



## BayICT Partnership Quarterly Report

Q4 2020

January 4, 2020

The first quarter for BayICT Partnership 2.0 was very productive and the BACCC Regional Director team appreciates your time and collaboration, so important to the ultimate outcome of student success. The purpose of the quarterly report is to provide an update of partnership activity and outcomes. This report may also meet career education advisory report requirements for CTE programs developing and/or updating cloud computing courses and programs. The appendix includes participants and outcomes from the December 4<sup>th</sup> Business & Industry Leadership Team meeting that reviewed and voted on cloud computing program learning outcomes.

### Q4 2020 Highlights

- BayICT.org, the BayICT portal launched in early October. The new site provides employers, workforce development partners, CBOs, faculty & administrators, and, most importantly, students with resources and information about Bay Area region ICT Digital Media programs and events. [Bookmark it!](#)
- The BayICT Partnership kicked off with its meeting on October 14<sup>th</sup> with 33 members in attendance representing business, industry, workforce development boards, community-based organizations, and community college faculty and administrators. The Partnership objectives, work-in-progress, process, and next steps were shared and discussed.
- The Partnership convened its first business and industry leadership advisory on December 4<sup>th</sup>. Because of the number of Bay Area community colleges adding and improving cloud computing programs, the BILT provided input on knowledge, skills and abilities required for entry-level jobs in 12-36 months. Twenty-one members attended, of which 6 were the BILT. See the Appendix for the full report.
- ICT-DM short duration reskill/upskill programs have been developed and introduced, and are underway covering: Office Technology; Marketing, Management & Accounting; Networking & Cybersecurity; and Web Development & Design. All programs are available throughout the region, completed in less than 6 months, 100% online, with all materials provided. [More information.](#)
- In collaboration with NextGen Cyber Talent Partnership employers, we kicked off the BayICT Tech Talks guest speaker series on November 19<sup>th</sup>. The hour-long Zoom meetings are open to all Bay Area students and faculty, scheduled on the 1<sup>st</sup> Monday and 2<sup>nd</sup> Tuesday of the month. Information security professionals were the first guests in 2020 and the 2021 schedule is adding experts from other ICT-DM career such as technical sales, XR/VR, and AV technologies. [More information.](#)

The next quarterly meeting of the Partnership will be virtual in early March 2021. We heard your feedback and will limit the duration to under 90 minutes by gathering as much member input as possible in advance. A save-the-date is forthcoming, which will also seek your prioritization of where we next focus on preparing Bay Area students for high-demand jobs.

Respectfully,

Richard Grotegut

Olivia Herriford

Ray Kaupp

**BACCC Regional Directors, Employer Engagement, ICT Digital Media**

**Appendix: BayICT Partnership BILT Review**  
Cloud Computing Program and Student Learning Outcomes

**Attendees**

Business & Industry Leadership Team (BILT)

Bjorn	Pave	Sr. Director IT	Verkada, Inc
Susan	Coefield	Regional Program Manager	VMware
Tony	Zirnoon	Founder / CEO	Human Capital Ventures Corp.
Kim	Yohannan	Americas Manager, Cybersecurity Academy	Palo Alto Networks
Dave	McCandless	Principal	McCandless Systems
Tim	Aher	Director Recruiting	Salesforce

Workforce Development

Tamara	Walker	Program Manager	Oakland Workforce Development Board
Ryan	Buckley	Chair	DVTI
Bob	Redlo	Coordinator	East Bay Health Workforce Partnership
V	Clapp		Workforce Development Board of Contra Costa County
Annie	Tahtinen	Director, Tech Training Programs	JVS

Community Based Organizations

Alissa	Friedman	President and CEO	Opportunity Junction
Dean	Maffie	Career Development Specialist	JobTrain

Bay Area Community Colleges

Terri	Oropeza	CIS Faculty	Cabrillo College
Francis	Reyes	CIS Instructor	Contra Costa College
Steven	Nelson	Employment and Training Specialist III	CCSF
Ana	McClanahan	Dean of Science, Technology, Engineering, Arts, and Mathematics	College of Alameda
Richard	Grotegut	RD ICT-DM	BACCC
Ray	Kaupp	RD ICT-DM	BACCC
Olivia	Herriford	RD ICT-DM	BACCC
Ann	Beheler	PI (Facilitator)	National Convergence Technology Center

BILT members voted on the importance of specific Knowledge, Skills, and Abilities (KSAs) students will require 12-36 months from now for entry-level cloud computing jobs using a scale of 4 (most important), 3 (important), 2 (somewhat important), 1 (least important). The facilitated discussion focused on KSAs with divergent votes or lower

scores. During the discussion, KSAs were added. While not ranked, BILT suggestions are considered important. Below are the KSAs listed in order of importance.

<b>Cloud Computing Knowledge</b>	
Knowledge of the differences or similarities between Private, Public, and Hybrid Cloud Implementations.	3.71
Knowledge of the difference or similarities between Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) models.	3.71
Knowledge of Cloud IAM users, groups, roles and policies.	3.71
Knowledge of Cloud Computing shared security responsibility model.	3.71
Knowledge of the differences between Cloud vs. On-Premises.	3.57
Knowledge of the term resilience and how resilience can be designed into a project, program, infrastructure, or organization.	3.57
Knowledge of who owns or should own the data/information in a Cloud implementation.	3.57
Knowledge of Cloud IAM (Identity and Access Management).	3.57
Knowledge of High Availability factors (Fault-tolerance, recoverability, and scalability).	3.57
Knowledge of microservices and containerization (e.g. Kubernetes and Docker).	3.57
Awareness of the pros or cons behind using Frameworks.	3.43
Knowledge of the different organizational roles needed as one plans for Cloud implementation or manages an existing Cloud capability.	3.43
Knowledge of the concept of Service Level Agreement, why they are used, when they are used, and its application within Cloud implementations.	3.29
Knowledge of the key Management and Operational challenges potentially faced when considering or implementing a Cloud capability.	3.29
Knowledge of the key Security and Privacy monitoring challenges potentially faced when considering or implementing a Cloud capability.	3.29
Knowledge of Cloud Regions and Zones.	3.29
Knowledge of High Availability Service Level Agreements (SLA).	3.29
Awareness of framework concepts, their selection and use.	3.14
Knowledge of the incident response challenges potentially faced within a Cloud implementation.	3.14
Knowledge of Web Services technologies.	3.14
Knowledge of the different Cloud computing database types.	3.14
Knowledge of how to scale a Cloud database.	3.14
Knowledge of Cloud database fail-over best practices.	3.14
Knowledge of Auto Scaling and Load Balancing	3.14
Knowledge in preparing and deploying a cloud database solution that meets application requirements.	3.14
Knowledge of Recovery Time Objective (RTO).	3.00
Knowledge of Recovery Point Objective (RPO).	3.00
Knowledge of the term benchmarks and the reasons for their use.	2.86
Knowledge of data aggregation, integration, and analysis.	2.86
Knowledge of Cloud block, object, and file storage.	2.57
Knowledge of the differences between SQL and Non-SQL Databases.	2.57
<b>Added December 4, 2020</b>	
Knowledge of Python	
Knowledge of containers (Kubernetes, Terraform, in general)	
Knowledge of AWS Lambda	
Knowledge of cloud formation	

Knowledge and understanding of ethics	
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<b>Clouding Computing Skills</b>	
Skill in documenting and determining root cause failure(s) for items that failed or partially passed.	3.43
Skill in applying permissions for IAM user(s).	3.43
Skill using cloud security tools offered by organizations like Microsoft, AWS, and Google.	3.43
Skill in identifying and distinguishing Private, Public, and Hybrid Cloud Implementations.	3.29
Skill in identifying and distinguishing Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) models.	3.29
Skill in demonstrating how to customize virtual networks with IP Address Range, subnets, routing tables and gateways.	3.29
Skill in analyzing and troubleshooting Cloud Virtual Networks.	3.29
Skill in preparing and deploying virtual machines in a virtual network (private or public subnet).	3.29
Skill in applying permissions for IAM Group(s).	3.29
Skill in deploying a containerized application.	3.29
Skill in implementing auto scaling and load balancing.	3.29
Skill in documenting results of executed test cases showing whether according to developed success criteria the test case passes, fails, or partially passes.	3.14
Skill in preparing written reports.	3.14
Skill in producing Virtual Machines from a Cloud image.	3.14
Skill in deploying cloud storage technologies with the assistance of a senior technician.	3.14
Skill in analyzing and troubleshooting different cloud storage technologies.	3.14
Skill in using management tools like Chef, Puppet, etc.	3.14
Skill in producing Virtual Machines within a Cloud region.	3.00
Skill in preparing and deploying a Cloud High Availability and Business Continuity Solution.	2.86
Skill in preparing presentations.	2.71
Skills in performing database maintenance and development.	2.57

<b>Clouding Computing Abilities</b>	
Ability to problem solve.	4.00
Ability to work within a Project Team.	3.71
Ability to communicate effectively (written and oral) within and among team members and associated stakeholders (i.e. different audiences and organizational levels). This includes communicating complex technical issues and business implications.	3.71
Ability to analyze and interpret customer input for expressed and implied requirements.	3.71
Ability to work under stress.	3.57
Ability to read and interpret technical documents, diagrams, and decision trees	3.57
Ability to recognize and understand details	3.57
Ability to order and arrange items	3.14
Ability to measure, analyze, and make recommendations based on data.	3.14
Ability to assist clients with migrating and integrating multiple applications to the cloud.	3.14
Ability to translate technical language into lay terminology when needed	3.00
Ability to create appropriate presentation visuals for technical material	3.00
<b>Added December 4, 2020</b>	
Ability to work with different others (diversity & inclusion)	

Ability to ask for and seek help from others	
Ability to make ethical decisions	
Ability to prioritize tasks	

### Cloud Computing Certifications

A week prior to the BayICT Partnership meeting, Cabrillo College CIS faculty asked their advisory team to rank cloud certifications. They provided the BayICT BILT with a link to the voting tool to add their input. Below is the combined prioritization.

## What Cloud Certifications are important for entry-level worker looking for a job 12-36 months from Fall 2020

