

National BILT Meeting Minutes

“Infrastructure and Cloud” Job Skills Vote and Discussion

MEETING DATE: Tuesday, November 4, 2025 Tuesday, November 18, 2025	MEETING TIME: 11:30am-1:00pm Eastern 11:30am-12:30pm Eastern	MEETING PLACE: Zoom
RECORDER: Mark Dempsey	RECORDING: Available upon request	PREVIOUS MEETING: Industry trends meeting – August 19, 2025

MEMBERS PRESENT

BILT:		
Brian Cunningham, J Strategies	Harvendra Singh	Srinivas Sandiri
Dan Tuuri, TrueNorth Companies	Karthigayan Devan	Stacy Brandenburg, Hye Tech Network
Durga Krishnamoorthy, Cognizant Technology	Lee Rosenfeld, McGraw-Hill	Vincente D’Ingianni, Binary Systems
Harsh Verma, Glocol Networks	Mark Richter	
EDUCATORS in Meeting #1: Calhoun College, Central Georgia Technical College, Columbus State CC, Florida State College, Lindsey Wilson Univ, Lone Star College, Lower Columbia College, Luzerne County CC, Northern Virginia CC, Northwest Arkansas CC		
NITIC STAFF: Ann Beheler, Mark Dempsey, Christina Titus, Larry McWherter (NITIC principal investigator), Alie Hernandez, Stephanie Schuler, Deb Hecht, Diane Meza, Andie Bonkowske, Grayson McKeown		

MEETING #1 – Tuesday, November 4	
Agenda items	Discussion
NITIC and BILT overview	<p>Ann provided an overview of the NITIC grant, then explained that the goal of today’s meeting is to prioritize job skills for entry-level infrastructure technicians in the next 12-36 months. She welcomed the BILT members and told them their anonymized feedback will be widely disseminated to educators nationwide. She also noted educators on the Zoom call are invited to primarily listen actively.</p> <p>Ann provided an overview of the BILT (Business and Industry Leadership Teams). BILTs are business advisory councils that put employers in a co-leadership role. BILTs have two goals – aligning curriculum to workforce needs and building and deepening the relationship between educators and employers. BILTs host two kinds of meetings – cross-disciplinary “future trends” meetings and single-discipline job skills vote meetings like the one we’re having today. Ann noted the discussion after today’s vote is just as important as the vote itself.</p> <p>Ann explained the 1-4 voting scale. Each job skill item will receive its own individual vote.</p> <ul style="list-style-type: none"> * “4” means absolutely must be in the curriculum * “3” means should be in curriculum * “2” means it’s a “nice to have” * “1” essentially means delete <p>Mark pointed out that “knowledge” items refer to an awareness. Knowing about something does not mean you know how to do it. “Skill” items refer to practical know-how.</p> <p>For the first time, NITIC offered a separate voting link for educators to conduct their own prioritization.</p>

	<p>Using a QR code (and URL in the chatbox), the SMEs voted electronically.</p> <p>Anything scoring 2.6 or less will be discussed because, typically, items with scores that low are left out of the curriculum.</p>
Knowledge items	<p><u>K13 - Knowledge of server administration and systems engineering theories, concepts, and methods, 2.50 average</u></p> <p>Two employers noted that students need to have knowledge of this. Another employer who voted this K13 explained that while it's good to know this, much of this will be handled in the cloud. Even so, he admitted that if you're dealing with VMs you would still be dealing with OSI-level items. Ann noted that we're in an "in-between stage" still where most infrastructure will have cloud involved. One employer said "cloud" is a pretty broad term: "SaaS is cloud. AWS, Azure, GCP, OCI, these are cloud infrastructures that are widely adopted and heavily used, and make up a significant amount of the resources that these engineers that are coming out of school may be seeing." His answers were all motivated by that sort of outlook. He agreed that networking skills are desirable, he wondered if cloud-related technologies and emerging trends like LLMs might be more important. He recognized that you can only put so much into a curriculum. Another employer pointed out that much of administrator concepts come from the vendors; it's hard for educators to keep up with the ongoing vendor updates. He liked the idea of teaching overall knowledge of the topic. Because there was BILT concern about "engineering theories" being too high level, one employer suggested removing that phrase from the K.</p> <p>ACTION: consider rewording K13 to "Knowledge of server administration."</p> <p><u>K15 - Knowledge of concepts, terminology, and operations of a wide range of baseband and broadband communications transmission media and protocols, 2.42 average</u></p> <p>One employer noted that the cloud is "just someone else's data center" so he needs people to understand how the cloud works and how it's built, not just the GUI. Another employer liked it but found it to be a little too broadly worded. Students need to understand the 30,000-foot level first, then drill down into the details. Another employer didn't like the examples of baseband and broadband. He also worried that the examples are too task-oriented versus forward thinking, but others liked the notion that students are getting "into the weeds" with very specific skills and knowledge. Another employer who scored this K low noted that in 2 years, some of this may be outdated. He thought other elements on this list were more important. Ann noted that it'll be up to faculty to decide how best to get everything into the curriculum.</p> <p>ACTION: consider keeping K15.</p> <p><u>K23 - Knowledge of jamming and interference patterns so they can be recognized as a challenge for the network itself applied to wireless networks, 2.08 average</u></p> <p>One employer responded that understanding interference is useful, but "wireless jamming" is too advanced. An entry-level worker wouldn't need to know that. Another employer thought students still need knowledge of this. Another employer agreed because interference patterns are so common but admitted this might be better suited as a high-level awareness.</p> <p>ACTION: consider keeping K23, but focus on higher-level knowledge and concepts.</p> <p><u>K33 - Knowledge of principles and methods for integrating system components including network storage and servers, 2.50 average</u></p>

One employer stated that students need to understand this because it helps them understand how the puzzle fits together. Another employer noted that students need to know how the cloud is built. Another employer didn't think this was an entry-level K.

ACTION: consider keeping K33.

K35 - Knowledge of network backup and recovery procedures, 2.42 average

One employer noted that the cloud doesn't back itself up. Another recalled a "painful" experience spending weeks trying to cover something that wasn't properly backed up. One employer voted this low because he sees it as "heavily automated." He agrees it's important, but wouldn't suggest spending a lot of time on it exploring different backup and recovery procedures. Another employer would not expect a new hire to know much about it – they'd lean on other teams. He knows there's not time to focus on every K in detail. For this, he would expect a new hire to follow the existing procedures.

ACTION: consider keeping K35, but focus on higher-level knowledge and concepts.

K40 - Knowledge of IoT end devices and connectivity, 2.58 average

One employer does want students to have knowledge of this IoT devices need to be built properly and secured properly. He predicts a lot of this will soon be automated. We won't build IoT on the edge without automation. Students "need to know how that automation plays into that, and what the security is, and how the security gets defined by the InfoSec people." Another employer noted that when IoT devices stop working, students need to understand why. Another employer agreed that knowledge of IoT connectivity is "going to be paramount in today's infrastructure and tomorrow's infrastructure."

From the chat box: "In my environment, and clients I work with, we see minimal OT/IoT -- much of this can be managed through vendor risk management or segmentation for specific use case."

ACTION: consider keeping K40, but focus on higher-level knowledge and concepts.

K42 - Knowledge of Continuous Quality Improvement Principles (of particular value: Lean and Agile), 2.58 average

One employer noted it's good to know this, but the value depends on whether "are they developers that are deploying containers inside of Kubernetes or serverless architecture, or are they just working with these?" K42 would make more sense for a developer. Another employer noted that in two years, most graduates will be in the development space because of IAC (Infrastructure as Code). Then again, he's not sure how valuable these principles might be beyond just a general awareness. Another employer disagreed: his infrastructure team runs a daily scrum. To him, the important things are learning to work well with a team and following good development habits. Another employer noted that Kanban models should also be considered, which prompted another employer to point out that these are all different ways to prioritize tasks.

ACTION: consider adding Kanban to the list of examples in K42.

K43 - Knowledge of how to identify organizational goals that align with architecture and how do you identify your value to the organization, 2.42 average

One employer who rated this low thinks K43 leans to higher-level enterprise and solution architecture rather than entry-level hires. This seems more like a senior role. Students should

be able to “read diagrams and understand how the data is flowing between different systems and what is the purpose of the whole architecture” but this is all a high level of understanding only. Two employers joked about teaching architects how to draw understandable diagrams. Maybe students should learn how to use diagram tools to develop basic data flows.

ACTION: consider keeping K43, but focus on higher-level knowledge and concepts.

K48 - Awareness of the pros or cons behind using Frameworks, 2.58 average

The BILT wasn’t sure how to define “frameworks.” This one seems a little ambiguous. One employer voted it low because “too many entry-level people rely on large libraries or other things that they need to import into the system” which can make the software larger and harder to manage. Another employer noted that frameworks are important if you must meet them for auditing purposes. Another wondered if students would benefit from a SWOT analysis of different frameworks. Another agreed that frameworks as coding tools may not be important, but frameworks as a policy environment like FedRAMP should be taught. Another employer noted that he agrees that students need exposure to frameworks to understand the importance of why that structure matters, but he doesn’t need them to know how to interpret and decide what framework should be adopted.

ACTION: consider keeping K48.

K54 - Knowledge of the different organizational roles needed as one plans for Cloud implementation or manages an existing Cloud capability, 2.45 average

One employer noted this would probably be developed as the new hire pursued his/her career path. Another employer stated that knowing “different organizational roles” would be important.

From the chat box: “Knowing your audience and how to respond. The higher the position the less your words should be and bullet points are key.”

ACTION: consider keeping K54, but focus on higher-level knowledge and concepts.

K73 - Knowledge of making recommendations for migration of a physical network to a cloud-based architecture, 2.33 average

One employer who voted K73 low said “migration” was the key word. He’s seen migration that lasts a year, so he’s not sure what this one is describing. Another agreed that this is something that will come from experience. Making recommendations is not entry-level. Another employer noted that businesses need to be told “once you get it into the cloud, you can’t afford to bring it back.” One employer suggested K73 should be “understanding strategies and best practices for migrating” rather than “making recommendations.” The BILT liked this idea.

ACTION: consider rewording K73 to “Knowledge of understanding strategies and best practices for migrating a physical network to a cloud-based architecture.”

K77 - Knowledge of implementing auto scaling and load balancing, 2.58 average

One employer liked keeping this one for now as general knowledge, even though IAC will probably take care of auto-scaling and load balancing in the future. The BILT did not object.

	ACTION: consider keeping K77.
Skills items	<p><u>S2 – Skill in establishing a routing schema, 2.50 average</u> BILT agreed this should be kept, but one employer noted that this isn't about building network architecture, it's about knowing how routing works in that organization's environment. S2 is a skill in implementing what's already been created and engineered. One employer likened it to subnet routing. "From a LAN to a WAN, none of that has changed." Another employer was concerned with the word "establishing." He would have preferred it to be "skill in maintaining." The BILT seemed okay with this. Another employer noted that he's seeing new graduates that can't even set up their home routers. One employer replied that it's because the home routers are so easy – you push a button and you're done. You no longer have to know how it all works.</p> <p>ACTION: consider rewording S2 to "Skill in maintaining a routing schema."</p> <p><u>S3 – Skill in implementing, maintaining established network security practices, 2.42 average</u> One employer noted this has to be taught; otherwise you have "attack vectors through bad security practices." Another employer suggested that this is also linked to zero trust principles.</p> <p>ACTION: consider keeping S3.</p> <p><u>S4 – Skill in installing, configuring, and troubleshooting LAN and WAN components such as routers and switches, 2.58 average</u> Ann noted that even if it's all automated, someone has to install it. One employer wondered if some of these basic networking items are also being taught in other foundational networking classes. He stated that you're not really "configuring, installing, and troubleshooting" inside a cloud environment. Another employer again referenced IAC – students need to understand it so they can eventually code it. The BILT seems to want to keep it.</p> <p>From the chat box: "For S2, S3, S4, "implementing and maintaining" work for me on each. "configuring" makes me think more architecture/admin and building from scratch."</p> <p>ACTION: consider keeping S4.</p> <p><u>S12 – Skill in configuring and basic optimizing software, 2.50 average</u> Mark suggested removing the word "and" which may be causing confusion. One employer advocated keeping, suggesting students to be able to use the tool and know what it does and why you're installing it. That way, "when you're doing the configuration, you'll know what you're looking at." Another employer found S12 to be a little too generic.</p> <p>ACTION: consider rewording S12 to "Skill in configuring [no "and"] basic optimizing software."</p> <p><u>S14 - Skill in using virtual machines (e.g., Microsoft Hyper-V, VMWare vSphere, Citrix XenDesktop/Server, Amazon Elastic Compute Cloud, etc.), 2.75 average</u></p>

One employer asked to add KVM as one of the key hypervisors in the list of examples. It's a base hypervisor in many tools and products.

ACTION: consider adding KVM to the list of examples in S14.

S22 – Skill in identifying system/server performance, availability, capacity, or configuration problems, 2.50 average

The BILT wants to keep because students need skill in recovering a downed server. One employer likened this to being able to troubleshoot issues.

ACTION: consider keeping S22.

S27 – Skill in applying Software Defined Networking concepts, 2.58 average

One employer wondered if this wasn't the definition of IAC. The BILT wants to keep it.

ACTION: consider keeping S27.

S36 – Skill in producing Virtual Machines within a Cloud region, 2.58 average

One employer wasn't sure about this. Students need skill in creating an image, yes, but do they understand why it's being put in a region? Another employer noted that students need to know where VMs physically live, especially with recent AWS and Cloudflare outages. It's important to understand geographical redundancy. One employer wondered about merging S35 "Skill in producing Virtual Machines from a Cloud image" and S36, but Ann cautioned about linking two items with the word "and" because it creates confusion with the voting. Some like one part of the phrase but not the other.

ACTION: consider keeping S36.

S46 – Skill in using tools like Chef, Puppet, Ansible etc., 2.58 average

The BILT suggested that Ansible is the de facto choice. One employer suggested making it "automation tools." The BILT liked this idea.

ACTION: consider rewording S46 to "Skill in using automation tools" but keeping only Ansible as an example.

S47 – Skill in managing changes/updates for both internal and external customers when policies and procedures change, 2.58 average

One employer wondered if this should be simplified to "skill in change management." Another suggested this might be sort of a soft skill. One employer noted his entry-level hire will likely be the one closest to the user desk on a daily basis. Another agreed that students need to know how to talk to people. The BILT wants to keep it.

ACTION: consider keeping S47.

S50 – Skill in leveraging cloud/hybrid managed services to enable greater flexibility and resilience in a secure infrastructure, 2.50 average

The BILT seemed to think this isn't an entry-level skill. One employer explained: "An entry-level person coming in is not going to be making the decision to move from cloud or to hybrid. That's already going to be made. They're going to be coming in to help to assist with whatever business decision." New hires will help implement only.

	<p>ACTION: consider removing S50.</p> <p><u>S51 – Skill in reading, interpreting, writing, modifying, and executing simple scripts (e.g., Perl, VBScript) on Windows and UNIX systems, 2.50 average</u></p> <p>The BILT wants to keep this. One employer explained that his infrastructure team has to be able to code. All infrastructure is code now and this will only become more true in the future. Another employer wasn't sure about the Perl and VBScript examples. The BILT seemed to prefer Python and Bash as better examples. Another employer wondered about combining this with S46 and putting Ansible back into the list. One employer noted he's seen scripting outside of Ansible but agrees that sort of change would "get the point across."</p> <p>ACTION: consider removing the examples in S51 and combining with S46.</p> <p><u>S57 – Skill in Google Cloud, 2.58 average</u></p> <p>One employer noted that there has been a shift towards Google Cloud. His company secures all of the big cloud providers and called Google Cloud a "gigantic infrastructure." Another employer marked all of the cloud Skills (S55 Azure, S56 AWS, S57 Google Cloud) low because he's a believer in teaching functionality and fundamentals. Everything else is just a GUI. Another employer replied that there are key differences between the providers. He also pointed out that AWS is "pretty much the backbone of the internet."</p> <p>ACTION: consider keeping S57.</p> <p><u>S63 – Skill in operating different electronic communication systems and methods, 2.50 average</u></p> <p>One employer thought this skill was a little siloed. Would a cloud infrastructure developer or manager be implementing VoIP and monitoring something like WebEx? Another employer answered "yes" - those are exactly the types of things his company creates the infrastructure to support. Students need the skill to understand that these are the applications running on top. He also suggested that this include IoT devices. Another employer would prefer the word "maintaining" rather than "operating." The BILT liked this suggestion, even as another employer noted that in his experience, it's mostly highly leveled, skilled people who are using and implementing and maintaining those systems.</p> <p>ACTION: consider rewording S63 to "Skill in maintaining different electronic communication systems and methods" and including "IoT devices" in the list of examples.</p>
Conclusion	<p>The meeting ended before the work was completed.</p> <p>Ann asked the BILT if they'd be willing convene for a follow-up meeting to get through the rest of the Skills and then discuss "what's missing" items to include on the next vote for this job skills list. They agreed.</p>
MEETING #2 – Tuesday, November 18	
Agenda items	Discussion

Introduction	Ann thanks BILT members for convening again to finish up the work leftover from the November 4 meeting. She also apologized for not sending everyone material to review prior to the meeting – she had a problem with a Windows update that crashed her system.
Skills	<p><u>S67 – Skill in applying an organization's goals and objectives to maintain architecture, 2.50 average</u> One employer suggested that an entry-level worker is executing, not “maintaining.” Another employer noted that “goals and objectives” make him think this is more of a higher-level managerial skill.</p> <p>ACTION: consider removing S67.</p> <p><u>S68 – Skill in updating and/or maintaining standard operating procedures (SOPs), 2.33 average</u> One employer wasn’t sure if this is entry-level or not. He’s had experience with new hires working in the field on the infrastructure that are working with SOPs, though they may not always update them as they should. Ann suggested “skill in providing feedback to change SOPs for the appropriate decision maker.” Another employer agreed that it’s to know how to use and maintain an SOP, but not be the owner of it. Another employer said there’s a K for knowing about SOPs and then an S for the skill in providing meaningful feedback.</p> <p>ACTION: consider rewording S68 to “Skill in providing meaningful feedback to the appropriate decision-maker for using, maintaining, and changing SOPs.”</p> <p><u>S69 – Skill in applying cybersecurity and privacy principles to organizational requirements (relevant to confidentiality, integrity, availability, authentication, non-repudiation), 2.58 average</u> One employer noted this is important to keep. Someone at the entry-level who’s in IT needs to understand security principles and how those procedures and requirements apply to the organization. Ann wondered if this knowledge only, but the employer said there is some skill involved. Another employer agreed to keep it. The BILT did not object.</p> <p>ACTION: consider keeping S69.</p> <p><u>S70 – Skill in maintaining automated security control assessments, 2.42 average</u> One employer stated that, to him, the entry-level people are “the first line of defense.” There was a question about whether “maturity model” was included elsewhere on this list, but Mark checked and confirmed it is not. One employer found S70 to be rather broad and seems higher than entry-level. If S70 is about making sure the new hire is making sure the scanner's updating the new IP block, then yes this is an important skill. Another employer responded: to make sure that it's updating the IP block then you have to go in and look at the code and if it's not there, you put it in. That’s the “maintaining.” Ann asked if we need to change the wording. One employer said some tasks in S70 are routine, but other tasks like creating a CICD pipeline they won’t be expected to do. But new hires would need to know what a CICD pipeline looks like and how to keep it running.</p> <p>ACTION: consider keeping S70.</p> <p><u>S71 – Skill in analyzing and interpreting customer input for expressed and implied requirements, 2.33 average</u></p>

	<p>One employer does want new hires to have the skill to talk to customers effectively, but when it comes to “interpreting” he would want a senior person involved. Another employer countered that there is some interpreting required because you have to listen and analyze what the customer is saying. The issue is making sure that you understand what the customer really wants and needs. One employer wondered about rewording it to “skill in receiving and collecting feedback and requirements.” The BILT did not object.</p> <p>ACTION: consider rewording S71 to “Skill in receiving and collecting customer feedback and requirements.”</p> <p><u>S75 – Skill in using expert systems with a large language model, 2.58 average</u></p> <p>One employer wondered what sort of expert systems we’re talking about. Just about anyone today should be able to use an LLM. He noted that S74 (Skill around prompts) scored high, which is related. Ann wondered if it should be “skill in using an LLM.” The BILT seemed to like this idea, though one employer noted that in two years there will be a huge shift in the roles that AI plays. Another employer wondered why S75 was rated so low when S74 (Skill around prompts) scored 2.75 and S76 (Skill in verifying and interpreting LLM expert system output) scored 2.75.</p> <p>ACTION: consider rewording S75 to “Skill in using large language models.”</p>
Certifications	<p><u>Cert-1 – A+, 2.42 average</u></p> <p>Ann noted the popularity of A+ comes and goes with BILTs. The BILT discussed with A+ covers. Ann explained its foundational hardware skills with some software. It’s “just get started” content. One employer wondered about changing his vote to rate it higher – he’s concerned that the cloud certifications scored higher, which may be undervaluing hardware skills. Another employer explained he’s interviewed candidates with A+ certifications but couldn’t answer simple questions when asked. He’s worried some may get it just to put it on their resume. He wants higher level certifications. Another employer appreciated A+ in the way it teaches troubleshooting methodology and offers a broad overview of everything. But A+ “is not the golden ticket is used to be.” The BILT agreed. Ann noted that some of the A+ skills will be covered in other parts of this job skills list. Maybe the focus should be on the skills and not the cert. The BILT seemed to like this idea. One employer agreed – students will get A+-style hands-on skills pursuing the other certifications on the list. Another employer likes A+ because it can help entry-level workers get ready for jobs as data center technicians. He also suggested A+ be taught in high school.</p> <p>Another employer noted that security certificates are covered in A+, which he considered important. Mark pointed out that K21 (Knowledge of concepts of certificates, key management and usage) may cover that topic. The employer agreed as a good overall strategy, but “connecting it to hardware maintenance probably would be made as the broader conversation is around the strategy for authentication and verification.”</p> <p>From the chatbox: “The vast majority of cert v experience v degree so often comes down to preference and anecdotal. I’d love a deep peer reviewed study on perceptions. Certs do provide a ‘trusted framework’ and a ‘measurement’ but as employers, they are perceived as a moment in time measurement. We have other ways to test for this during hiring.”</p>

	<p>ACTION: consider keeping Cert-1.</p> <p>When an employer asked if this discussion is geared more to the cloud or to on-prem, Ann answered she is seeing technical programs die that only offer infrastructure. Programs need to cover cloud skills and topics to attract students. It may not be an “either or” situation.</p> <p>One employer stated he’d like to teach students “how to think” critically. If the learn that, then the certs can sit on top. “The certs are just something to get you through the resume process.” Training has gone far beyond learning from a textbook. Students need hands-on experience. One employer noted that one large company may soon remove exams from its training and instead have the student engage with an AI tool to provide an assessment.</p>
Removing items	<p>The meeting shifted to discussing what should be included at the next job skills vote. Christina pointed out that to make room for new items, some lower-scoring items should probably be removed from the current list, which is very long. The challenge is that the BILT didn’t approve the removal of many of the pink, low-scoring items.</p> <p>The BILT acknowledged the challenge of fitting so many knowledge and skills into a two-year program. Larry explained that there are ways to adjust small segments of a course’s content without getting additional approvals. He noted he’s never taught a course the same exact way twice. The complexity of making curriculum changes depends on the situation. How much are you changing? Are the changes still teaching the approved outcomes?</p> <p>One employer wondered about starting at a macro big picture level, diving not the micro level on specific skills and topics, then ending again at the macro with a capstone, and weaving critical thinking through all of the courses. He’s looking at ways to best prepare a student for the business world. Ann noted the challenge of so many classes being “canned.”</p> <p>Ann and Mark emailed the current list to the BILT members to refresh their memory of what was included on the list so they pick what to cut and also what to suggest for next time, but then NITIC pivoted. In the interests of time, rather than ask the BILT members to read through the list now, Ann invited them to email NITIC any comments they had on removing items from the existing list.</p>
What should be included next time	<p>Ann next asked the employer what items were missing from the list and should be included for the next job skills vote.</p> <p><u>Critical thinking</u>: One employer noted that he has to rely on manuals to know details, but he’s able to do this because he understands the basic concepts. Someone who knows how to think critically, someone who understands the foundations and what’s relevant – that person is more apt to pick up new technology quicker.</p> <p><u>Databricks certification</u>: Another employer who builds and redesigns cloud infrastructure that includes automation tools asked about students learning Databricks. He noted there is a Databricks GenAI Fundamentals Foundation certification. Databricks can help teach workflows that help businesses automate processes in Azure. Other employers had heard of Databricks but were not familiar with it.</p> <p>Introduction to Azure Databricks: https://share.google/6lxjeRuH7tRQN3RJ0</p>

	<p>Some discussion about the possibility of an <u>architecture certification</u>, like one that Azure offers. Ann and other employers didn't think there was room in a two-year program for architecture skills. Entry-level workers would not be doing that job. One employer noted architecture is more suited to those who have had hands-on, real world experience in the industry with hardware. One employer noted that this again goes to his point about the need for students to understand foundational skills like boot sequences and packet traffic. The employer who suggested architecture explained that he simply wondered if solution-level certifications would be helpful.</p> <p>One employer suggested finding ways to encourage students to go "above and beyond" what the class is requiring. What low-cost tools and skills can they learn outside of the classroom? Ann liked this idea because it goes back to the need for IT workers to be lifelong learners. Another employer asked about ways to recognize students who do this.</p> <p>Diane talked about the micro-credentialing that Maricopa offers as a way to give employers assurance of the knowledge and skills the students are learning. There's the class letter grade, but then separate is the credential and to get that, the student must demonstrate the skill. This solves the problem of students who pass the final – which may be theoretical only – but don't really have the hands-on skill. Ann noted the challenge of "clicker-size" labs that walk you through the steps without necessarily teaching students the skill. One employer said this is the goal – a job candidate sits down for an interview with the ability to prove practical skills.</p>
Conclusion	<p>Ann thanked the group and asked Mark to send everyone the final version of the list. She invited the BILT members to send comments via email if they had something they wanted to add.</p> <p>Outcomes from these BILT meetings (minutes, prioritization worksheets, and trends summaries) are available for free here: https://www.nitic.org/industry/national-bilt/bilt-overview/</p>
Next Meeting: Tuesday, February 10 (9:30am-10:30am Central/10:30am-11:30am Eastern) – IT industry trends	