

International Association of Drilling Contractors



Cybersecurity Committee

9 Aug 2018

9 – 11 am

IADC
3657 Briarpark Drive, Suite 200
Houston, TX 77042

Attendance

First Name	Last Name	Company Name
Stewart	Gillies	ABERDEEN DRILLING CONSULTANTS
Joe	Goodlad	ABERDEEN DRILLING CONSULTANTS
Mike	Reynolds	BAKER HUGHES
Michael Josh	Lewis	CHEVRON
Nick	Parham	COAST GUARD OCS
Melissa	Mejias	IADC
Brent	Batchelor	MISSION SECURE
Eric	Dila	NOBLE DRILING
Juan	Negrete	ROWAN COMPANIES
Ben Jason	Ramduny	SEADRILL
Siv Hilde	Houmb	SECURE-NOK LLC
Daniel	Liu	SGV INTERNATIONAL, LLC
Adam	Myers	TELESOURCE
Thomas	Koithan	WEATHERFORD
Jose	Brana	WEATHERFORD

Agenda for the meeting:

1. Welcome and Introductions
2. Review of Antitrust Guidelines and Facility Orientation
3. Review of Minutes from Last Meeting
4. Update on Legislative and Standardization Activities
5. IADC Cybersecurity Guidelines Development – Network Segmentation
6. Integrating Cybersecurity into Drilling Assets - Discussion

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7. AOB and Close of Meeting

Minutes:

1. Welcome and short introduction of the participants – “round around table”. This included facilities orientation.

2. Meeting delegates was reminded of the IADC antitrust guidelines.

3. Minutes from the committee meetings are posted at: <http://www.iadc.org/cybersecurity-committee/meeting-minutes/>. There were no comments to the minutes from the June 14, 2018, IADC Cybersecurity Committee meeting.

4. Update on Legislative and Standardization Activities by Melissa Mejias, IADC. Please see appendix to the minutes.

5. IADC Cybersecurity Guidelines Development – Network Segmentation by Ben Ramduny, Co-Chair. The guidelines are about 60% completed. Thus far, the focus has been on standards and best practices for network segmentation, IEC 62443 with identification of zones and conduits, and networking protocols, especially identifying whether the various protocols in use are routable or not (e.g. serial). The sections that still needs to be written are guidelines regarding how to define a risk-based network segmentation strategy for a drilling asset and from this strategy, identify critical components and define requirements for segmenting the network. The latter should be based on the needs related to protecting critical components in a manner that achieves HSE, business continuity and financial goals. The below figure shows an outline of the network segmentation guidelines and the status (as per Aug 9) of each section.

The meeting spent significant amount of time discussing how to move forward with the guidelines and how to develop guidelines that addresses both existing and new drilling assets. The meeting concluded with the following plan: (1) review the current guidelines and (2) develop an appendix containing network segmentation guidelines for new drilling assets, and have the core body of the guidelines addressing existing drilling assets. There were two volunteers for the review tasks and these were: Brent Bachelor from Mission Secure and Mike Reynolds from Pacific Drilling. Regarding the appendix, the October 11 meeting will focus on this appendix. To kick-start this work, the October 11 meeting will be organized as a brainstorming session for the appendix, focusing on defining requirements and needs to get everybody aligned and agreed on the goal and purpose of the appendix, and then move forward to defining the technical requirements for network segmentation for new drilling assets. The brainstorming session will be led by Eric Dila from Noble Drilling. The management team would strongly encourage people to participate in the brainstorming session as this is an opportunity to exchange and discuss ideas regarding network segmentation, and to take part in defining the network segmentation guidelines for future drilling assets.

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#	Title	Section Objective	Action required	Author
	Introduction and Background		Review	
1	Standards and Best Practices for Network Segmentation	Introduce next section	Review & Update	
1.1	ISA/IEC 62443 Overview and Application to Drilling Asset	Review the standard and provide a narrative on how the standard could be applied to a MODU	Review & Update	
1.2	ISO 27001/2 Overview and Application to Drilling Assets	Review the standard and provide a narrative on how the standard could be applied to a MODU	Review & Update	
1.3	NIST Overview and Application to Drilling Assets	Review the standard and provide a narrative on how the standard could be applied to a MODU	Review	
1.4	Defining a Network Segmentation Strategy based on Risk	Guidance on how to ensure that a segmentation project is segmenting the network because of risks to the components within the segment	Write Section	
2	Guidelines for Identifying relevant network Segments	Introduce next section	Review	
2.1	Identifying the Criticality of Components	Guidance on how assess each component and determine how critical it is to the drilling operation a safety o the MODU	Write Section	
2.2	Identifying Remote and 3 rd Party Connections		Write Section	
2.3	Defining the limitations and requirements of each Network Segment	Guidance on how determine when segmentation may not be possible to process or technology constraints	Write Section	
3	Designing Network Segmentations and Remote Access		Write Section	
4	Guidelines for Controlling Traffic Flows Between Network Segments	Introduce next section	Review	
4.1	Uni-Directional or Bi-Directional Traffic Flows	Guidance on possible traffic flow control mechanisms based on whether the communication is 1 way or both ways	Review	
4.1	Selecting traffic flow control mechanisms	Guidance on choosing appropriate traffic flow control mechanisms	Review	
5	Practical Guidelines for Implementing Network Segmentation	Guidance on options that can help to reduce risk if full segmentation is not possible due to technical constraints or budget.	Review	
6	Example (applying the guidelines to a generic 6th gen drillship	A step by step example of how to apply the guidelines to an existing MODU	Review & Update	
7	Maintaining Accurate Network Architecture Designs	Guidance on how to build a process to ensure that network diagrams are maintained and remain current	Review & Update	
8	Periodic Auditing of network Segmentation design and policies	Guidance on what should be periodically reviewed and the frequency to ensure that the segmentation deployed on day 1 remains effective on day x following numerous operation changes.	Write Section	
9	Conclusions	Summary and reference to further reading	Review	

6. Integrating Cybersecurity into Drilling Assets – Discussion. Deferred to upcoming meetings.

7. AOB and close of meeting. The committee meetings are announced on the IADC website. Please remember to register. The next committee meeting is October 11 in Houston, TX.

Updated and tentative schedule of deliverables for the IADC Cybersecurity Committee:

- December 2018 – Guidelines for Network Segmentation.
- December 2018 – Cybersecurity Training v1.0.
- June 2019 – Guidelines for Hardening of Control Systems.
- June 2019 – Guidelines on Security Monitoring and Audit.

There were no other business and meeting adjourned.

Appendix:

1. Update on Legislative and Standardization Activities