## SECRET/ (b)(1) and (b)(3) P.L. 86-36

Voluntary Summary Reports Provided by ISPs to NSA in Support of the DIB "Opt-In" Pilot October 28, 2011

The ISPs provided voluntary summary reports to NSA during the DIB Pilot. Each ISP provided different information and on different schedules. Below is a description of what information each ISP provided and a sample of each type of report.

## AT\&T

- Daily report included Green/Yellow/Red status for DNS Sinkholing, Email Filtering and General Infrastructure, or any planned outages. This report did not contain any data.
- During earlier stages of Pilot, no regular weekly reports, but on a few ad hoc occasions provided total \# of events for each of the two (b)(3) P.L. 86-36
- On 20 September, at the request of their customers, AT\&T began providing weekly summaries of number of DNS hits per domain per day
- On 13 October, AT\&T began providing weekly summaries of the number of hits per signature per day for both DNS Sinkholing and Email Filtering
- (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

Sample AT\&T Report:


- Weekly DNS Summary report
- SIGID
- The NSA unique identifier for the signature that triggered the event
- Count
- The number of events triggered during the reporting period for that signature

- Weekly Email Summary report
o. SIGID
- The NSA unique identifier for the signature that triggered the event
o Count
- The number of events triggered during the reporting period for that signature



## /CenturyLink

- Weekly DNS Detail report contained:
- DIB Name (some redacted)
- Name of the DIB company to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim companies
- Host (most redacted)
a The IP address of the victim host to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim hosts within a company

- Date/Time
- The date and time at which the event occurred
- Hit Type
- The level of event correlation that CenturyLink was able to perform
- Falls into one of the following 3 categories



Sample CenturyLink DNS Detail Report:

Report Dare Range $=10 / 10 / 2011$ 12:00:00 GMT TO 10/17/11 12:00:00 GMT


- DIB Name (some redacted)
- Name of the DIB company to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim companies
- Host (most redacted)
- The IP address of the victim host to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim hosts within a company
- Safe Hits
- The number of DNS Sinkholing events categorized with a Hit Type of "SAFE ONLY HIT" or "SAFE \& DNS HIT"
- DNS Only Hits
- The number of DNS Sinkholing events categorized with a Hit Type of "DNS ONLY HIT $^{\prime \prime}$
- Total Hits
- The total number of DNS Sinkholing events


Sample CenturyLink DNS Summary Report:

Report Date Range $=10 / 10 / 2011$ 12:00:00 GMT TO 10/17/11 12:00:00 GMT

| (b)(1); (b)(3)P.L. $86-36 ;$ and (b)(3) 18 U.S.C. 798 DIB NAME | HOST | SAFEHITS | DNS ONLYHITS | TOTALHITS |
| :---: | :---: | :---: | :---: | :---: |
|  | REDACTED-2 | 1 | 0 | 0 |
|  | REDACTED-2 | 3 | 1 |  |
|  | REDACTED-4 | 0 | 1 |  |

- DNS Hit Correlation Report
- DATE/TIME (GMT)
- The date and time at which the event occurred
- DIB
- Name of the DIB company to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim companies
- HASH
a A one-wav hash of the NSA-provided domain associated with the event

- SAFE DATE/TIME
- The date and time at which the victim host contacted CenturyLink's safe server (if that activity occurred)

- DESTIP
- The IP address of the CenturyLink safe server contacted by the victim


Sample CenturyLink DNS Correlation Report:

## CTL/Detailed DIB Report

Report Date Ramge: 10/102011 12:00:00 to 10/17/20:1 12:00:00


- Weekly SMTP Detail report contained:
- DIB Name (some redacted)
- Name of the DIB company to which the event pertained if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique victim companies
- Hit Date/Time
- The date and time at which the event occurred
- Server
- The IP address of the DIB customer mail server to which the malicious email was sent if authorized by the customer to share, otherwise a "REDACTED-\#" placeholder that would distinguish the number of unique mail servers to which the email was sent
- Attachment Type
- If the malicious email had an attachment, the type of attachment found


Last Modified:
31 March 2011

## Contents

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2.2.2 (今/ Outgoing DNS Request Gateway ..... 9
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## 1 (U) DIB Pilot Security Architecture Purpose

(U//FOU日) The purpose of the security architecture portion of the network that supports the DIB Pilot processing is to protect the ${ }^{(D)(3) \text { P.L. }} 8{ }^{86-36}$ information supplied to the Pilot operational implementers as well as any other equities associated with this information. This document provides a relatively thorough description of the components and configuration that make up the implementation of the (D)(3) P.L. 86-36

## 2 (U//FOUO) Recommendations for Maximized Protection of USG Classified Information

## 2.1 (U) Overall Architecture

(今)First, consider the following diagram in Figure 1. Without effective boundary control, rogue SMTP or DNS functionality cannot be prevented. The main point here is that each DIB member must:
(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

Le.g. in the DIB Pilot, this includes incoming
SMTP access and outgoing DNS requests)
What can go wrong will go wrong.
(S) In Figure 1 - which is intentionally sparse because the following diagrams will fill in some important details - DIB Member A has two (perhaps redundant) ISP connections to the Internet. In practice, it is likely that each DIB Member really has many, differentlycontrolled interfaces at various points in its network - often because of performance considerations (geography, bandwidth, latency and cost).


Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative

(S) Each member also has the responsibility to ensure that all ISP connections to the commercial Internet are only through (b)(3) P.L. 86-36, (b)(1). Enforcement of this policy - particularly detection of violations - may be problematic, but should be technically feasible. The assurance of such policy is critical.


Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative

## 2.2 (U//FOUO) Gateway Function Architecture



- (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798


Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative


## (TS)

(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

The importance of this cannot be overemphasized.

(U//FOUG) Sneaker net is a basic, but secure communications method when used with proper controls. If more real-time processing of system or network element logs should be desired, they would need to be secured according to their security domain considerations.

Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative


- Quickly restore the host to the desired known state as needed.


### 2.2.1 ( $\mathrm{S} /$ Incoming SMTP Gateway

(TS $/$ / 1 The ideal SMTP gateway data flow:
(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

```
TOPsLentet/(b)(1) and (b)(3) P.L. 86-36
```

Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative

## (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

### 2.2.2 (S) Outgoing DNS Request Gateway <br>  <br> (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative


Requirements for the Protection of Classified Information - DIB Cybersecurity Initiative
(b) (6)

```
From:
In IIIImamandLL.
```



```
To: [a[an,||llub]II]
```



```
Subject:
Attachments:
```




## CLASSIFICATION: SECRET/(b)(1) and (b)(3)P.L. 86-36//20360601

CLASSIFICATION: SECRET//(b)(1) and (b)(3) P.L. 86-36 20360601
Attached is the NSA document for starting the discussions with the ISPs.
The real question is what is DHS's security requirements once we take this initiative over?

Ray Kinstler
Director, Future Operations, US-CERT

-----Original Message----
From: Ritz, Daniel W.
Sent: Tuesday, December 06, 2011 9:28 AM
To: Bicknell, Wade D.; Willis, Larry E.; Campbell, John; Kinstler, Raymond L. Subject: DIB security docs for AT\&T

Docs for AT\&T...
-----Original Message-----
From:
Sent: Tuesday, December 06, 2011 8:36 AM


Subject: Resend: RE: (U) DIB security docs for AT\&T
Classification: SECRET//(b)(1) and (b)(3) P.L. 86-36

Please replace the NSA Security Requirement for ISP doc with the attached.

The original copy was incorrectly classified as NOFORN.

## (b) (6)

(D)(3) P.L. $86-36$
T1 Net Defense Mission Effect Lead
OPS2A0844
(b) (6)
Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: z0360601
Classification: SECRET/ (0)(1) and (b)(3) P.L. 86-36

DERIVED FROM: NSA/CSSM 1-52
CLASSIFIED BY:
DECLASSIFY ON: z0360601
DATE OF SOURCE: 20070108


DERIVED FROM: NSA/CSSM 1-52
CLASSIFIED BY:
DECLASSIFY ON: 20360601
DATE OF SOURCE: 20070108
CLASSIFICATION: SECRET//(b)(1) and (b)(3) P.L. 86-36/+20360601

DERIVED FROM: NSA/CSSM 1-52
CLASSIFIED BY:
DECLASSIFY ON: 20360601
DATE OF SOURCE: 20070108
CLASSIFICATION: sEcoct $/$ /(b)(1) and (b)(3) P.L. 86-36//20360501

NSA Security Requirements for ISP in Support of DIB Security

## I. (U) Introduction

(U//FOUO) The purpose of the NSA Security Requirements for the ISP in support of DIB Security is twofold.
a. $\left(S / /^{\text {Penmer }}\right.$ ) To protect the NSA classified information

SMTP classified signatures and another containing NSA DNS classified signatures.
b. $(S$ ) To ensure that the security of the communications between the ISP and DIB dealing with either the SMTP or DNS service provided as part of the NSA classified information is accurately conveyed.
( $\$ /$ The purpose of the ISP Security Initiative is to protect DIB companies from rogue SMTP or DNS internet traffic. By providing ISPs NSA classified signatures, the ISPs are able to provide additional security capabilities in these two areas to the participating DIB companies that are not available by traditional commercial offerings or products. Therefore, satisfying the above two objectives, protecting NSA classified information and securing the SMTP and DNS service based on the NSA classified signature, is critical to the overall success of this activity. The enclosed requirements must be addressed within the ISP architecture to ensure the above objectives are met.
II. (U) Scope

the requirements only address ISPs environments providing the SMTP and DNS enhanced services based on NSA classified information.(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

(U//£OUO) The requirements in this document are based on a notional architecture that provides the necessary layers of defense and devices' security to obtain the stated objectives in section 1 .
(U//FOUO) The requirements cover security needs dealing with physical and logical architecture, Identification and Authentication, Access Control, Auditing/Logging, Security Configuration and Hardening, Services, Management, Network, Cryptography, Key Management Monitoring, Testing, and Documentation. Each of these areas are addressed in the sections below.

## III. (U) Document Structure

$\square$ In order to meet the two security objectives identified in the introduction and to eliminate/reduce the identified threats, security mechanisms are required at various places within the architecture. (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798 $\square$

## IV. (U) Requirements

(U//FOUO) The requirements are written with three levels of criticality. Requirements that are "must haves" to either curtail a threat or support the objectives in section I are notated with the word "shall". Requirements that are strongly recommended are notated with the word "should". And finally, requirements that would provide another layer of defense and would be "nice to have" are notated with the word "recommend" or "desire". Italicized sentences are for clarification or further explanation of a requirement.

```
SECRET/隹(1) and (b)(3) P.L. 86-36
```

a. (U) Architecture
(U//FOUO) The architecture requirements are split into two overarching categories:

1. (U) Physical
(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

b. (U) Devices

(U//FOUO) Security functions that support the overall security objectives stated above execute on a variety of devices within this architecture. (b)(3) P . L. 86-36 |  | Most of these requirements are applicable to all the devices in the |
| :--- | :--- | architecture that provide security operations in support of the two objectives stated in the introduction. However, in some cases, a requirement is for a specific device. In these cases, a note will be made to indicate the requirement is unique to a particular device. The security functions are: Identification/Authentication, Access Control, Auditing, Security Configuration and Hardening, and Monitoring. By performing these sets of requirements on the appropriate devices within the architecture, the security, thus the objectives, of the system are supported and the threat minimized.



2. (U) Access Control

3. (U) Auditing/Logging


SECRET/( ${ }^{\text {(D)(1) and (b)(3) P.L. } 86-36}$

4. (U) Security Configuration and Hardening


## SECRET//(0)(I) and (b)(3) P.L. 86.36



## SECRET// ${ }^{(b)(1) \text { and (b)(3) P.L. 86-36 }}$

APPENDIX A
(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798



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Thanks,


## (b)(3) P.L. 86-36

Deputy General Counse1 (Cyber)
National Security Agency


Classification: UNCLASSIFIED//FOR OFFICIAL USE ONLY


Classification: SECRET//NOFORN


Subject: RE: (U) Prep for Monday's DC: Response to Legal Issues DOJ Raised Re DIB Pilot

Classification: SECRET//NOCORN

Sir
(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

(b)(3) P.L. 86-36 Associate General Counsel (Information Assurance)
(b)(3) P.L. 86-36

## (b) (6)

OPS 1 2C099B

Subject to attorney-client privilege. Do not release outside NSA without OGC approval.

(b) (6)

Please have this final summary to us first thing Monday morning.
Thank you,
(b) (6)
(on DDIR's account)
(b)(3) P.L. 86-36

Executive Assistant to Deputy Director, NSA
OPS2B, 2B8036; Suite 6242


From: (b)(3) P.L. 86-36
Sent: Wednesday, July 07, $20107: 31$ PM


Subject: RE: (U) Prep for Monday's DC: Response to Legal Issues DOJ Raised Re DIB Pilot

Sir



Associate General Counsel (Information Assurance)

OPS 1 2C099B

Subject to attorney-client privilege. Do not release outside NSA without OGC approvaI.

From: (b)(3) P.L. 86-36
Sent: Wednesday, July 07, 2010 6:52 PM


Subject: RE: (U) Prep for Monday s DC: Response to Legal Issues DOJ Raised Re DIB Pilot Classification: SECRET//NOFORN

## b) (6)

Please follow up the loose ends and give me a final summary that $I$ can take to the Deputies meeting next week. Thanks
(b) (6)

From:
(b)(3) P.L. 86-36

Sent: Weanesaay, July 07, 2010 5:23 PM
To:


■


Subject: (U) Prep for Monday's DC: Response to Legal Issues DOJ Raised Re DIB Pilot

Classification: SECRET//NOFORN

Sir


Subject: ** Report from NSS Meeting on DC Read-Aheads **

Classification: SECRET//NOFORN
Sir,

# (b)(1) and (b)(3) P.L. 86-36 



Sincerely,
$\square$
Director's Special Assistant for Cyber
Chief, NSA Cyber Task Force
Senior Advocate, African American Employee Resource Group

(b)(3) P.L. 86-36

Classification: SECRET//NOFORN


Subject to attorney-client privilege. Do not release outside NSA without OGC approval.

Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: 20350701
Classification: SECRET//NOFORN

Derived From: NSA/CSSM 1-52
Dated: 20070108

Declassify On: 20350701
Classification: SECRET//NOFORN

DERIVED FROM: NSA
DECLASSIFY ON: x25

CLASSIFICATION W/O ATCH: SECRET
CAVEATS W/O ATCH: NOFORN
TERMS W/O ATCH: NONE

CLASSIFICATION: SECRET
CAVEATS: NOFORN
TERMS: NONE

| From: | (b)(3) P.L. 86-36 |
| :---: | :---: |
| Sent: | - an ralyumus |
| To: | - |
| Cc: | bancumandin. (D)(3) P.L. 86-36 |
| Subject: | (ロ) |

Classification: UNCLASSIFIED//FOR-OFFICIAL USE ONLY

Tom



Subject to attorney-client privilege. Do not release outside NSA without OGC approval.

From: (b) (6)
Sent: Wednesday, June 30, 2010 10:13 AM
To: (b) (6) M., Mr., OASD NII;
Cc: (b)(3) P.L. 86-36.
Subject: IPC and DIB Pilot

CLASSIFICATION: UNCLASSIFIED
CAVEATS: FQUO
TERMS: NONE

Gentlemen,

## (b)(1) and (b)(3) P.L. 86-36

I do not have any additional details,
but I assume you heard similarly from your participants. Apparently he also mentioned Thursday's meeting at DOJ and confirmed that OLC would be present.
(b) (6) - I separately forwarded you the list of preliminary questions/discussion topics from DOJ.

Thomas M. McDermott
Office of the General Counsel
Department of Homeland Security,


CLASSIFICATION: UNCLASSIFIED
CAVEATS: FOUO
TERMS: NONE

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Classification: UNCLASSIFIED//FOR OFFICIAL USE ONL-Y


Welcome back, and Thanks! Let me ask a couple questions to ensure we're all on the same page:


## Thanks again



## (b) (6)

Associate General Counsel
DoD Office of General Counsel



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Classification: UNCLASSIFIED//FOR OFFICIAL USE ONLY


From:


Sent:
To:

Cc:
Subject:


Classification: SECRET//NOFORN


I hope all are well.

At last week's meeting, NSA took two actions to follow up on the exact number of companies participating in the DIB Pilot and the reasons some companies chose not to participate.

1) The final count of companies participating in the DIB Pilot is $(b)(7)$ 'b)(3) P.L. 86-36

2) Measures of Effectiveness.

As you know, the DIB Pilot is designed to leverage the commercial capabilities of the private sector to improve their ability to monitor, detect and mitigate intrusions and other malicious activity (b)(3) P.L. 86-36 on their networks.

At the conclusion of the operational phase of the Pilot, the participating ISPs and DIB companies may voluntarily provide overall feedback to the USG regarding the progress,
challenges, effectiveness, and other lessons learned to allow for post-Pilot analysis of effectiveness and scalability.

We drafted some measures to determine the effectiveness and scalability of the pilot's capability to protect against the most sophisticated intrusions - (b) (3) P.L. 86-36 $\square$

3) Below is also further information on the Pilot:


All the best,
$\square$


Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: 20360201
Classification: SECRET//NOFORN


Classification: UNCLASSIFIED//FOR-OFFICIAL USE ONLY

(b)(3) P.L. 86-36 Associate General Counsel (Information Assurance)

Subject to attorney-client privilege. Do not release outside NSA without OGC approval.

```
From: (b) (6) [- (6)
Sent: Friday, July 16, 2010 3:33 PM
To:(b)(3) P.L. 86-36 (b) (6)
Cc: (b) (6) Bailey, Leonard (JCONTS)
Subject: RE: DIB Questions (FOUO)
Importance: High
```

CLASSIFICATION: UNCLASSIFIED//FOR-OFFICIAL USE-ONLY
Are we in a position where we can answer some of tho anestions attached? This is the information we will need to do a legal review. (D) (O) may have additional thoughts on this. Thanks.


CLASSIFICATION: 등

Folks,

At the end of last week's meeting we discussed collecting questions and issues that we thought warranted further discussion and circulating them to each other. Attached are some initial questions regarding the DIB project that (D) (6) and I jotted down. They are by no means exhaustive and are only the product of brainstorming between Susan and me. Please circulate to Richard and Maxine, since I don't have their high-side email addresses. Thanks.

## (b) (6)

CLASSIFICATION: UNCLASSIFIED//FOR-OFFICIAL USE ONLX

## (b) (6)

## From:

## (b)(3) P.L. 86-36

Sent:
Monday, January 03, 2011 5:42 PM
To:
McDermott, Thomas M
Cc:
Subject:
(b)(3) P.L. 86-36

RE: (U) RE: DIB PIIOT ISSUES

## Classification: sECRET//(b)(3)P.L. 86-36

Tom,

My understanding is that DOJ (b) (5) There will be discussion during the session at the svtc tomorrow morning but that is my understanding.
$v / r$,
MAB

Mike Brown
RADM, USN
Director, Cybersecurity Coordination
National Protection \& Programs Directorate
Department of Homeland Security


From: (b) (6)
Sent: Tuesday, December 28, 2010 11:23 AM


Subject: FW: (U) RE: DIB Pilot issues

TERMS: NONE

Thomas M. McDermott
Office of the General Counsel

Department of Homeland Security,

National Protection and Programs


From: McDermott, Thomas M.
Sent: Tuesday, December 28, 2010 11:21 AM
To: Reitinger, Philip R.; McConnell, Bruce W.; Schaffer, Gregory P.; Stempfley, Roberta G.; Brown, Michael A. RADM; Dean, Nicole M.
Cc: (b)(3) P.L. 86-36
Subject: FW: (U) RE: DIB Pilot Issues
CLASSIFICATION: SECRET
CAVEATS: $\square$
TERMS: NONE
Following up on my email from last Wednesday evening,
. At a high-level, NSA is proposing:


Thomas M. McDermott

Office of the General Counsel
Department of Homeland Security,

National Protection and Programs



Jason et al,

As discussed yesterday,

Happy holidays and best wishes,


## From: (b) (6)

Sent: Wednesday, December 22, 2010 10:55 AM


CLASSIFICATION: SECRET // NOCODN
Al1:

Here's an informal summary of the Department's agency analysis.
Please contact Jim Baker or me with any questions or concerns about this document.

## (b) (6)

Senior Counsel to the Deputy Attorney General
U.S. Department of Justice


From:
Sent: Tuesday, December 21, 2010 6:18 PM
To: (b) (6) Cher Painter, Christopher M.E.; Newman, Charles L.; Baker, James A.; (b) (6)
(OIPR) (b) (6) (b) (6) Mr., OGC; Butler, Robert J., Mr., OSD(P)
Subject: (U) RE: DIB Pilot Issues
Classification: SECRET


Thank you for your email and the informal paper tomorrow.


As the senior Policy lead for DoD, I'1l defer to Bob Butler on the third point.

Adding $\square$ and Bob Butler to the email chain...

Best,

## (b) (6)

From: (b) (6)
Sent: Tuesday, December 21, 2010 5:44 PM
To: [b) (B) PL B6:36 ; (b) (6)
(b) Dainton Chnictopher M.E.; Newman, Charles L.; Baker, James A.; (b) (6)

Subject: DIB Pilot Issues

CLASSIFICATION: SECRET // NOFORN

All:


PS -- Can someone at DOD please send this to Bob Butler and (b) (6) I don't have their JWICS addresses.

Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: 20351201
Classification: SECRET

Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: 20351201
Classification: SECRET//

DERIVED FROM: NSA/CSSM 1-52
DECLASSIFY ON: 20351201
CLASSIFICATION W/O ATCH: SECRET
CAVEATS W/O ATCH:
CLASSIFICATION: SECRET
CAVEATS:
TERMS: NONE

DERIVED FROM: MS
DECLASSIFY ON: MR
CLASSIFICATION W/O ATCH: SECRET
CAVEATS W/O ATCH:
TO
TERMS W/O ATCH: NONE
CLASSIFICATION: SECRET
CAVEATS: TO
TERMS: NONE

From:
Sent:
To:
Cc:
Subject:

Classification: TOP SECRET

Nicole,
Thanks for the note - my folks have left for the day, but I'1l forward the "final" version tomorrow - it incorporates DHS's second round of comments and the draft language David, Richard and the attorneys worked. So, nothing new there.

Re: the second item - what I said today was that the ISPS had provided their security architectures for security review and that the security team had reviewed it and done an assessment


I didn't attend those meetings, as we were just interested in the outcome not the detailed technical discussions, but I can ask the team for whatever architecture details they received, if that is valuable to you. Please let me know.

Re: the status meetings, we established weekly status meetings last week. We had one each with AT\&T and The one with this week was cancelled at their request, because there were no technical updates to provide. As we discussed, you are welcome to attend and you have the days and times. As you heard today, the legal issues drive the pace of the operational decisions, so in some cases, meetings are cancelled if legal progress has not been made and we are forced to slow the operational progress to keep the two parallel.

Best,


From: (b) (6)
Sent: Wednesday, November 03, 2010 4:47 PM
To: Sc: Schaffer, Gregory P.;
Stempfley, Roberta G.; (b)(3) P.L. 86-36 (b)(3) P.L. 86-36 McDermott, Thomas M.
Subject: DIB

CLASSIFICATION: TOP SECRET
CAVEATS: NOㄷㅇN
TERMS: NONE

## b) 6



On a separate note, I realize the status meetings with the ISPs you had scheduled this week were cancelled, however, if there are any other meetings DHS can engage on with respect to the DIB pilot, please let me know. We want to ensure we stay as closely sync'd as possible.

Thanks so much,
Nicole

DERIVED FROM: ms
DECLASSIFY ON: ms
CLASSIFICATION: FOP SECRET
CAVEATS: NOFORN
TERMS: NONE
Classification: fop SECRET
(b) (6)


CLASSIFICATION: UNCLASSIFIED
CAVEATS: FOUO
TERMS: NONE

Thank you, ${ }^{(b)}$ (6). Tom McDermott ( $c c^{\prime}$ d here) is handling the operational issues related to the DHS "design study" work with ISPs under CNCI 3. For continuity on those topics (and since I'll be on leave or jury duty for a significant part of the coming weeks) I'm looping him in to attend the NSA-DOD meetings with vendors if possible.

I have not yet seen a timeline or description of the DOD DIB pilot study plan. Would DOJ attend these meetings too, or is there a different series of meetings that they would join?

Thanks.
(b) (6)
(b) (6)


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David

This is to invite you to the technical exchange meetings NSA is holding with carriers starting Friday, 11 June from 9-11 a.m. with ${ }^{(0)(4)}$ and (0)(7) and continuing Fri 1-3 p.m. with ATT, both in room 2A0218. The meeting with will be Wed, 16 June from $1-3 \mathrm{p} . \mathrm{m}$. Meetings with
the remaining 3 Tier I carriers are being scheduled. We are waiting confirmation that carrier attorneys will be attending.

These are what we are envisioning as the "first round" of meetings during which (b) (5) The second round will be for (b)(3) P.L. 86-36, (b) (5)
A second round meeting with ATT is scheduled for 22 June 10-12 a.m. Please let me and (b)(3)P.L. 86-36 know if you are planning on attending. Hope to see you there.


Subject to attorney-client privilege, Do not release outside NSA without OGC approval.

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CLASSIFICATION W/O ATCH: UNCLASSIFIED
CAVEATS W/O ATCH: FOUO
TERMS W/O ATCH: NONE
CLASSIFICATION: UNCLASSIFIED
CAVEATS: ᄃ口УO
TERMS: NONE

## (b) (6)



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Brendan,
Thanks. We'll review and share our notes.


We've acknowledged their points and are thinking about how to correct that in the future, welcome your thoughts,

Best,
(b) (6)


CLASSIFICATION: UNCLASSIFIED//FOUO
Hi $\square$

I am passing along our notes from Tuesday's session with the DIB participants. Sorry for the delay getting to you my notes for the meeting summary. Also, I couldn't find Victoria's email address; please feel free to pass this along to her as well.

Below are the key points that we took away. When do you anticipate the draft meeting notes would be ready?



Let me know if you have any questions on my inputs. I will be out of the office MondayThursday and will have limited access to JWICS. Please let me know at my low-side account (b) (6) if you have any questions or if I need to find a JWICS terminal to see your response.

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Holzer, James V.
From:
(b)(3) P.L. 86-36

Sent:
Tuesday, May 04, 2010 5:04 PM
To:
Reitinger, Philip R.; Schaffer, Gregory P.; Bro $\square$ n. Michael A.; Mc $\square$ onnell, Bruce W.
Cc:
McDermott, Thomas M.; (0) (6)
DIB pilot update

CLASSIFICATION: SECRET
CAVEATS: NOFORN
TERMS: NONE

Gentlemen,


## (b) (6)

DERIVED FROM:
DECLASSIFY ON:

CLASSIFICATION: SECRET
CAVEATS: NOFORN
TERMS: NONE

## SEEREF/(b)(1) and (b)(3) P.L. 86-36

NSA Final Recommendation on AT\&T Architecture
(U//FOUO) Below are a list of items that NSA believes must be done to the AT\&T architecture in order to protect the signatures from a variety of potential threats. These recommendations are in no specific order since they are all equally important to the security of the signatures.



tst//Rerionale: (b)(1); (b)(3) P.L. 86-36; and (b)(3) 18 U.S.C. 798

(S/ Recommendation 9: AT\&T provided a new $\square$ However, we have several questions. We believe that a meeting about this would be beneficial to all parties.

Meeting notes from DIB briefing to
15 June 2010

## Date of Meeting: 6/16/2010

Time: 1300-1500

## (b) (2)

ISP: ${ }^{(b)(4)}$ and $(b)(7)$
(U//FOUO) Overview: Presentation briefed collectively by $\square$ The same basic script as described in previous meeting notes was followed as the



(U//FOUO) comments centered on:

- (U/fFOUO) What exactly is the govt asking and are they being asked for the same thing at DHS concerning EINSTEIN
 leveraged

- (U//FOUO) They explained their capabilities are centered on detection and analysis on their customer networks while they perform higher end redirection and mitgation of traffic on their interna networks.
- (U/FFOUO) They also mentioned that all of the ISPs share malicious IPs once a month.

TOPSECRET/f(1)(1) and (())(3) P.L. 86-36

Meeting notes from DIB briefing to $\square$
15 June 2010

Date of Meeting: 6/15/2010
Time: 1300-1500

(U//FOUO) Overview: Presentation briefed collectively by


1. (U//FOUO)
2. (U//FOUO) NSA provided a list of questions to ${ }^{\text {(1emern }}$ (each ISP will be provided a copy) querying them on cyber protection offerings and strategies
3. 


4. (U//FOUO) The briefing also contains a slide describing all of the interfaces for the partner system; there is also an accompanying document that describes the interfaces in detail
a. NSA told ${ }^{\text {(INmen }}$ that they would be provided both the briefing and the interface document
b. We could definitely use this information and should be provided to us
5. (U//FOUO) $\square$

6. (U//FOUO) NSA told that E3 and the DIB are asking for exactly the same thing; the only difference is the protected customer base and the terminology is different.
a. Both sides are being directed to have joint engagements in the future.


## FOP SECRET//間(1) and (0)(3) P.L. 86-36



Additional items:
(S/ Only one of the participants was at the meetings down here. Same basic soundtrack as to what the govt is asking the ISPs to consider.

(b)(1); (b)(3) P.L. 86-36; and (b)(3) 18

## Notes for Technical Exchange Meeting (TEM) \#1 with Tier 1 ISPs for Protection of the DIB

Date of Meeting: 6/11/2010

(U//fouo) Overview: Presentation briefed collectively by $\square$
(U//FOUO) Anne presented the following:

(U//FOUO) Under CYBERCOM, DIRNSA has authority over the ".mil" and DIB areas. DHS has the responsibility for the ".gov" and critical infrastructure.

(U//FOUO) Lastly, Pat briefed the concept of operations which necessary in order to build the current defensive capability.

(U//Fowo)

(U//foue)

1) Question \#1: What is the relationship of the DIB partners (basically, will the DIB partners be thought of as customers or participants)?
a. Answer \#1: DIB partners will definitely be involved.
2) Question \#2: Will this effort lead to a RFP?


## (U//FOUO) Other Items:

1) 

 on Cloud (i.e., a paper written by
2) stated the urgency of getting this effort done.
3) The 60-day legal/operational framework timeline began on 6/4/2010.
4) Slides presented showed a joint effort with DHS/NSA.
5) A set of questions were provided to ${ }^{(\text {(irc) and (b)Cl }}$ for follow-on discussion at the $2^{\text {nd }}$ TEM (dates listed below) for homework assignments. The set of questions included the following:
a. (U//FOUO) What are the services you provide clients with under the various categories of "managed security services"?
b. (U//FOUO) What types of malicious network activity mitigation actions do you currently perform to maintain your network? Please provide a level of operational detail for a couple of mitigation examples used today
c. (U//FOUO) How is the effectiveness of mitigation actions measured, both qualitatively and quantitatively?
d. (U//FOUO) In support of network security, what types of monitoring (at any and all levels) is currently performed?
e. (U//FOUO) What network or threat information is useful to you in support of your detection and mitigation operations?

## TOP SECREF//

f. (U//FOUO) If government classified information is to be supplied in support of network security operations, please describe the mechanism(s) currently in place, if any, that will protect such information.
g. (U//FOUO) Please walk through the classified scenario briefed during the first TEM, describing how you would implement the various functions within your own architecture. Which functional elements would you implement on your own, in partnership with government capabilities or would be required to be performed by the government partner?
6) Next TEM \#1 meetings:
a. $6 / 11 / 2010$ (Fri): $1300-1500$ with AT\&T
b. $6 / 15 / 2010$ (Tue): $1300-1500$ with
c. $6 / 16 / 2010$ (Wed): $1300-1500$ with
d. $6 / 17 / 2010$ (Thurs): $900-1100$ with
e. $6 / 17 / 2010$ (Thurs): $1300-1500$ wit
7) Tentative $2^{\text {nd }}$ TEM (TEM \#2) Meetings:
a. 6/22/2010: 0900-1100 with AT\&T

## Scenarios:



Meeting notes from DIB briefing to


15 June 2010
Date of Meeting: 6/15/2010
Time: 1300-1500

## (b) (2) <br> ISP: <br> 

(U//FOUO) Overview: Presentation briefed collectively by $\square$

1. (U//FOUO) NSA commented that the USG will be responsible for any QOS degradation due to the implementation of any DIB protection
2. (U//FOUO) NSA provided a list of questions to (each ISP will be provided a copy) querying them on cyber protection offerings and strategies
3. $(S / /$

The same basic script was followed as the previous meetings with $\square-1$ and AT\&T.

4. (U//FOUO) The briefing also contains a slide describing all of the interfaces for the partner system; there is also an accompanying document that describes the interfaces in detail
a. NSA told
b. We could definitely use this information and should be provided to us
5. (U//FOUO)

6. (U//FOUO) NSA told that E3 and the DIB are asking for exactly the same thing; the only difference is the protected customer base and the terminology is different.
a. Both sides are being directed to have joint engagements in the future.
7. (U//FOUO)

8. (U//FOUO)



Additional items:
$(\mathrm{S} /$ One $\quad$ Only one the participants was at the meetings down here. Same basic soundtrack as to what the govt is asking the ISPs to consider.

(TS/L)(b)(1); (b)(3)P.L.86-36; and (b)(3)18 U.S.C. 798

From:
Sent:
To:
Cc:

Subject:
Attachments:

Follow Up Flag:
Flag Status:

Monday, June 04, 2012 T12 AM


Follow up Flagged

Classification: //(b)(1) and (b)(3) P.L. 86-36

>From my perspective, our telecon was productive as many questions were answered. NSA is working on timely answers to a couple questions that arose requiring additional investigation. Attached are 2 classified (SECRET/ $\square$ documents in response to ${ }^{(b)(4) \text { and (b)(7) }}$ request and written response (in blue text, yellow text is open items) to the questions we received from ${ }^{(b)(4)}$ and $(b)(7)$ We will try to provide timely response to the outstanding questions through high-side email, but if DHS ${ }^{(b)(4) \text { and }(b)(7)}$ requests a follow-on meeting for clarification, NSA will be available. Once ${ }^{(0)(4)}$ and (b)(7) architecture is finalized, we should meet to make sure everyone is on the same page.

$$
v / r \text {, John }
$$



Derived From: NSA/CSSM 1-52

Dated: 20070108

Declassify On: 20370201
Classification: sECRET//(b)(1) and (b)(3) P.L. 86-36
(U) Protections for DNS signatures at ISPs
(U) Introduction:
(St) Currently, the Defense Industrial Base (DIB) security initiative is using two Dian Pa Bral to protect the DIB companies. These two capabilities provide classified signatures for SMTP and DNS. For this discussion, the DNS signatures are the concern. $\qquad$

(U) Risks:

do.
(U) An adversary can:

(U) PROCEDURAL OVERVIEW
(U) Below are the high level steps needed in preparing signatures, the sequence for operational compare and the algorithms that can be implemented now, stressing that they are currently insecure
because all crypto-processing is in the clear. Therefore, additional layered security mechanisms are required to reduce the risk to the signature list.
(U) Signature preparation:
(U) Upon receipt of the DNS signatures, the following steps shall be taken:

(U) Query handling:


## (U) "Encryption" methods:



## SECRET/(b)(1) and (b)(3) P.L. 86-36

(U) Review of proposals
(U//FOUO)


- (U) Hardening and Filtering

- (U) IPSEC



(U) Conclusion:
(U) To provide a more secure solution, the ISP vendors if placing the DNS signature in enclave 1 shall choose one of the three options to better protect the signatures. These options are only to be used for
systems that meet the "NSA Security Requirements for ISP in Support of the DIB Security" or any revision to this requirements document.

From:
Sent:
To:
Cc:

Subject:
Attachments:
Categories:
(b)(3) P.L. 86-36

Tursday, No eaber 04, 2010409 PM Dean, Nicole M.
Sc「affer, Gregory P.; (b)(3) P.L. 86-36
Ste■ pfley, Loberta G., (b) (6)
b) (3) P.L. 86-36 McDer ott, $\square$ onas M.; (b)(3) P.L. 86-36
(U) $\square E[D I B$

DIB Cybersecurity Plan_Final.doc
Purple Category

Classification: SEGRET/(b)(1) and (b)(3) P.L. 86-36

Nicole,
As requested, attached is the final version of the DIB Pilot Plan.
Best,
(b) (6)

Derived From: NSA/CSSM 1-52
Dated: 20070108
Declassify On: 20350701
Classification: sECRET/(b)(1) and (b)(3) P.L. 86-36

