

Advisory Board / Business and  
Leadership Council

Program Name  
Networking/Cybersecurity BLC

Date  
November 15, 2024

NETWORKING/ CYBER SECURITY BLC KSA Meeting  
Business and Leadership Council Meeting Minutes

CHAIRPERSON: Karen Boatman		
MEETING DATE: Correct-November 15, 2024	MEETING TIME: 3:30 PM	MEETING LOCATION: IO, ROOM 114
RECORDER: Collette DiAngi		PREVIOUS MEETING: September 27, 2024

**MEMBERS PRESENT: (P = Present) Add nonmembers to bottom of table with heading "Others Present."**

P	Name and Title (List all)	Business Affiliation	Email	Best contact number
P	Renea Bosher	Pantex	<a href="mailto:Renea.Dosher@xu12.doe.gov">Renea.Dosher@xu12.doe.gov</a>	
P	Tiffany LaFleur	Pantex	<a href="mailto:Flafleur21@actx.edu">Flafleur21@actx.edu</a>	806-679-2375
P	Ashley Golden	BSA	<a href="mailto:Ashley.golden@bsahs.org">Ashley.golden@bsahs.org</a>	806-212-8552
P	David Payne	Valero	<a href="mailto:David.payne2@valero.com">David.payne2@valero.com</a>	512-201-0242
P	Jeff Stoughton, Instructor	AMTech	<a href="mailto:Jeff.stoughton@amaisd.org">Jeff.stoughton@amaisd.org</a>	806-231-7008
P	Steve Sellers	Pantex	<a href="mailto:James.sellars@pantex.doe.gov">James.sellars@pantex.doe.gov</a>	806-282-3162
P	Jandi Tyson	Region 16	<a href="mailto:Jandi.tyson@esc16.net">Jandi.tyson@esc16.net</a>	
P	David Neeley, Card Sys Mgr	Valero Payment Services	<a href="mailto:David.neeley@valero.com">David.neeley@valero.com</a>	806-324-4516
P	Trever Wagner, Instructor	AMTech	<a href="mailto:Trever.wagner@amisd.org">Trever.wagner@amisd.org</a>	806-881-9733
P	Shiloh Inthirath, IT Desktop Mg	BSA	<a href="mailto:Shiloh.inthirath@bsahs.org">Shiloh.inthirath@bsahs.org</a>	806-930-9870
P	Zack Newbill, Sr. Software Dev.	AQHA	<a href="mailto:Znewbill41@gmail.com">Znewbill41@gmail.com</a>	Zack Newbill, Sr. Software Dev.
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P	Karen Boatman, CIS Coordinator	Amarillo College	<a href="mailto:keboatman@actx.edu">keboatman@actx.edu</a>	806-371-5930
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P	Lynn Kenney, CIS Instructor	Amarillo College	<a href="mailto:L0504159@actx.edu">L0504159@actx.edu</a>	806-371-3249
P	Edie Carter Dean STEM Department	Amarillo College	<a href="mailto:elcarter@actx.edu">elcarter@actx.edu</a>	806-371-5335
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P	Timothy Vo, CIS Instructor	Amarillo College	<a href="mailto:Tvo212@actx.edu">Tvo212@actx.edu</a>	806-371-5217
P	Ryan Francis, Coordinator	Amarillo College	<a href="mailto:rfrancis@actx.edu">rfrancis@actx.edu</a>	806-335-4229
P	Collette DiAngi, Administrative Specialist	Amarillo College	<a href="mailto:cvgiangi@actx.edu">cvgiangi@actx.edu</a>	806-371-5269

Minutes	
Key Discussion Points	Discussion
	N/A
Continuing Business:	N/A
Welcome:	Christopher George opened the meeting at 3:05 by having the industrial professionals introduce themselves and the College faculty and staff. He explains the purpose of the meeting: to gather industry insights to update the curriculum and ensure it aligns with current industry needs and focus on evaluating the relevance of various skills, knowledge, and abilities (KSAs) for entry-level positions
New Business: <i>*Please note: When viewed in minutes as "Other note," these are the notes recorded by Christopher George during the meeting.</i>	<p>Ryan Francis, The Perkins Activities Coordinator, explained the methodology of the voting platform and the threshold for KSA discussion. He explained that this is an aggregated score of all the committee member scores, and just kind of an arbitrary threshold of 2.6 (Delane McUne pointed out there was a lower threshold from 2 to 2.6 was not added in the items of discussion) so if the average fell below a certain that threshold, that means, that is a point that we really want to have some discussion and better understand what that meant to you, and better understand if maybe that's something that needs to be removed from the curriculum, or if maybe the question wasn't understood entirely. 58 items need to be discussed. He noted that he was an unbiased participant and facilitator. Ryan defined KSA Knowledge—knowledge as what an employee needs to know, maybe facts that are available to them, principles, and information that may be required for the job. Skill—is what an employee needs to be able to do, demonstrate proficiency, and learn tasks. When looking at skills you as an employer should ask yourself, this is something that an entry-level position can do in the workplace and accomplish, sometimes referred to as what is done in a unit of time at work. Abilities are natural or acquired attributes that enable job performance, and physical or mental capacities to perform work functions, like customer service.</p> <p>Ryan Francis proceeded to facilitate the voting on the KSA's. The begins with skill #5.</p>

	<ul style="list-style-type: none"><li>• #5 Skill in response for on-premises or cloud service models. The average score was 2.43</li></ul> <p>Tiffany Lafleur's main perspective on this is that she would never place an entry-level employee in an incident response position. However, she wants them to understand the overall incident response process, including the preparation and identification phases, and the high-level steps involved. She will not require them to possess those skills in practical scenarios. Therefore, this understanding serves more as a touchpoint rather than a specific objective in the course. Other note taken by Chris George: <i>TF not going to take entry to incident response, prepare identify but not skill maybe a touch point not objective, no increased need for entry-level.</i></p> <ul style="list-style-type: none"><li>• #16 Skill in using network management tools to analyze network traffic patterns (e.g., simple network management protocol). The average score was 2.57</li></ul> <p>Tiffany Lafleur commented that most of their entry-level roles utilize SMP, which stands for Simple Network Management Protocol. This protocol is integrated into graphical user interfaces that monitor network status, including up and down conditions. However, this is the only area where I see entry-level positions focused on monitoring any aspect of the network. Other note taken: BSA nice to have but not required, TF entry level snmp monitor up and down status. BSA Would fall under knowledge.</p> <ul style="list-style-type: none"><li>• #17 Skill in protecting a network against malware (e.g., NIPS, anti-malware, restrict/prevent external devices, spam filters). The average score was 2.33</li></ul> <p>Tiffany commented it would fall under knowledge &amp; Valero commented it is beyond entry level. Other Note: TF Knowledge , Valero beyond Entry Level. Useful to know how firewall works, how ACL rules work, Function of but not implement. BSA have knowledge for troubleshooting. DP windows firewalls, windows server, infrastructure is on the job. How to read MAN pages.</p> <p>#18 Skill in basic configuring and utilizing network protection components (e.g., Firewalls VPNs, network, intrusion detection systems). Same Note: TF Knowledge , Valero beyond Entry Level. Useful to know how firewall works, how ACL rules work, Function of but not implement. BSA have knowledge for troubleshooting. DP windows firewalls, windows server, infrastructure is on the job. How to read MAN pages.</p> <ul style="list-style-type: none"><li>• #20 Skill in applying various subnet techniques (e.g., CIDR). The average score was 2.00.</li></ul> <p>TF –other note: need to be able to understand CIDR and subnetting, more of a knowledge but not to configure.</p> <ul style="list-style-type: none"><li>• #21 Skill in configuring and utilizing computer protection components (e.g., hardware firewalls, servers, routers, as appropriate). The average score was 2.50.</li></ul> <p>Tiffany commented they need to be able to understand CIDR and subnetting, more of a knowledge but not to configure.</p> <ul style="list-style-type: none"><li>• #22 Skill in configuring and basic optimizing software. The average score was 2.43.</li></ul>
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David Payne –other note: commented that it doesn't have configuration or intimate knowledge. Senior employees will configure so knowledge. TF entry level does tech support and imaging. BSA entry-level learning it but will gain skills on the job, want to empower employees to move on but not needed in the position available.

TF's comment—a broader understanding, Good to Have. Need them to understand why.

- #24 Skill in configuring and utilizing computer protection components (e.g., hardware firewalls, servers, routers, as appropriate). The average score was 2.25.

Tiffany discussed with *Skill set# 24*, that topic is more relevant from a teaching perspective rather than a purely technological one. When they have students configure virtual machines, they learn a great deal in the process. They gain hands-on experience with internal networking and various components, which deepens their understanding. By taking the time to set up a virtual machine, they become more familiar with concepts like memory and RAM. She believes this is a valuable skill for them to acquire, as it lays a solid foundation in IT overall. Other note:

David Payne says he doesn't have to have configure it or intimate knowledge. Senior employees will configure so knowledge. TF entry level does tech support and imaging. BSA entry level learning it but will gain skill on the job, want to empower employees to move on but not needed in position available. TF broader understanding is good to have. They need to them to understand why.

- #32 Skill in monitoring and optimizing basic system/server/cloud performance. The average score was 2.57.

Tiffany marked this one as high, one of our primary entry level jobs. The entire job is doing this. It's monitoring Up, Down status. It's monitoring utilization rates, things like that in our noxoc. So for us, this is an important skill.

On other note: Pantex's primary entry-level job is up/down NOC/SOC entry-level needs this skill to be able to monitor.

- #33 Skill in recovering failed systems/servers (e.g., recovery software, failover clusters, replication, etc.). The average score was 2.14.

Other note: BSA representative stated it's not something entry-level needs to do. TF is more of a knowledge than a skill.

Ryan stated that #33 is more of a knowledge than a skill. 35 is still applying software-defined network concepts scored pretty low to non-applicable.

- #35 Skill in applying Software Defined Networking concepts. The average score is 2.20.

From the other notes: BSA representative, it is not entry-level, if they rate things higher, they expect upward mobility of that skill in their organization. TF government is not there yet? Valero says it's not relevant to entry-level jobs for their team here.

- #37 Skill in identifying and distinguishing Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) models. The average score is 2.00.

BSA more knowledge than skill.

- #39 Skill in preparing written reports. The average score is 2.57.

Jandi Tyson from Region 16 - expects tech to write reports about their work., BSA - documentation tasks or sharing to the knowledge base, RCAs, TF - Pantex help desk needs to be able to document and Valero - well-written tickets important to send to other teams.

- #40 Skill in preparing presentations. The average score is 2.17.

Other note: Written reports more important than presentations.

- #43 Skill in demonstrating how to customize virtual networks with IP Address Range, subnets, routing tables and gateways. The average score is 2.60

Tiffany states that this skill is similar to others in that it's not necessarily a skill I would recommend for a complete beginner. However; she believes it would establish a solid foundation for everything else. You can't be an effective cybersecurity analyst without understanding how a network operates. Therefore, grasping this concept is crucial as a foundational skill. The same applies to help desk roles; having a sufficient understanding of network functionality enables you to identify where to escalate issues when they arise.

Jandi states that their technicians and help desk staff are responsible for this work. They travel to different locations and receive remote support from our associates. They have successfully deployed services such as Google applications, cloud firewalls, Office 365, and backups. However, they must understand the details well enough to communicate effectively with those providing remote support.

Other note: Valero mostly upper-level net/sec. TF Pantex feels good skill to know to grow and troubleshoot.

- #46 Skill in deploying cloud storage technologies with the assistance of a senior technician. The average score is 2.00.

Other note: Jandi Tyson from R16 tech help desk travel and do remote support and need to deploy google, office 365, backups, cloud firewall, need to be able to talk to remote techs. BSA trying to migrate in the future. Pantex GOV cloud is different set of rules than traditional cloud.

- #52 Skill in assessing or monitoring systems for cyberattacks. The average score is 2.00.

Other note:

Pantex, sometimes with NOC/SOC. Need Help Desk to understand what is suspicious. Jandi from R16 have associates and specialists that are IS-specific. Specialist and Cyber Admin does incident response. BSA said that valuable skills and boots-on-the-ground incident response, assist investigation team with endpoints, even if they don't do it in their everyday job. TF every person in IT needs to be a security-minded person.

- #54 Skill in leveraging cloud/hybrid managed services to enable greater flexibility and resilience in a secure infrastructure. The average score is 2.25 (NO COMMENTS MADE)
- #55 Skill in reading, interpreting, writing, modifying, and executing simple scripts (e.g., Python, Powershell) on Windows and UNIX systems (e.g., those that perform tasks such as: parsing large data files, automating manual tasks, and fetching/processing remote data). The average score is 2.14.

Other notes: BSA- great but not required. Would like someone but not going to do it everyday. Tiffany said that it is one of the skills that put you above the other candidates, also something the workforce can teach. Would like to see on candidate resumes.

- #57 Skill in applying security concepts in the automation of resource provisioning. The average score is 2.57.

Other notes: BSA uses automation for provisioning and automation pools. Clarification for security entry level help desk tech but also included entry level IAM which is available as a larger company.

- #59 Skill in using Azure. The average score is 2.26

Other note: BSA, R16, Pantex use it. Entry level would be taught on the job processes, knowledge is great but not required. DP knowledge is more important than vendor specific.

- #65 Skill in operating the organization's LAN/WAN pathways. The average score is 2.14.

Other note: BSA knowledge is great.

- #68 Skill in monitoring traffic flows across the network. The average score is 2.29.

Other note: Pantex NOC/SOC uses at entry level.

- #80 Skill in crafting effective prompts for AI tools to generate accurate and relevant outputs. The average score is 2.33.

Other note: Pantex/Valero is hard no on AI use. Jandi from R16 under the Texas governor's rules before being allowed in the school district. BSA buying AI from other people in the background, lots of AI coming into health care.

Ryan transitioned to the next section of the KSA, which was focused on "Knowledge." He explained what this entails, including an understanding of cloud-based technologies and concepts, as well as examples and file signatures. He posed several questions: Is this what the future holds? Do you foresee this becoming relevant in the next three to six years? How does this apply to your businesses?

	<p>K3 --Knowledge of business issues regarding software licensing. The average score is 2.43 Other note: Valero thinks It's important, and has been dinged before on licensing. BSA how to pull licensing or look for licensing, be able to know but don't have the ability to go rogue. Not a hard skill needed. Valero has a weird Cobol system. R16 thinks it's a skill because school districts are heavily licensed. all agreeing that small businesses might be more necessary.</p> <ul style="list-style-type: none"><li>• K16--Knowledge of Cloud-based technologies and concepts (e.g. IAAS, SAAS, PAAS, file/sync/share). The total core is 2.29.</li></ul> <p>Other note: BSA says they are rating it by most important to least important in this list, and sees this coming in the future. AmTech representative noted we agreed this is a knowledge more than a skill.</p> <ul style="list-style-type: none"><li>• K33—Knowledge of VOIP telecommunication systems, both cloud based and on premise. The total score is 2.29.</li></ul> <p>Valero stated that only general knowledge is needed.</p> <ul style="list-style-type: none"><li>• K39—Knowledge of case management tools, processes and procedures. Total score is 2.46 NO COMMENTS made.</li><li>• K40—Knowledge of crisis management processes and procedures. Total score is 2.29.</li></ul> <p>Other note: Tiffany said that good knowledge to have from a liability prospective so people don't panic.</p> <ul style="list-style-type: none"><li>• K48—Knowledge of Virtual Private Network (VPN) security. Total score is 2.14.</li></ul> <p>Other note: TF, protocols, and some ways to configure it. Thinks it is an important skillset to be able to remote vpn but not configure both endpoints.</p> <ul style="list-style-type: none"><li>• K51—Knowledge of the range of existing networks (e.g., PBX, LANs, WANs, WIFI, SCADA). Total score is 2.57. NO COMMENTS made.</li><li>• K52—Knowledge of the common attack vectors on the network layer. Total score is 2.43. NO COMMENTS made.</li><li>• K53—Knowledge of network and systems management principles, models, methods (e.g., end-to-end systems performance monitoring), and tools (NOC and SOC). Total score is 2.57</li></ul> <p>Ryan posed the question is it not entry level? is that mostly what you all thought when you saw this? Or is that kind of way up there just knowledge, anything specific in the knowledge of this, or just fundamental understanding of what it is, fundamental understanding great K 56 knowledge of jamming and interference patterns, so that they can be recognized as a challenge for the network itself, applied to wireless networks. Other note: TF—Pantex needs the NOC/SOC, others not entry-level.</p> <ul style="list-style-type: none"><li>• K56—Knowledge of jamming and interference patterns so they can be recognized as a challenge for the network itself applied to wireless networks. Total score is 2.43</li></ul> <p>Other note: TF—Just Knowledge, Fundamental Understanding. Maybe not in Associate degree, very niche skill. BSA representative—touch point but not required.</p> <ul style="list-style-type: none"><li>• K60—Knowledge of virtualization technologies and virtual machine development and maintenance. Total score is 2.14. Other note: Same as K56 (same as above).</li><li>• K64—Knowledge of principles and methods for integrating system components including network storage and servers. Total score is 2.57. Other note: TF Pantex, more of foundational need the vocabulary but not do it.</li></ul>
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- K65—Knowledge of script automation and application programming interfaces (e.g. Python, PowerShell). Total score is 2.43.

Ryan voice that there should definitely be more information noted on this point (K65).

Tiffany thinks it's useful, but they are a primarily a Windows environment. In those entry level jobs, they're going to be primarily in the PowerShell. They're going to get a very different answer next week when you talk to the software dev people. She prefers PowerShell because of the functionality aspect.

Other note: TF Pantex would love to have more candidates that know about PowerShell for NOC/SOC. DevOps team may say python more important.

- K65—Knowledge of network backup and recovery procedures. Total score is 2.43.

Ryan noted Who is actually is looking for certifications, knowledge of Internet of Things. He stated that devices and connectivity scored actually kind of high, even though it was below the threshold.

Other note: TF good knowledge for certification testing.

- K66—Knowledge of network backup and recovery procedures. Total score is 2.57.

Other note: TF good knowledge for certification testing.

- K70—Knowledge of IoT end devices and connectivity. Total score is 2.57.

Other note: TF thinks future knowledge from cybersecurity perspective. BSA medical side becoming more relevant, everything is networked, very cloud connected, adding more to their environments. Valero refineries may have more IoT - specialized for whoever is working with it.

- K73—Knowledge of the differences or similarities between Private, Public, and Hybrid Cloud Implementations. Total score is 2.00.

BSA representative--I think some of these for us is because with our entry level position, it's not, it's more of an we don't have a lot of entry level positions in network and cyber security, other than provisioning or I am. So a lot of what our entry level is is they have a broad.

Other note: BSA not entry level position, just provisioning and IAM, need a broad knowledge but not deep. Helpful for them to decide where they are going in IT.

- K75—Knowledge of the concept of Service Level Agreement, why they are used, when they are used, and its application within Cloud implementations. Total score is 2.57.

Other note: TF SLA important to understand, Base understanding.

BSA representative there are SLAs at every level. Entry Level need to know internal but not deal with Vendor SLA.

- K76—Knowledge of who owns or should own the data/information in a Cloud implementation. Total score is 2.00.

Other note: TF like challenging from the logic perspective. Who is responsible for it if a PII breach. BSA understand that it exists.

- K77—Knowledge of the key Management/Operational/Security/Privacy challenges potentially faced when considering or implementing a Cloud capability. Total score is 2.33.

Other note: Good to know.

- K80—Knowledge of cloud network storage including cloud object -based storage and local system storage. Total score is 2.00.

David relayed that helps them understand why some business decisions get made, okay, why things are designed the way they are.

Other note: Knowledge good to know.

- K 86—Knowledge of High Availability factors (Fault-tolerance, recoverability, and scalability). Total score is 2.43

Other note: Good to know. Valero helps students understand why business decisions were made and why they are designed the way they are.

- K88—Knowledge of Auto Scaling and Load Balancing. Total score is 2.29

Other note: TF- Knowledge/understanding is sufficient.

- K97—Knowledge of infrastructure data storage capabilities and storage clusters. Total score is 2.43.

Other note: BSA representative—Knowledge is an advantage. Nice to have.

- K98—Knowledge of Web Services technologies. Total score is 2.14

Other note: BSA representative said it is good knowledge for troubleshooting.

- K99—Knowledge of the different Cloud computing database types (RDS). Total score is 2.00. NO COMMENT made.
- K106—Knowledge of Infrastructure Recovery Methods during a cyber-attack and post attack due diligence. Total score is 2.57.

Other note: BSA representative--Knowledge, not going to be doing the decision making.

- K107—Knowledge of identifying Single Points of Failure. How to recognize critical dependencies in your network and what to do to mitigate. Total score is 2.57.

Other note: Pantex likes this to make student think critically.

- K109--Knowledge of log consolidation tools. Total score is 2.14.

Other note: BSA representative thinks it should be a Skill, look at event logs/troubleshoot/look at different errors. Would rate as a 4 on a Skill.

- Ryan moved to item C-3 CompTIA Security+. Total score 2.57
- C7 CompTIA Linux+. Total score 2.14
- C8Cisco CCNA+. Total Score 2.29
- Azure Security, Compliance, and Identity Fundamentals SC-900. Total score 2.20

Other note recorded for all C-components: High Schools in the State of Texas must require to pass certification. BSA representative thinks Net+ is easier than A+. Pantex representative needs Security+. BSA representative thinks Net+ is more

	<p>valuable because of more ports configuring, see more Net+, CCNA is not entry level. CCNA will be looked at over Network+, SC-900 not entry level, would be higher. BSA has 11 entry level employees and would like the Microsoft certification.</p> <p>Other notes include:</p> <ul style="list-style-type: none"><li>• How can we teach students to be hireable? Abilities have more weight than most skills and knowledge.</li><li>• Infosec and Cyber is just not an entry-level job.</li><li>• Tinker and using virtual labs to capture the flags.</li></ul>
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Curriculum Decisions:	
Other:	
Adjourn:	Karen Boatman at 4:39 pm.

Committee Chairperson: Karen E. Boatman <i>Karen Boatman</i>	MEETING DATE: 11/15/2024 12/11/2024	NEXT MEETING: 11/22/24
Recorder's Signature: Collette DiAngi <i>Collette V. DiAngi</i>	12/11/2024	
DEPARTMENTAL CHAIRPERSON SIGNATURE: <i>Adrine Harrell-Carter</i>	DATE: 12/11/2024	
DIVISION DEAN'S SIGNATURE <i>Edie Carter</i>	DATE: 12/11/2024	

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