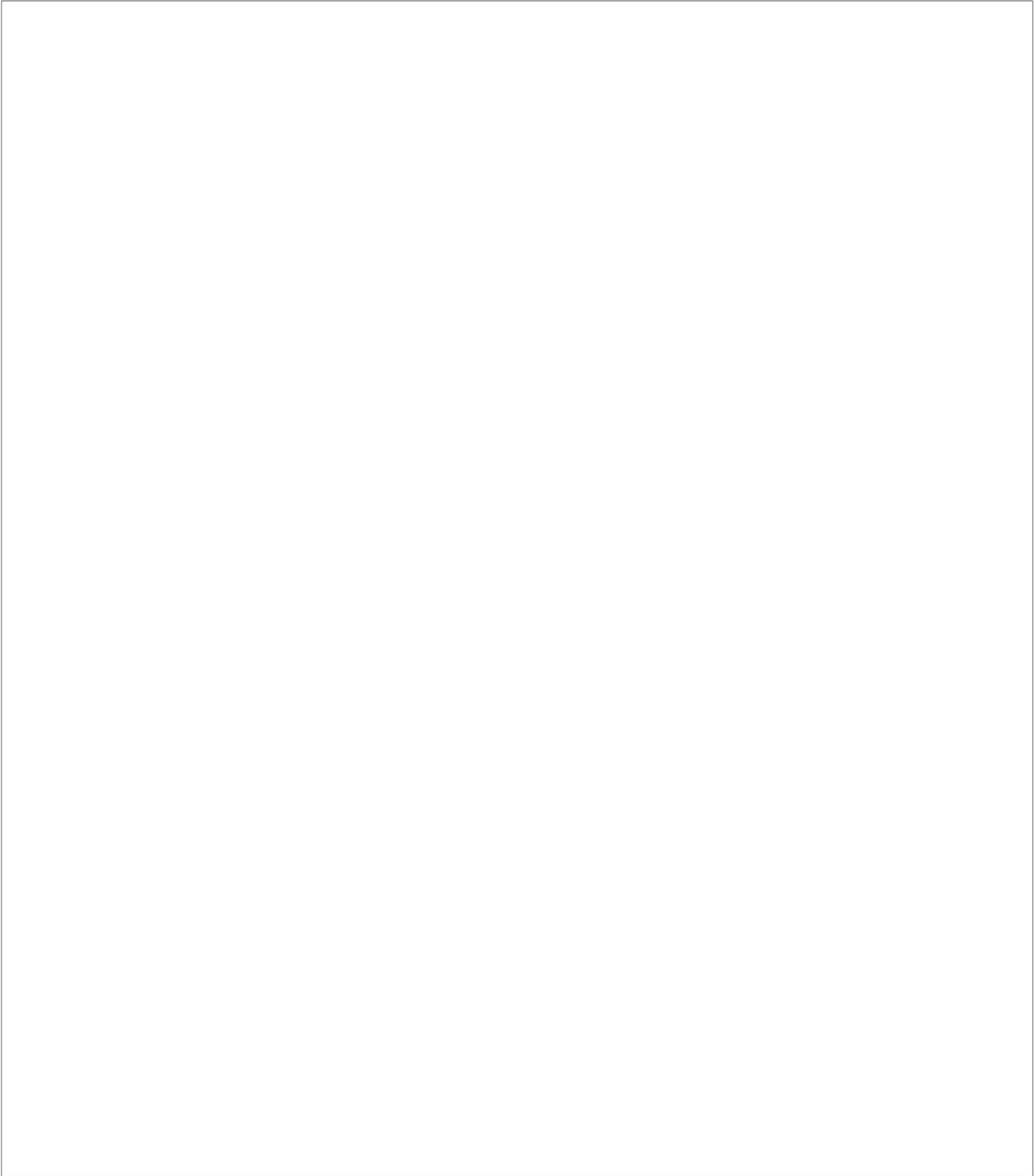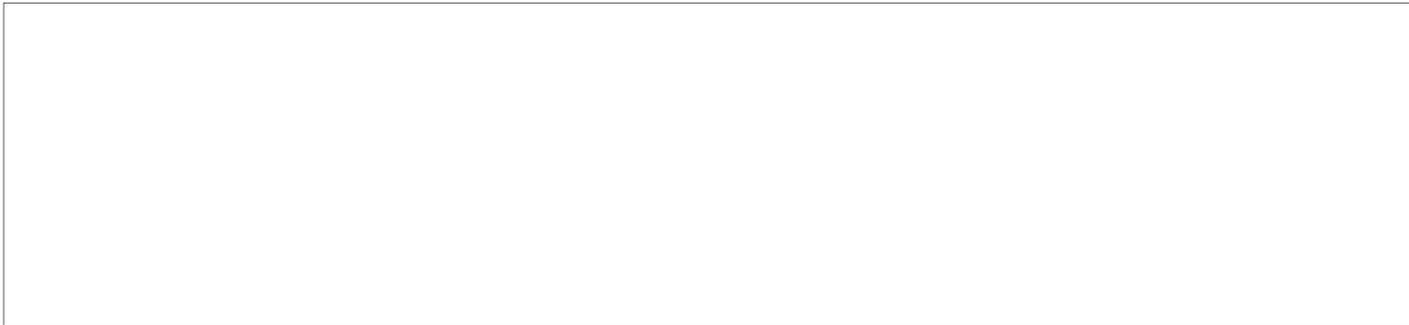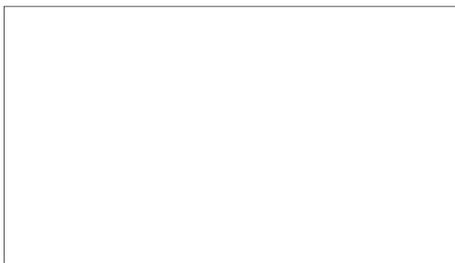
From:
Sent: Friday, June 17, 2016 1:44 PM
To:

To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

**Advanced Collaboration Enterprise Services (ACES)**

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

3

Best,

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Classification: UNCLASSIFIED
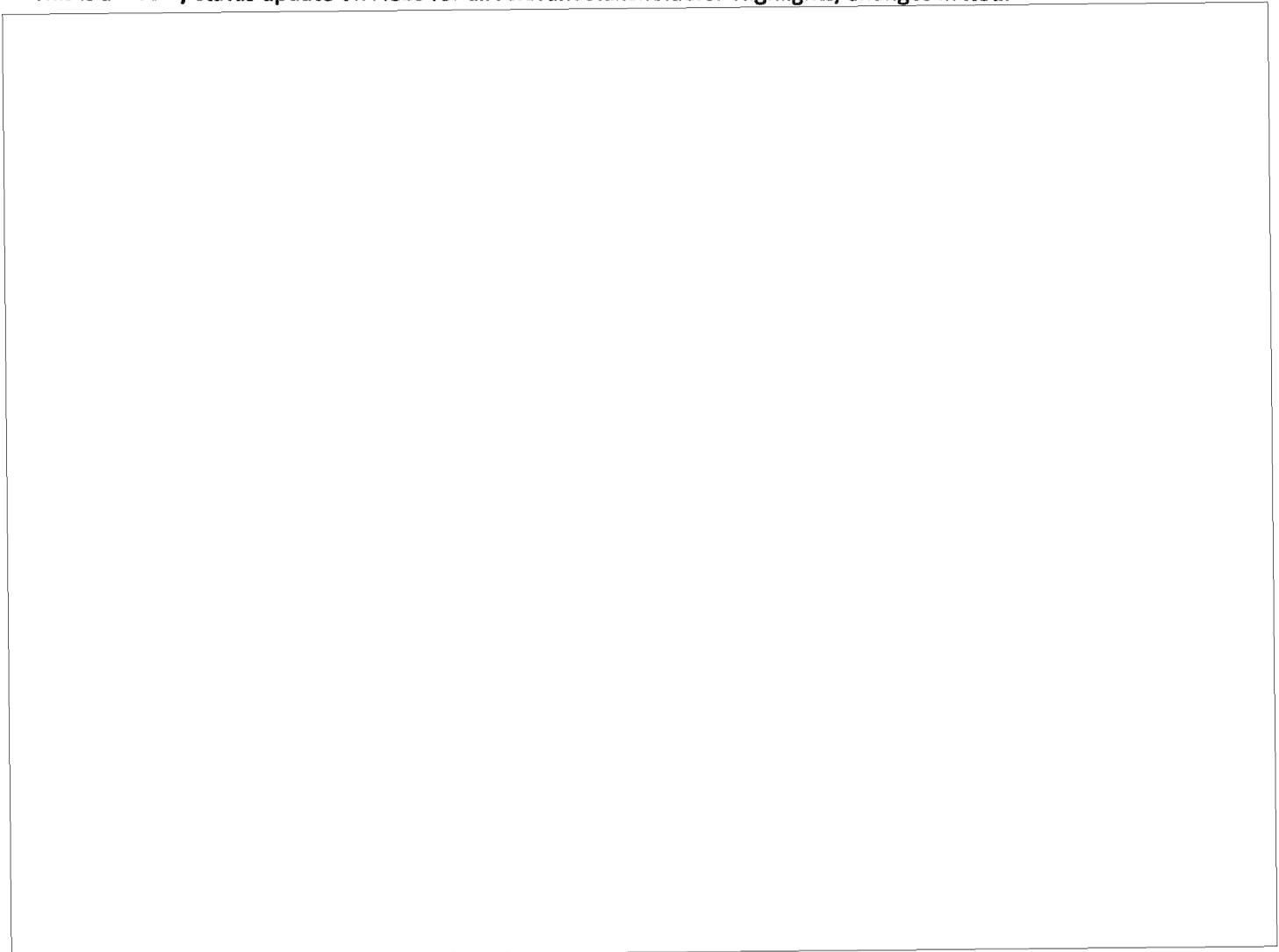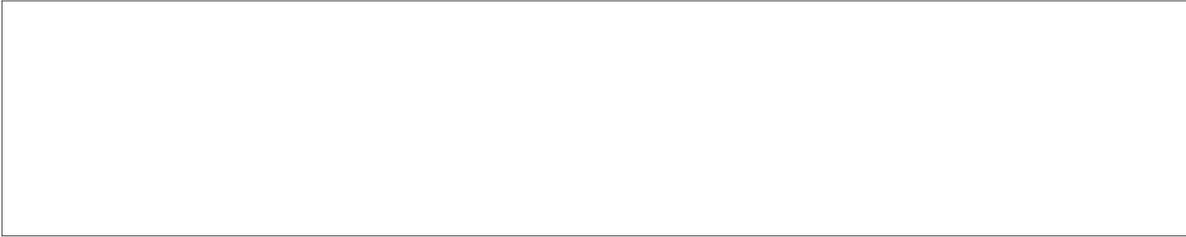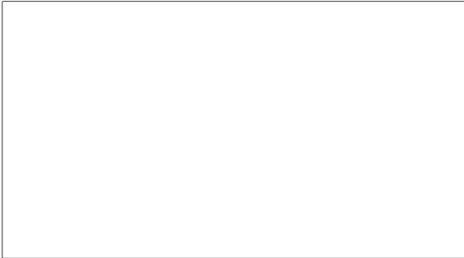
From:
Sent: Friday, June 10, 2016 2:30 PM
To:

1

To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

2

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Classification: UNCLASSIFIED

3

From:
Sent: Wednesday, June 01, 2016 3:24 PM
To:

1

To:
Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
===

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

===

Classification: UNCLASSIFIED

From:

Sent: Friday, May 20, 2016 11:43 AM

To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

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Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

2

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Classification: UNCLASSIFIED

From:
Sent: Monday, May 02, 2016 1:40 PM
To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

1

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

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Classification: UNCLASSIFIED

From:
Sent: Tuesday, April 19, 2016 11:04 AM
To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

1

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**

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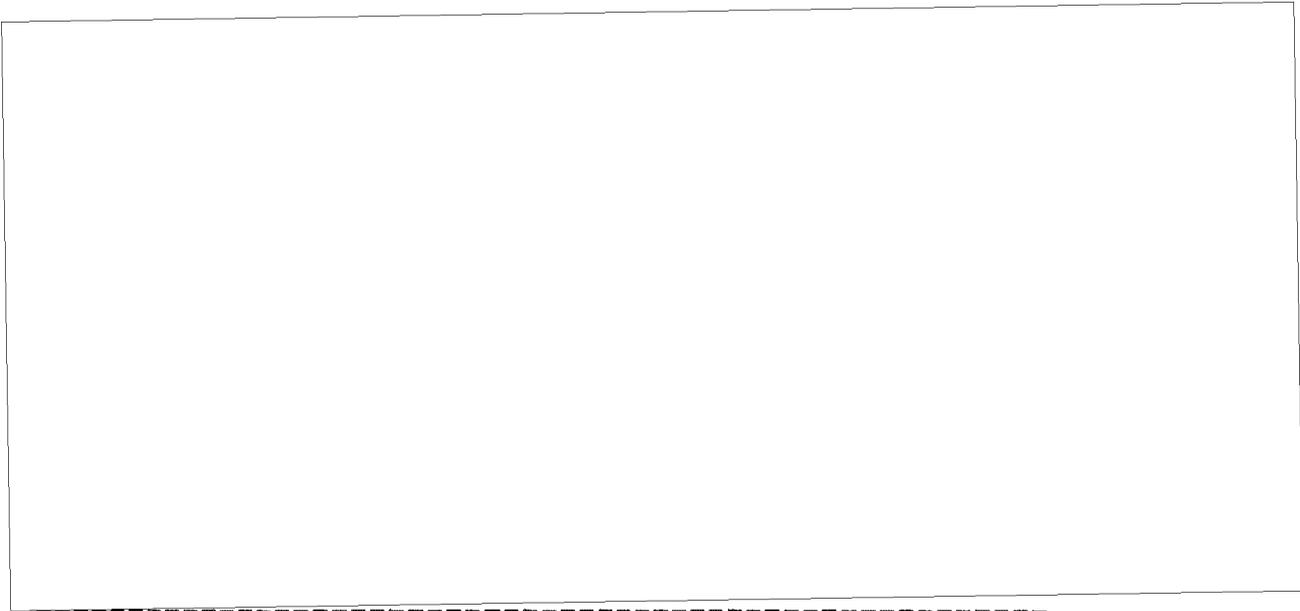
Classification: UNCLASSIFIED

From:
Sent: Friday, April 01, 2016 10:08 AM
To:
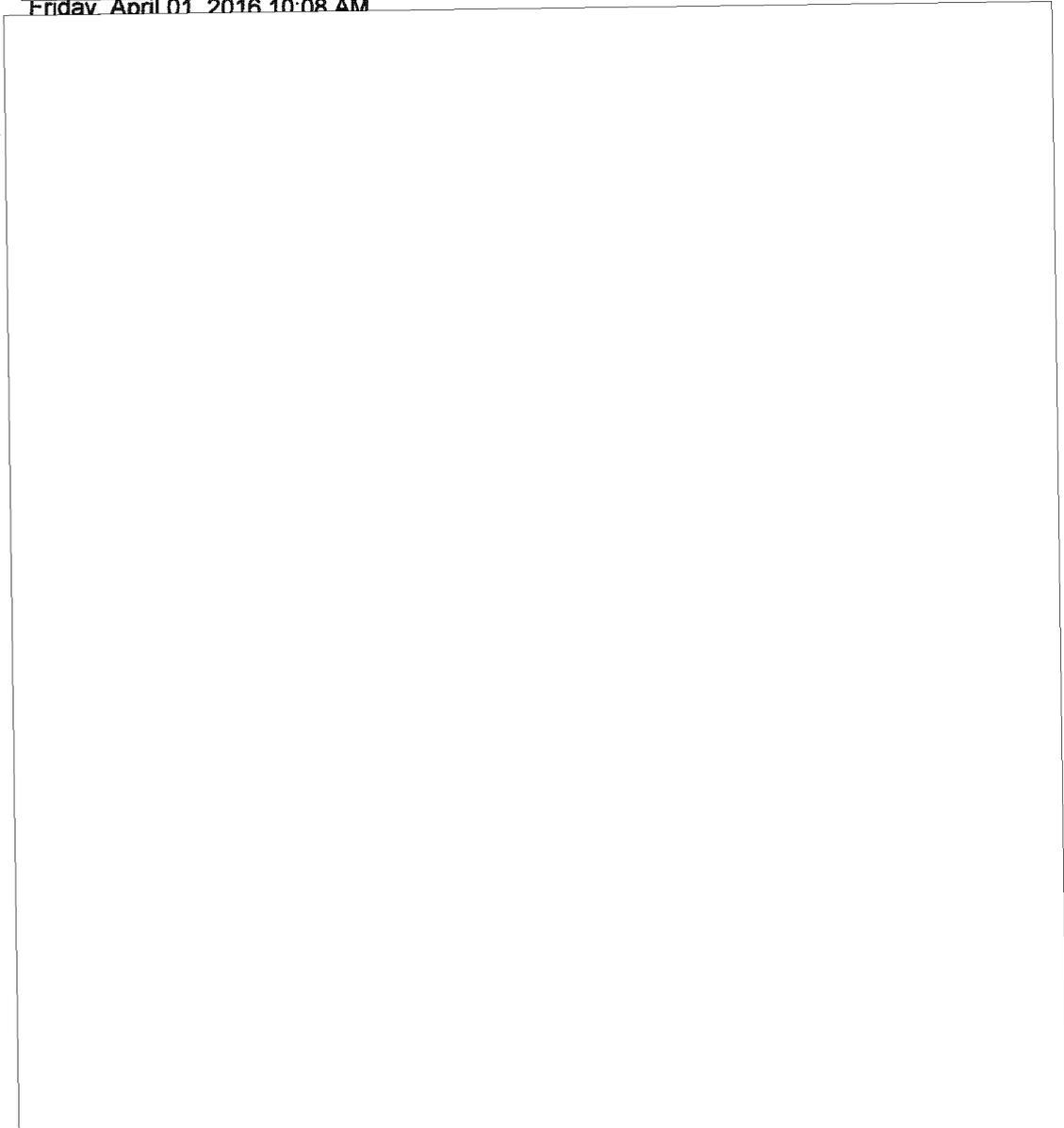
Subject: IMPORTANT: Weekly ACES Update — UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1
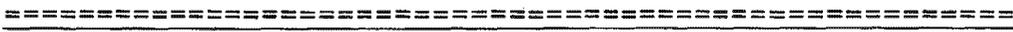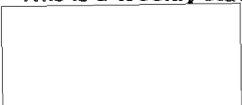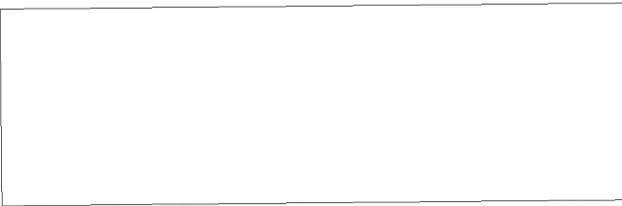
Classification: UNCLASSIFIED

From:
Sent: Tuesday, March 08. 2016 12:34 PM
To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

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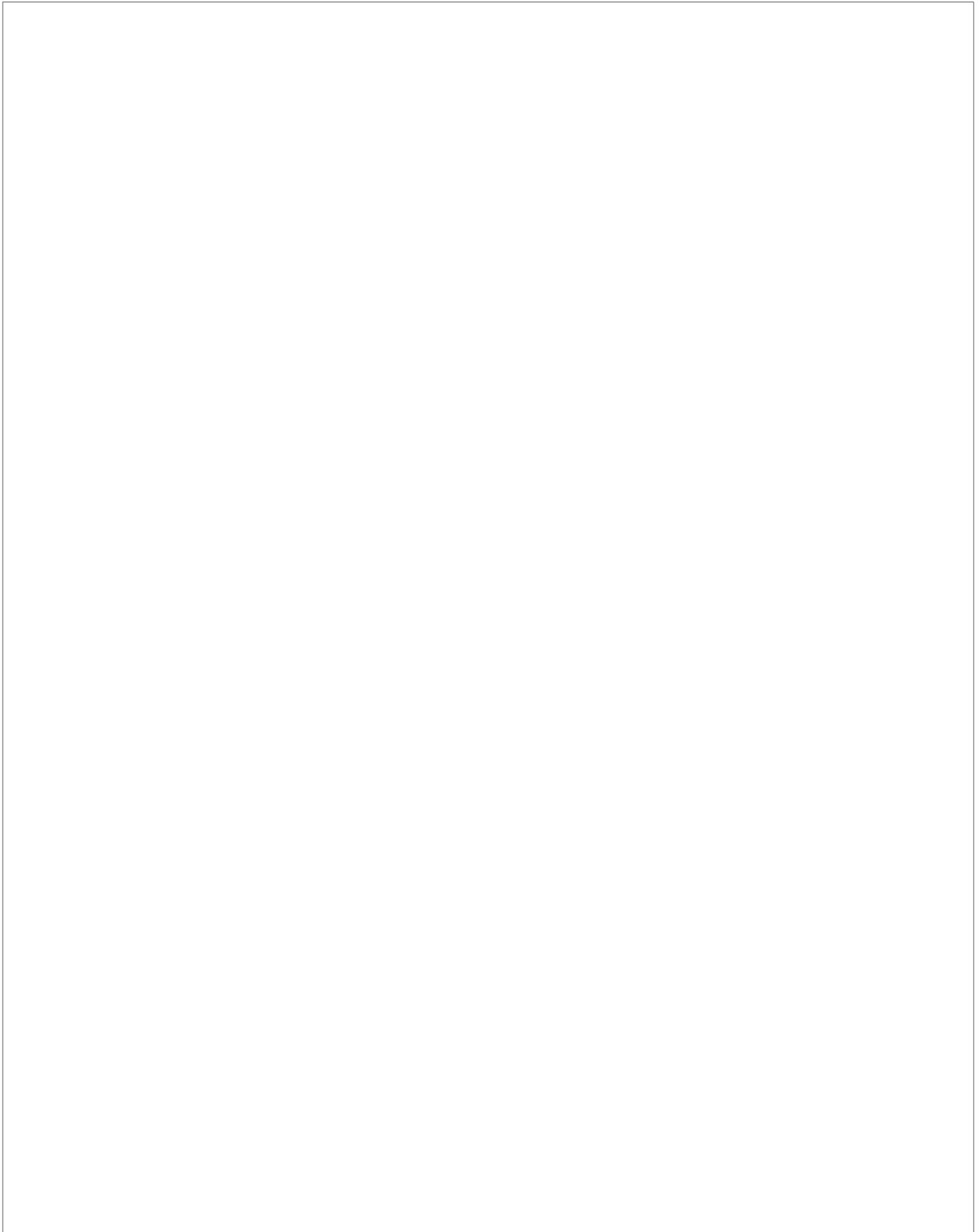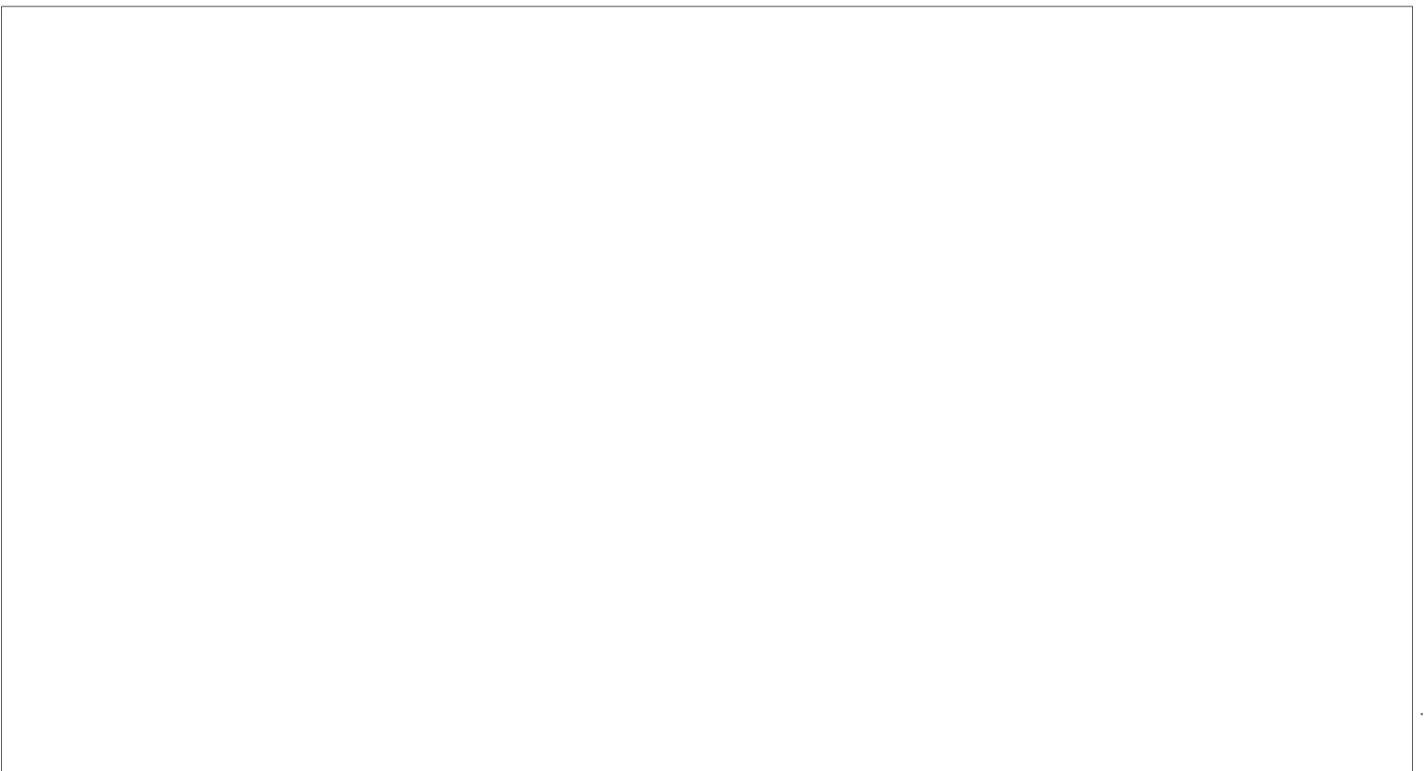
Classification: UNCLASSIFIED

From:
Sent: Monday, February 29, 2016 2:08 PM
To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

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Classification: UNCLASSIFIED

3
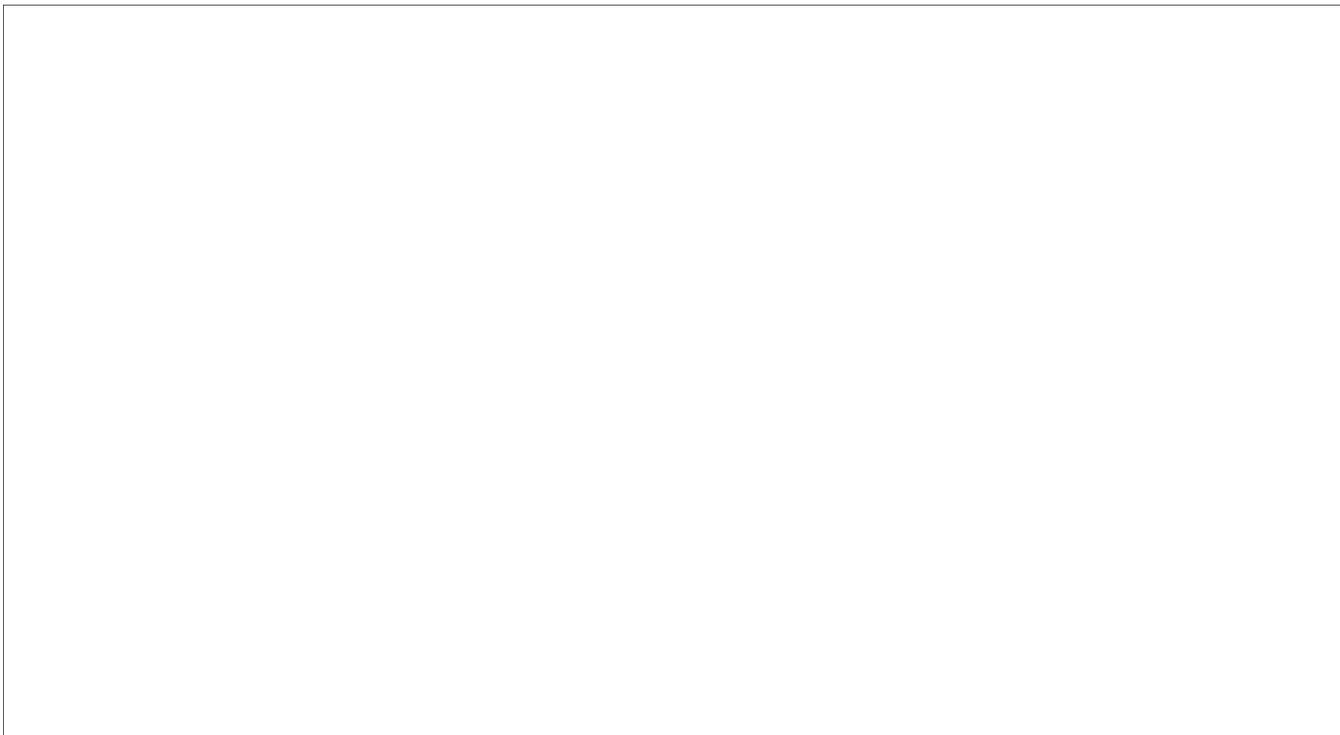
From:
Sent: Monday, February 22, 2016 11:55 AM
To:

Subject: IMPORTANT: Weekly ACES Update --- UNCLASSIFIED

Classification: UNCLASSIFIED
==

Advanced Collaboration Enterprise Services (ACES)

Creating a Common Operating Environment (COE) for MOD Collaboration Enterprise

This is a **weekly** status update on ACES for all relevant stakeholders. Highlights/Changes in **Red**.

1

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Classification: UNCLASSIFIED