**NIST Big Data Public Working Group (NBD-PWG)**

**NBD-PWD-2015/M0426**

**Source: NBD-PWG**

**Status: Draft**

**Title: Web chat from Meeting of July 28, 2015**

**Tim Zimmerlin (to Everyone)**: 1:16 PM: I agree with David's observations wrt "concern". There are 4 basic terms: concern, cross-cutting concern, stakeholder, and actor…leading up to the requirements documentation.

**Mark Underwood (to Everyone)**: 1:16 PM: Lost audio here

**alicia zuniga alvarado (to Everyone)**: 1:16 PM: yes

**Robert Reyling (to Everyone)**: 1:16 PM: yes I also lost audio

**alicia zuniga alvarado (to Everyone)**: 1:16 PM: yes, we lost you

**alicia zuniga alvarado (to Everyone)**: 1:16 PM: back,good

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:17 PM: David this isn't a criticism...but it seems that concern should cut to the chase via the term 'liability'......since stakeholders seems to redundtify the term concern.....just a thought.....

**Tim Zimmerlin (to Everyone)**: 1:17 PM: Pw, yes, it does...

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:18 PM: Dear Sir: Thank you for agreeing with us so promptly......awaiting to hear how you sound today.....

**Tim Zimmerlin (to Everyone)**: 1:19 PM: Stakeholders care so much about their concerns that they willingly underwrite the system CAPEX & OPEX, they make themselves liable, they purchase insurance.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:19 PM: Aka: no buzz saw vibrato.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:19 PM: They do purchase cybersecurity insurance....?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:20 PM: For both CAPEX & the other one....too...

**Tim Zimmerlin (to Everyone)**: 1:20 PM: Pw, yes, insurance is part of due diligence. Trust your insurance investigators more than your IT dept.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:21 PM: What about those un-written clauses.....such as we won't pay if it's your fault...and it usually is...."your fault".....

**Tim Zimmerlin (to Everyone)**: 1:22 PM: Pw, that is a common concern of the insurance model. Insurance is not freedom to do dumb things…or nothing.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:22 PM: Tim: we agree with you as always....and....David: This shows a lot of effort on your part and is quite a good starting point.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:23 PM: Oh yes, how do we comment.....?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:23 PM: The Arch Reflector is the NIST web site...?

**David Boyd (to Everyone)**: 1:24 PM: bigdataarch@nist.gov

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:25 PM: We suggest spending a large amount of energy dealting with Audit Security & Privacy within this document......

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:26 PM: Just a brief sentence or two...to let the world know that auditing commitement is necessary for privacy and security.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:27 PM: Will do......

**Cavan Capps (to Everyone)**: 1:27 PM: I would like to add my input later after I can look at this in more detail.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:28 PM: So we should hold off on Security & Privacy....and weave that into Part IV....yes....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:29 PM: Personally and professionallly both security & privacy deserves a mention and point them to Part IV for greater info. regarding secrurity & privacy....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:30 PM: Security for the individual is different from security for the Entity....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:31 PM: Privacy, too they are both different between the Individual and the Entity....

**Tim Zimmerlin (to Everyone)**: 1:31 PM: Dave, the reason I cannot participate is because ISO prevents me from reading the bibliographic reference docs. In fact ISO charges the public egregous amounts.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:32 PM: The EU loves egregous.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:33 PM: Dear Sir.....we agree....with your thoughts.....again....and again....

**Tim Zimmerlin (to Everyone)**: 1:33 PM: Pw, $117 for a 27 page overview of 2700x.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:33 PM: Yikes....

**David Boyd (to Everyone)**: 1:34 PM: Tim, we could get into a long debate on ISO policies. However, one way to get access is to join the INCITS Big Data TC (about $1500 / year). Then you not only get access to the standards but also input to votes on the standards as they come out.

**Mark Underwood (to Everyone)**: 1:34 PM: Sounds like S&P placeholder content . . .not very Big Data-centric

**Russell Reinsch (to Everyone)**: 1:35 PM: What did he say

**Tim Zimmerlin (to Everyone)**: 1:36 PM: Dave, I will not pay about $1500.00 per year to support ISO. I already pay about $500 per year to support IEEE & about $200 per year to support ACM.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:37 PM: We should be able to leverage some Cloud info. into this document regarding S&P....the aggregation of Big Data-->Cloud-->&-->Mobile will make S&P applicable for each architecture as they continue to become co-mingled...or tri-mingled if you prefer....

**Mark Underwood (to Everyone)**: 1:37 PM: Dave, point taken .NE. cloud and vice versa, but we should be able to copy / clone / adopt some content

**Mark Underwood (to Everyone)**: 1:37 PM: Though as in the case of NIST 8062 it has looked like an essay as much as a standard

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:37 PM: Really....that's not good.....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:38 PM: Tim....can you use the Chat....?

**Tim Zimmerlin (to Everyone)**: 1:39 PM: Dave, please study the pre-exascale 3 systems funded by NSF & DOE.

**Russell Reinsch (to Everyone)**: 1:39 PM: zzzzzzzz

**Mark Underwood (to Everyone)**: 1:39 PM: +1 for this side conversation about ISO - unfortunate confluence of commerce & standards-making, but it's the path we're on

**David Boyd (to Everyone)**: 1:39 PM: Mark, in 20547-3 the approach is to adopt some of the same overall structure and views as the cloud computing standard. One of the issues in WG9 is that there is a push from certain experts to limit our thoughts to what is in that standard versus taking a bigger view.

**Mark Underwood (to Everyone)**: 1:40 PM: Dave, ack'd

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:40 PM: Did you hear about the NSA & UK intelligence cutting a deal with Swiss cryptographic mfg....giving them access via a back door....?

**Tim Zimmerlin (to Everyone)**: 1:40 PM: Dave, please also study Cloudlab (UT) and Chameleon (UChicago) funding by NSF.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:41 PM: It was an encryption back door....

**Tim Zimmerlin (to Everyone)**: 1:41 PM: Dave, please also study Comet (UCSD) and Wrangler (UTA) funded by NSF.

**Cavan Capps (to Everyone)**: 1:42 PM: stepping away for a minute

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:45 PM: Yes.....my entire R&D Team from Compliance Partners, LLC would like to participate......

**Mark Underwood (to Everyone)**: 1:45 PM: Off topic: Here's a nice overview - tho a little vague -- over the tools in use for powering Apple Siri. http://bit.ly/1KsTyuM It includes Apache Mesos, stores in HDFS, The firm, Mesosphere has raised $10M to commercialize Mesos. The piece refers to Apple's deployment as PaaS. Wish we could get this loaded as a use case.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:46 PM: Dear Sir: We only deal in Immaculate Requirements.....

**Tim Zimmerlin (to Everyone)**: 1:49 PM: Mark, Mesos is very good; Mesos/Kubernetes replaces Chef, Puppet, or Ansible.

**Russell Reinsch (to Everyone)**: 1:51 PM: My machine doesnt save the chat record anymore. Can someone email me a copy of this weeks chatlog please?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:51 PM: Sure....what is your address....?

**Russell Reinsch (to Everyone)**: 1:52 PM: russell.reinsch@gmail - thanks

**Mark Underwood (to Everyone)**: 1:52 PM: Tim - Must be something useful there for Apple. Good to have it on our radar, e.g., at least sorting out where in the RA it gets used (PaaS)

**Cavan Capps (to Everyone)**: 1:52 PM: cavan.paul.capps@census.gov

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:52 PM: Ok....will do.....and if you don't receive my copy....it's all Tim's fault....Pw

**Mark Underwood (to Everyone)**: 1:53 PM: PW - a recent tweak to GTM made it more difficult to get the GTM-maintained chat log; I think it became an admin function, but I'm uncertain

**Cavan Capps (to Everyone)**: 1:53 PM: Mark thx for Mesos reference

**Tim Zimmerlin (to Everyone)**: 1:53 PM: Mark, please check these links on containers: https://www.opencontainers.org/, http://www.linuxfoundation.org/news-media/announcements/2015/07/new-cloud-native-computing-foundation-drive-alignment-among

**Mark Underwood (to Everyone)**: 1:53 PM: Tim -thx

**Cavan Capps (to Everyone)**: 1:55 PM: My question on containers and clusters are how can we manage them getting the security advantage without using memory less efficiently (on an analytical cluster)

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:55 PM: The link works....to Linux cloud info...

**Tim Zimmerlin (to Everyone)**: 1:56 PM: Caven, containers are vastly more efficient than VMs at scale and high network workloads.

**Tim Zimmerlin (to Everyone)**: 1:57 PM: Caven, please read the 2 links above. Start with the US companies supporting Linux & containers & Kubernetes.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:57 PM: Should we raise the issue of 'Mitigation Strategies'.....what to do, when things go South....?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 1:59 PM: UML = Uniform Modelling Language, no?

**Tim Zimmerlin (to Everyone)**: 1:59 PM: Wu, realistically, today, all NBD-PWG can influence is Research&Education systems, funded by NSF or DOE or DARPA or IARPA.

**Cavan Capps (to Everyone)**: 2:00 PM: I am aware of VMs vs Containers, still I am thinking that the size of the container will be largely static during the period the container is used. Effectively I can support fewer analytical users (without over subscribing) than if I go pure bare metal, however I may also have less security when I am running large sets of analytical users

**Cavan Capps (to Everyone)**: 2:00 PM: but I like the links

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:01 PM: Tettering on the edge of gross-complexity....sounds like to us.....

**David Boyd (to Everyone)**: 2:01 PM: UML is just way tooooooooo low a level specification approach for a reference architecture. Heck I know DODAF folks who struggle with the low level nature of UML mapping to DODAF.

**Tim Zimmerlin (to Everyone)**: 2:02 PM: Cavan, containers are complete & independent of other containers; containers migrate & replicate locally; containers can run with least privilege.

**Cavan Capps (to Everyone)**: 2:03 PM: yes

**Tim Zimmerlin (to Everyone)**: 2:03 PM: Cavan, containers can implement "microservices" elastically, at high scale.

**Cavan Capps (to Everyone)**: 2:03 PM: but don't I waste physical memory

**Tim Zimmerlin (to Everyone)**: 2:04 PM: Yep!

**Cavan Capps (to Everyone)**: 2:04 PM: yes, but I like the security

**Cavan Capps (to Everyone)**: 2:04 PM: thanks

**Tim Zimmerlin (to Everyone)**: 2:04 PM: Wait! You do NOT waste DRAM or hard drive or reboot the local OS. So, NO!

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:05 PM: DRAM = Dynamic Random Access Memory....no?

**David Boyd (to Everyone)**: 2:05 PM: Cavan - In some of the DoD work I have been doing we were actually able to make a case the containers (especially if they encapsulate services for a specific user) help security because you don't necessarily have to share libraries and so if a user overwrites a specific library (say to introduce a trojan) they only corrupt their container. In addition, the isolation from the underlying OS provides a great barrier.

**Tim Zimmerlin (to Everyone)**: 2:06 PM: Cavan, containers are optimized for rolling updates of live services. Stateless containers can be killed when they are hacked or deadlock.

**Mark Underwood (to Everyone)**: 2:06 PM: So far as HL7 in S&P is concerned, it has survived and its child FIHR is basically carrying the de facto day for interop

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:07 PM: But they (the containers) can be compromized.....yes?

**Cavan Capps (to Everyone)**: 2:07 PM: yes, I love the security aspects.

**Tim Zimmerlin (to Everyone)**: 2:08 PM: Pw, containers can use least privilege, so hackers cannot do much damage. Each container can be a different user account.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:08 PM: When do we bring Mobile Eco-systems into this Big Data/Cloud Eco-system.....?

**Cavan Capps (to Everyone)**: 2:09 PM: but they are harder to compromise, as I understand it. But if I have an analytical user come in using a specified set of restricted data, if I put them in a container they have a static amount of RAM for that session, so I can put fewer users on a cluster without oversubscribing the containers.

**Tim Zimmerlin (to Everyone)**: 2:10 PM: Anyone who intends to use "containers" should follow the 2 container industry foundations/consortia.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:11 PM: Without too much heavy lifting.....(aka: keeping it brief.....) but acknowledging it's interdependent collaborative influences......

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:11 PM: How does power surges, outages affect the container's integrity....?

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:12 PM: They provide a window of opportunity.....for exposure....no?

**Tim Zimmerlin (to Everyone)**: 2:13 PM: Pw, containers do not help with power distribution. Just reboot the physical servers…and anticipate this is an attack mode on your data center.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:14 PM: Ok....we'lll keep looking for an Achilles Heel.....for containers....Thanks....

**Mark Underwood (to Everyone)**: 2:16 PM: Transcript note: Greg, Mark, Frank, Dave discussing how to use / adapt UML or reduced-UML as part of the stds activity

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:16 PM: Sounds like the impact of project team turn-over....

**Tim Zimmerlin (to Everyone)**: 2:16 PM: Pw, just hack github and yum. Most all young programmers use these.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:17 PM: We've been meaning to visit gethub.....we

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:17 PM: also need to visit yum, too....

**Tim Zimmerlin (to Everyone)**: 2:17 PM: Pw, old programmers use SoureForge. heh-heh

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:18 PM: That's us....old-n-slow that's our motto....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:19 PM: Yes, please share....we'd like to see them....

**Russell Reinsch (to Everyone)**: 2:19 PM: Extension of Mark's transcript note: a) diagram that simplifies what is big vs. what is not big. b) potentially multiple diagrams of the concept, where each view prioritizes one aspect of concepts; and other aspects of concept are made secondary.

**Tim Zimmerlin (to Everyone)**: 2:20 PM: You folks are steeling my thunder now! I am using Eclipse IDE with all its modeling tools. At the high level, choose a design pattern. At the low level model, fill out the data templates. Finally, run the SW generation tools to construct containers.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:21 PM: David....for some reason there is alot of feedback on your call...

**Tim Zimmerlin (to Everyone)**: 2:21 PM: Typo, folks…stealing my thunder. Darn spell checker!

**Frank Farance (to Everyone)**: 2:21 PM: I am willing to contribute two points of view:(1) computation, its orchestration, and computation parallelism, and (2) data, data storage, and data

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:22 PM: Yes, but it's a clear echo....

**David Boyd (to Everyone)**: 2:23 PM: I just posted the diagrams and conventions to the bigdataarch@nist.gov reflector

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:23 PM: Ok....thanks...

**Tim Zimmerlin (to Everyone)**: 2:23 PM: Thesis: All big data systems are Lambda architectures…or will soon be replaced with a Lambda implementation. E.g., Amazon AWS Lambda for an easy example.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:24 PM: How can conformance be both mandatory and optional at the same time.....hwo, how, how ?

**Tim Zimmerlin (to Everyone)**: 2:25 PM: Pw, if you want insurance, it is manditory.

**Mark Underwood (to Everyone)**: 2:26 PM: Tim, def need a lambda arch cite somewhere to remain relevant

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:26 PM: If you want to pay for it ...it's optional....gotcha...

**Tim Zimmerlin (to Everyone)**: 2:27 PM: Mark, just google Lambda architecture, check on Amazon AWS Lambda service, read articles and books.

**Mark Underwood (to Everyone)**: 2:27 PM: Tim, yeah, I'm aware, but we haven't baked into our document cakes

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:28 PM: Dear Sir: Once more the entire Compliance Partners, LLC R&D Team would like to participate on the Use Case Effort......

**Tim Zimmerlin (to Everyone)**: 2:29 PM: Mark, this is a good enough introductory book: "Big Data" Nathan Marz and James Warren, Manning. The authors have loads of experience.

**Tim Zimmerlin (to Everyone)**: 2:29 PM: Mark, I have scheduled Lambda for version 3…after governenance, provenance, and curation in version 2.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:34 PM: That's a nice idea.....just clean up Carey's mutterings.....he tends to get carried away with his own dribble......thanks Pw

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:35 PM: The above is a joke....as he has no pride....

**Frank Farance (to Everyone)**: 2:35 PM: Great conversation everyone!

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:35 PM: Good meeting sir.....and Tim still sounds like a Frog.....

**Tim Zimmerlin (to Everyone)**: 2:35 PM: Cyber physical social big data systems.

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:36 PM: Social Media.....yes....

**Pw Carey, Compliance Partners, LLC (to Everyone)**: 2:36 PM: IOT & CPS.....ok.....thanks....

**alicia zuniga alvarado (to Everyone)**: 2:37 PM: thanksm

**alicia zuniga alvarado (to Everyone)**: 2:38 PM: Thanks again, everyone good meeting