

Software Working Group Meeting Minutes

July 13, 2022, 1:00 PM to 2:30 PM EST

Video Conference (Zoom)

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Attendance

Mr. Williams, FASAB senior analyst, conducted the meeting via Zoom. Approximately 25 people attended the meeting with representation from the Department of Defense, Census Bureau, Nuclear Regulatory Commission, Securities and Exchange Commission, General Services Administration, Department of Homeland Security – U.S. Citizenship and Immigration Services, Department of Energy, Veterans Affairs, Department of Commerce, Treasury, and KPMG.

Introduction

The task force meeting convened around 1:00 PM EST.

Welcome

Mr. Williams welcomed and thanked everyone for their previous comments on the guidance scope material. He stated that the information and thoughts they provided were essential for the Board to further deliberate whether cloud-service arrangements could meet the SFFAC 5 characteristics of an asset. He also stated that he intended the meeting as a roundtable discussion and encouraged participants to speak up anytime with questions or comments.

Project recap

Mr. Williams then provided a recap on the progress of the software technology project since the last working group meeting that occurred in December 2021. During the February 2022 meeting, he proposed a scope of software-related guidance updates to the Board that included addressing cloud-service arrangements first. During the April 2022 meeting, he provided the Board an analysis on how cloud-service arrangements could fit into a framework of existing asset reporting guidance along with some initial thoughts on whether they could meet the SFFAC 5, *Definitions of Elements and Basic Recognition Criteria for Accrual-Basis Financial Statements*, essential characteristics of an asset. Additionally, two employees from the General Services provided the Board an educational session on cloud-service arrangements during the June 2022 meeting.

Meeting objectives

Mr. Williams explained that he planned to present an issues paper to the Board during the August 2022 meeting that provides a deep-dive analysis on whether cloud-service arrangements in the federal environment could potentially be considered assets for financial reporting purposes. The issues paper will specifically address (1) cloud computing characteristics, service models, and deployment models (2) categories of cloud-service arrangements, (3) a cloud-service arrangement asset framework, and (4) the benefits and challenges of reporting cloud-service arrangements as assets.

Mr. Williams specified that the guidance scope document that working group members previously provided comments on would set the framework for his issues paper for the August Board meeting. He stated that the purpose of the working group meeting was to go over the guidance scope document and summarize staff's current positions along with working group member thoughts and concerns. He caveated that he would ensure that the Board is aware of the views and concerns of working group members on staff guidance proposals.

Guidance scope document for cloud-service arrangements

Mr. Williams proceeded to discuss all six charts and accompanying analysis from the guidance scope document.

Scope of cloud-service arrangement characteristics and models

Mr. Williams briefly summarized the National Institute of Standards and Technology (NIST) characteristics (i.e. on demand self-service, broad network access, resource pooling, rapid elasticity, measured service), service models (i.e. infrastructure, platform, and software as a service), and deployment models (i.e. private cloud, community cloud, public cloud, and hybrid cloud) for cloud computing. He stated that he planned to remove the additional Congressional Research Service analysis at the suggestion of a working group member in order to streamline the analysis in the issues paper.

Mr. Williams explained the need to summarize and understand cloud-computing aspects in the federal environment without expanding or clarifying the NIST guidance. He emphasized that the goal is to develop accounting and financial reporting guidance for cloud services and that it was important to expand and clarify cloud-related terms for financial reporting reasons only and to otherwise leave the information technology (IT) guidance to the IT professionals. For example, it would be appropriate for future guidance to explain the data security implications of private versus public cloud only if there were an accounting or financial reporting reason for doing so. He concluded by stating that he thought it best to simply stick with the NIST guidance for describing cloud-service arrangements.

Software license versus cloud license

Mr. Williams then discussed how he understood the term “license” to apply in the cloud and general software environment based on discussions with federal entity IT departments. Software licenses provide the consumer the right to possess and operate the IT on their own hardware or IT systems. On the other hand, cloud licenses provide the consumer the right to access and use the IT resource over the internet without possessing the resource on their own hardware or IT systems. He further explained that it appeared that people used the term cloud license to denote a user access right to the cloud service. He acknowledged that there appear to be many different opinions on how licenses do or do not apply to cloud services and said that it ultimately may not matter because, in his opinion, both uses of the term could meet the SFFAC 5 essential characteristics of an asset.

One working group member stated that software licenses could be thought of as a product while a cloud license could be thought of as a service. Another working group member cautioned that the term cloud license could be confusing because while it could represent user access to a cloud service, in some situations a consumer could also procure a software license as part of a cloud-service arrangement or that a software license could be included in the cost of a cloud-service arrangement.

Cloud-service arrangement categories

Mr. Williams then discussed three primary categories of cloud-service arrangements that he had identified in his research and discussions with federal entities:

- Pay-as-you-go – Consumers pay a cloud-service provider in arrears for actual usage based on established measurement criteria. There is no upfront payment, usage, or term commitment. The consumer can start and stop service when desired. Mr. Williams stated that he saw this type of arrangement the most in the contract templates he reviewed.
- Cloud credits – Consumers pay upfront for a specific quantity of cloud credits that they can then apply to receive various cloud services on demand. This category is similar to the pay-as-you-go category except that consumers pay for a fixed quantity upfront rather than paying for variable usage in arrears.
- Multi-year commitment - Consumers commit to purchase a fixed amount of cloud services at an agreed upon price for a specified period. Consumers may enter into this type of arrangement in order to secure a discounted price in exchange for a usage commitment. This type of arrangement can consist of fixed subscription type payments and contract option years.

Mr. Williams stated that he did not receive comments from working group members that indicate a need to create another category and that he received general agreement that the three proposed categories largely capture the primary types of cloud-service

arrangements in the federal environment. He stated that a few people had mentioned that the term “reserved instance” to describe a type of cloud-service arrangement. He stated however that he understood reserved-instance arrangements as essentially how he described the multi-year commitment category.

One working group member confirmed that multi-year commitment type arrangements typically involved the consumer committing to a minimum dollar amount of cloud services over a set period. They described the arrangement as a minimum guarantee. Another working group member confirmed that for a cloud credit arrangement, their agency actually pays upfront and compared the arrangement to purchasing a phone card.

One working group member questioned if pay-as-you-go arrangements still involved some type of term-based agreement between the vendor and consumer and if it were difficult for a federal entity to stop and start cloud services so easily to due to implementation and security requirements. Another working group member replied that various requirements could make it challenging and rigid for a federal entity to start and stop service quickly. However, cloud-service providers are typically happy to sell cloud services by the minute.

Cloud-service asset framework

Mr. Williams then discussed whether he saw potential for each of the three categories meeting the SFFAC 5 essential characteristics of an asset. He reminded everyone that SFFAC 5 states “To be an asset of the federal government, a resource must possess two characteristics. First, it embodies economic benefits or services that can be used in the future. Second, the government controls access to the economic benefits or services and, therefore, can obtain them and deny or regulate the access of other entities.”

Mr. Williams first addressed whether he thought the three categories met the control characteristic. He stated that the NIST discusses various levels of consumer control across the cloud-service models. However, “control” is a term of art in SFFAC 5 with a very specific meaning - that the user can obtain the economic benefits and services of a resource and can deny or regulate access to other entities. Mr. Williams pointed out that SFFAC 5 states that control of access is essential for an asset, but that possession or ownership was not. Furthermore, the Board had previously determined that leases could be recognized as capital assets, even though they represent a tangible asset that is not owned by the federal entity.

Mr. Williams explained that in his opinion, all three cloud-service arrangement categories could generally meet the SFFAC 5 control characteristic of an asset. So long as the consumer has entered into an agreement to pay another entity for access to cloud-based IT resources, the consumer generally has control over the economic benefits and services of that resource and can regulate access to the IT resource within the confinements of the agreement.

Mr. Williams then addressed whether he thought the three cloud-service arrangement categories represent a future economic benefit or service to the consumer. He did not think that the pay-as-you-go model represents a future economic benefit or service because neither party to the agreement is obligated to continue to deliver on their requirements beyond the present. Additionally, the future cash flows are purely variable based on usage and therefore the consumer does not know the future cost of the economic benefits and services of cloud-service arrangements.

Mr. Williams then stated that the cloud credit category appeared to represent a future economic benefit or service because the upfront payment for cloud credits requires the vendor to provide future cloud access to the consumer. He also thought that the multi-year commitment category appeared to represent a future economic benefit or service because the agreement would require the vendor to provide future cloud access to the consumer for a specified period so long as the consumer continued to meet their requirements throughout the period of the agreement, such as timely payment.

In summary, Mr. Williams did not think that the pay-as-you-go cloud-service arrangement category could meet both SFFAC 5 essential characteristics of an asset. However, he saw that the other two categories, cloud credits and multi-year commitments, could meet both essential characteristics and saw potential for asset reporting for those arrangements. He emphasized that he currently considered the cloud credit and multi-year commitment arrangements as potential assets that warrant further research and consideration. He reminded everyone that ultimately the Board would have to make the decision of whether cloud-service arrangements represent assets in the federal government but that he was considering making these recommendations to Board members during the upcoming August meeting. He pointed out that based on the previously submitted comments, some federal entities agreed with his positions while some did not or had concerns.

One working group member disagreed that all cloud-service arrangements would generally meet the control characteristic of an asset. They suggested that there were a spectrum of different levels of control across the different types of cloud-service arrangements and that some may meet the control characteristic while others do not. For example, a private cloud model would provide the consumer exclusive control of the resource but a public cloud model would not because the consumer has no say in who else the public cloud provider provides cloud access. The working group member suggested that the consumer would be able to deny or regulate access for private clouds but not public clouds.

Mr. Williams acknowledged it was a logical argument but disagreed with the notion of preparers having to determine if each individual cloud-service arrangement meets the control characteristic. He pointed out that public cloud is not a public space and that even with public cloud, the consumer would be able to deny or regulate access to their cloud service rights in accordance with the arrangement with the provider. He explained that consumers often do this through passwords and/or access identification. He stated

that a federal IT professional previously indicated that no matter the cloud-service or deployment model, the consumer always retains control over their data and access rights.

Mr. Williams also did not think it was necessary for a consumer to have exclusive control over the entire IT resource to consider it an asset. For example, a government agency may rent a few office rooms in a large office building. That government agency does not have to own or control access to the entire building to consider its rented rooms as lease assets. Another example is a consumer having access to any generic office in a building full of the same offices. The consumer would not care which office they have rights to but know they have rights to access and use an office building.

Mr. Williams also did not think it would be practical for preparers to analyze each individual cloud-service arrangement to determine if the specific arrangement satisfied the SFFAC 5 control characteristic of an asset. He also pointed out that determining the level of control would be highly subjective and lead to disagreement among preparers and auditors and lead to inconsistent reporting across federal entities. Mr. Williams therefore preferred to recommend that the Board make an overall determination on whether cloud-service arrangements generally meet the control characteristic of an asset and not leave it up to preparers to assess the level of control for individual arrangements.

A working group member pointed out that with cloud credit and multi-year commitment arrangements, there may be a future economic benefit and service owed to the consumer, but it is often not a specific economic benefit or service. In other words, the consumer could apply their cloud credit to a multitude of cloud services that the provider offers. The working group member suggested that the vagueness of the future service could bring into question whether the cloud-service arrangement meets the essential characteristics of an asset.

A working group member questioned if multi-year commitment cloud-service arrangements could result in the consumer not actually using the reserved future economic benefit or service as that could make it difficult to assess whether there is a future economic benefit or service owed to the consumer. Mr. Williams understood the concern but offered that with lease assets, both lessor and lessee could theoretically break the lease, although typically with a penalty. He offered that if a consumer has entered into and remains in a commitment for future cloud services, it was reasonable to conclude that the consumer expects a future economic benefit and service from the arrangement. Another working group member stated that the consumer and provider are typically bound by the payment and service requirements of the multi-year commitments, or reserved instances.

Mr. Williams reminded the working group that ultimately the Board would decide if and to what extent cloud-service arrangements can meet the essential characteristics of assets. He stated that it was important that he and the working group consider the

possibilities for asset reporting in order to provide the Board members as much relevant information as possible for their future decisions.

Financial reporting objectives

Mr. Williams then briefed how reporting cloud-service arrangements as assets could contribute to the SFFAC 1, *Objectives of Federal Financial Reporting*:

- Budget Integrity – Reporting cloud-service arrangements as assets could help in identifying the associated liabilities that the consumer will pay in the future for the cloud services. This would help identify budgetary resources needed in the future to pay for services.
- Operating Performance - Reporting cloud-service arrangements as assets could help identify the cost efficiency of a federal entity's IT resources by classifying future obligations for providing federal programs and services, as well as helping management compare costs of different IT resources (e.g. internally developed software and software licenses).
- Stewardship – Reporting cloud-service arrangements as assets could enable financial reports to better portray the financial position of a federal entity by depicting the status of federal assets and associated liabilities. Additionally, this could help identify trends on how much a federal entity is essentially financing a software or IT resource from a provider.
- Systems and Control – Reporting cloud-service arrangements as assets encourages good internal controls in order to account for federal assets and associated liabilities accurately.

Financial reporting benefits and challenges

Mr. Williams then discussed potential benefits and challenges of reporting cloud-service arrangements as assets. He mentioned the following benefits:

- Reporting cloud-service arrangements as assets could help identify fiscal year trends in cloud-service costs.
- Reporting cloud-service arrangements as assets could help in comparing cloud-service costs between federal entities.
- Reporting cloud-service arrangements as assets could help in comparing the cost of cloud services with other software or IT resources used by federal entities (e.g. internally developed software, software licenses, etc.)
- Reporting cloud-service arrangements as assets could help federal entities identify future benefits and associated liabilities of federal resources (cloud services) used in operations and programs.

Mr. Williams mentioned that he had recently read an article that discussed how the Defense Logistics Agency (DLA) is attempting to perform net present value analysis (NPV) on cloud-service arrangement payments so that they can compare costs to software resource alternatives. He planned to reach out to DLA to understand NPV analysis as it relates to cloud-service arrangements and indicated it as proof of asset reporting potential for cloud-service arrangements. He then discussed the following potential challenges:

- Regarding cloud-service arrangements that consist of multiple option years, it could be difficult to determine the useful life of an asset due to the difficulty for management in determining the probability of exercising option years in the future due to the fast changing environment of the IT industry.
- For some arrangements, it could be difficult to separate cloud resource costs from cloud professional service costs (i.e. contracted labor to help implement, operate, and manage cloud resources).

Mr. Williams mentioned that in his research of cloud-service arrangement templates, the clauses often clearly separated cloud services from professional labor services for implementing and operating cloud services. He stated that the contracts typically separated them by special item numbers but understood that it were possible that some contracts do not clearly separate the two. One working group member pointed out that even with cloud services, there is usually a labor component within the cost of the cloud service. Mr. Williams acknowledged this point and replied that, in his opinion, it did not sound reasonable to expect preparers to analyze individual cloud-service arrangements at that level to identify the different types of costs baked into the cloud service price and that with many arrangements it likely would not be possible as the consumer just sees a total price. He stated that he would recommend the Board make a determination on whether cloud-service arrangements could meet the essential characteristics of an asset at the overall service level, rather than the individual pieces of the service.

One working group member pointed out that often, federal entities procure cloud services only one year at a time due to one-year appropriation limitations, even if the contract presents as a base year with option years. Another working group member stated that their federal entity is not bound by one-year appropriations and therefore enters into cloud-service arrangements with base multi-year terms and option years, such as a base of three years with two-year options. Mr. Williams acknowledged that both scenarios were likely among federal entities and compared the situation to that of leases.

Next steps

Mr. Williams encouraged everyone to continue to provide him information and comments as he finalized the material for the Board meeting in August. He reiterated that he would do his best to ensure that he communicated working group members'

thoughts and concerns on his proposed ideas. He indicated that he planned to provide the Board multiple financial reporting options for them to consider and deliberate.

Conclusion

Mr. Williams concluded by thanking everyone again for all of their time and efforts. He reiterated the importance of their participation in the working group for helping the Board make informed financial reporting decisions for cloud-service arrangements.

The meeting concluded at approximately 2:20 PM EST.