Building a Cloud Assessment Scorecard

INTERNET2

I2 online

AUGUST 26, 2020

BY COMMUNITY, FOR COMMUNITY

Agenda

- • Welcome

- • Introduction to the Internet2 Cloud Scorecard Working Group project

- • Cloud Scorecard Survey Results

- • Building the Scorecard

- • Q&A/Feedback

Logistics

- Participants microphones and video are turned off

- Please submit your questions via the Q&A functionality
  - Follow up questions, additional feedback may be directed to netplus@internet2.edu

- We will have time for interactive discussion at the end. Please use the "raise my hand" functionality and you will be un-muted (and make sure you un-mute yourself as well!)

- Today's virtual event is being recorded and will be made available on the Internet2 I2 Online page: https://www.internet2.edu/news-events/events/i2-online/

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Internet2

SPEAKERS

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Cloud Scorecard
Survey Results and Project Update

HOW RESEARCH & EDUCATION ADOPT THE CLOUD

Why a cloud scorecard?

NET+ Service Evaluation Components

Functional Assessment

- Review features and functionality
- Tune service for R&E community

Technical Integration

- Network: determine optimal connection and optimize service to use the Internet2 R&E network
- Identity: InCommon participation and community identity toolkit support

Security and Compliance

- Security assessments
- FERPA, HIPAA, privacy, data handling
- Accessibility

Business

- Legal: customized agreement using NET+ community contract templates
- Business model
- Define pricing and value proposition

Deployment

- Documentation
- Use cases
- Support model

NET+ Service Evaluation and the Scorecard

NET+

- Compliance with standards is reviewed by higher ed institutions as part of service evaluation and integrated into a contract

- Evaluations take 90+ days to complete and include a ratified contract and pricing

- Portfolio of 20-30 services

- Service Advisory Board and online Community of Practice supporting program and product advocacy and peer-to-peer knowledge sharing

Scorecard

- Compliance with standards is self attested

- Standard/exciting contracts

- Scorecard can be completed by cloud service providers in a matter of hours

- Unlimited number of services that may be listed

- Future development consideration for community peer-to-peer connections

The Growth of Cloud Services…

Most Higher Ed institutions surveyed said their spending on cloud computing is increasing, and experts predict 62% of Higher Ed apps will be cloud-based by 2021.

MediTalk surveyed three hundred federal, state, local, and education cloud adopters and found that 60% of Higher Ed institutions are integrating cloud computing into their general IT strategies.

Among Higher Ed institutions, the most popular uses of the cloud are currently email systems (86%), web hosting (84%), and customized educational apps (82%)

What is the Purpose of the Cloud Scorecard Working Group?

The purpose of this group is to explore how to leverage the standards that have been developed and utilized in the NET+ program to assess and report on compliance of various cloud services.

Internet2's Cloud Survey Working Group was tasked with...

Working Group Members

Loren Malm - Ball State University (Chair)

Jon Allen - Baylor University

John Bailey - Washington University in St. Louis

Kitty Bridges - New York University

Tom Dugas - Duquesne University

Dana German - University of Virginia

Erik Lundberg - University of Washington

Scott Stremick - University of Nebraska

Michael Ospitale - Stony Brook University

- Exploring whether there is a need for such an assessment/badging/scorecard activity
- Articulating the benefits to the academy and industry of such a program
- Recommending which compliance and contract areas would be subject to review under such a program, and whether there are existing standards to use or whether new standards should be created
- Determining ways this process or program could be leveraged in other areas of the research and education community, particularly trust and identity
- Introducing opportunities to partner with other community organizations to enhance this program (EDUCAUSE, regional networks, global NREN's, procurement consortia, etc.).
- Sharing initial ideas for implementation of this process or program
- Sharing additional ideas this group develops during their work

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Scorecard Survey

Results of the community survey

What Did We Learn?

71% said they would definitely make use of a Cloud Scorecard in evaluating services.

Security is the area that is most important to evaluate in a Scorecard, with 77 respondents rating it as critically important.

Accessibility, Network Connectivity, and Compliance and Regulatory issues were all rated lower

84 responses overall. Responses from a wide variety of institutions, large and small, public and private - including 4 international responses.

Identity and Privacy were the next most important, with 58 and 61 respondents respectively each rating them as critically important.
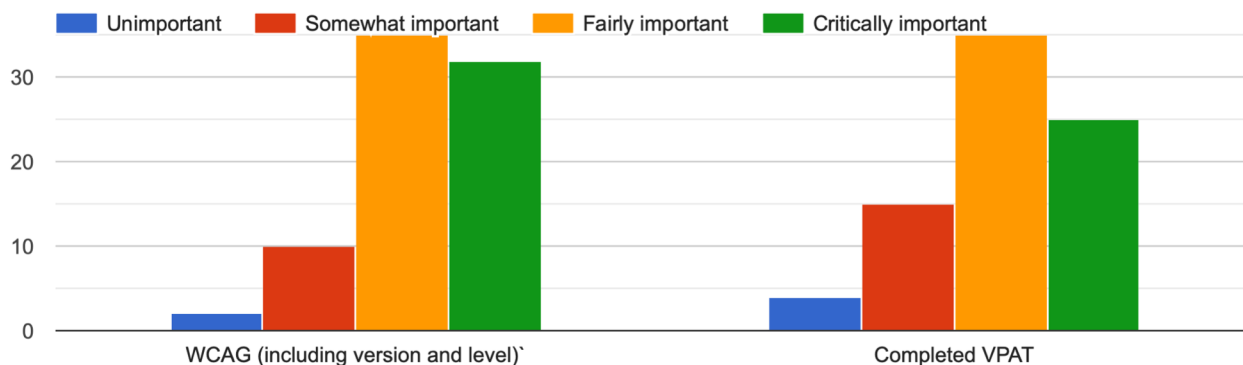
Topic Areas

How important are each of these areas to be included as part of a scorecard process?
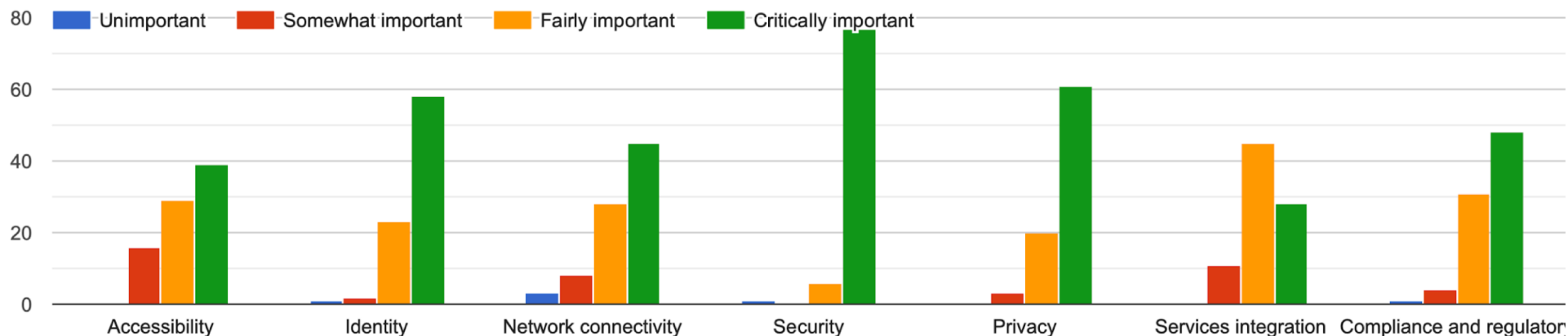
Accessibility

Accessibility Standards

- Is it useful to ask about one of the detailed campus Accessibility questionnaires?
  - University of California: https://www.ucop.edu/electronic-accessibility/_files/wcag-2.0-checklist.pdf
  - Penn State: https://drive.google.com/file/d/1OiaR7rKeejJNxf5GWGf6UELItKwieLTs/view

- Are there ways of assessing the contents of a VPAT?

Identity

Identity Standards

- Unimportant
- Somewhat important
- Fairly important
- Critically important
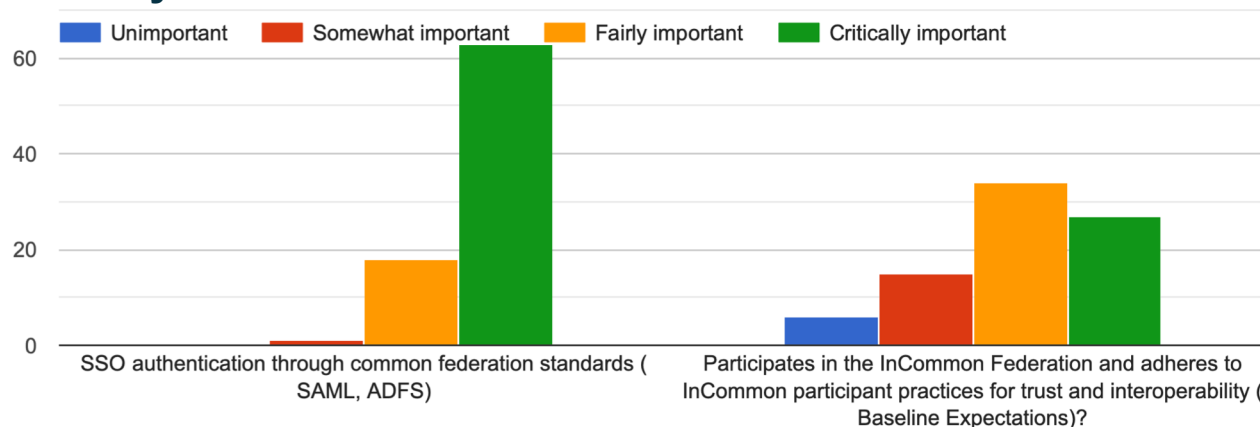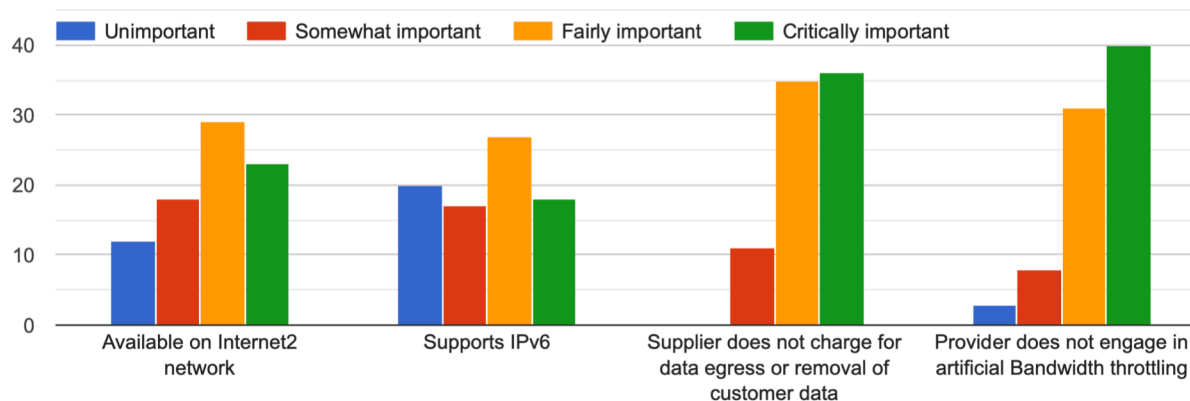
- Standards based SSO is clearly important

- Participation in the Federation is seemingly less important at this time. Why?

- It may be important to ask about MFA support

- OIDC and OAuth 2.0 were mentioned as other standards to ask about

HOW RESEARCH & EDUCATION ADOPT THE CLOUD

Network Connectivity

Network Connectivity

- Not surprisingly, bandwidth and data egress fees are important issues

- IPV6 remains a peripheral issue to this audience

- Availability via the Internet2 backbone does not seem to be critical - will this vary depending on whether a service is SaaS or IaaS?
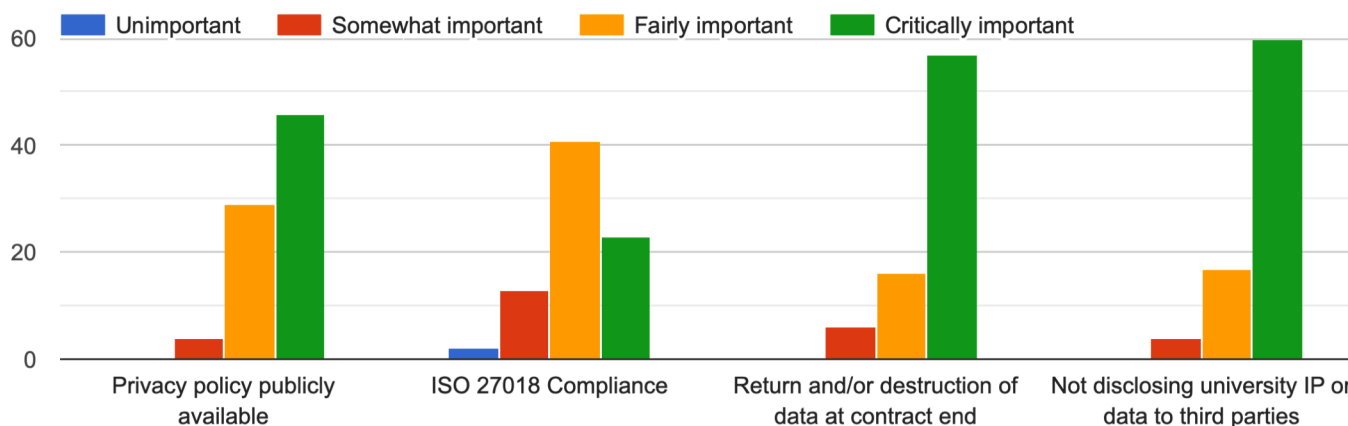
Security
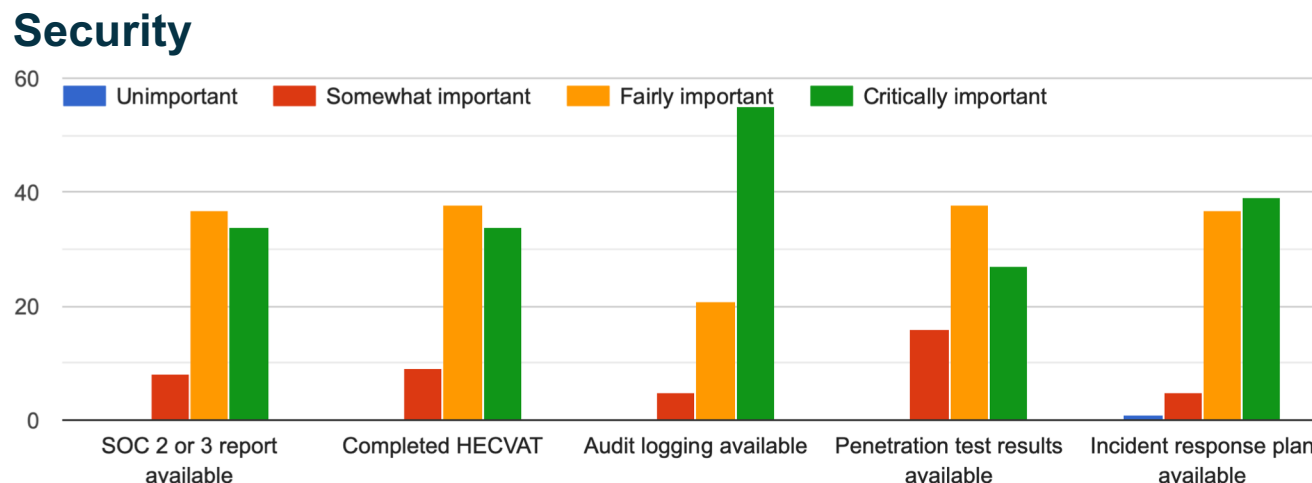
Security

- Availability of audit logging is the most important security issue.

- This question was somewhat ambiguous.

- Is it important that providers share their audit logs when requested, or are people concerned about the ability within a service to conduct their own audit logging?

Privacy

Privacy

Legend: Unimportant · Somewhat important · Fairly important · Critically important

(Bar chart, y-axis 0 to 60)

- Privacy policy publicly available
- ISO 27018 Compliance
- Return and/or destruction of data at contract end
- Not disclosing university IP or data to third parties

- Not disclosing university IP and retention of data at contract end are important issues

- A publicly available privacy policy is also fairly important

- ISO 27018 compliance has not yet risen to a level of importance in this audience
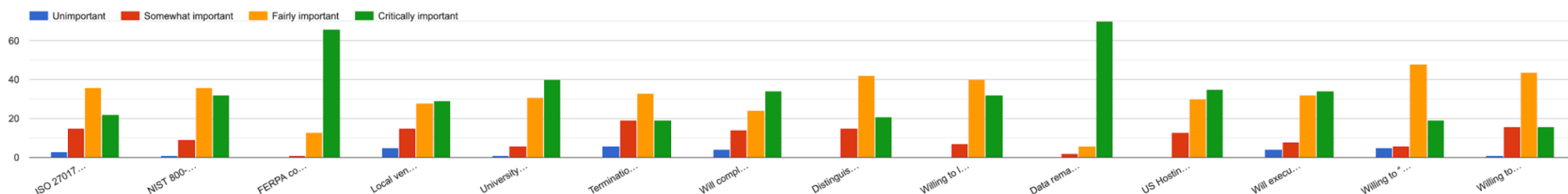
Services Integration

Services Integration
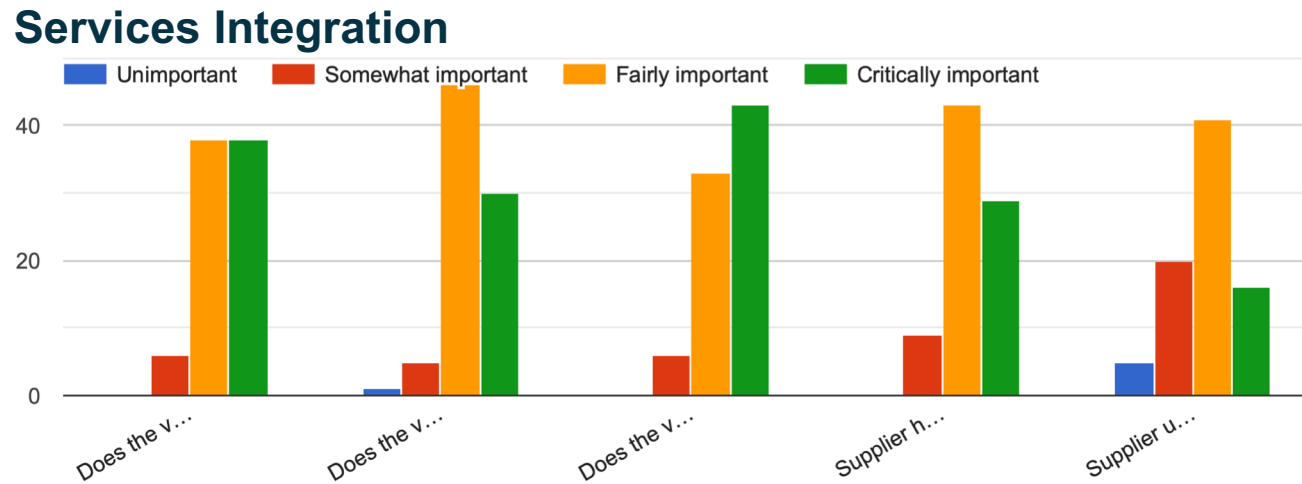
- Having API documentation is the most important integration issue

- The ability to integrate with other APIs is ranked as Fairly Important

- LTI is an important integration feature where applicable

Compliance and Regulatory

Compliance and regulatory

- Two issues rank as critically important:
  - ➢ Data remaining the institution's intellectual property
  - ➢ FERPA compliance

- University control of name, marks, publicity, and endorsements is fairly important

- Ability to execute a BAA is fairly important

- For IaaS, knowing which services are approved for HIPAA (and how that is determined) could be important

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Building the Scorecard

What we're building, next steps and how you can help

Approach and scope

- Start small

- Serve as a Market Survey

- Build to scale

Initial Questionnaire

39 questions total

Sections include:

Accessibility

    VPAT, WCAG, Policy link

Identity and Federation

    InCommon, SAML

Network and Connectivity

    I2PX, I2 connectivity, throttling, egress charges

Security

    SOC2, HECVAT, Audit logs

Privacy

    Policy, ISO 27018, data retention, disclosure

Technical Integration

    APIs, data formats, SDK, Open source

Other Compliance and Contractual Issues

    FERPA, data locale, trademarks, etc.

Complete questionnaire viewable here

Project Next Steps

- Present concept to the community (this call)

- Complete initial list of scorecard questions

- Draft final report recommendation

- Build technical architecture, including data structure and wireframes

What Would We Like to to Know from Higher Education?

- Would you ask vendors to show the scorecard as part of evaluating cloud services?
- Would that replace any existing steps in your evaluation of cloud services?

- Can the scorecard help decrease your time to acquire and implement cloud services?

- How do you envision your cloud requirements changing in the next few years?

What Would We Like to to Know from Industry?

- Would you complete a scorecard and be listed in a services directory?

- Can the scorecard help decrease your time to sale?

- What are common questions you receive from research and education institutions?

Learn more about the cloud scorecard project

Project site: https://tinyurl.com/cloud-scorecard

Email us: netplus@internet2.edu

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Please tell us how we did today!

Take our survey:
https://bit.ly/CloudScorecard

Have a question or feedback we didn't get to?
netplus@internet2.edu