

Hello Everyone,

I am writing on behalf of the IEEE P2301 Working Group (Cloud Profiles) which is working on the IEEE P2301 Guide for Cloud Portability and Interoperability Profiles (CPIP) project. This goal of this working group is to develop a guide which advises cloud computing ecosystem participants (cloud vendors, service providers, and users) of standards-based choices in areas such as application interfaces, portability interfaces, management interfaces, interoperability interfaces, file formats, and operation conventions. This guide will group these choices into multiple logical profiles, which are organized to address different cloud personalities.

Our group has taken advantage of the completion of the ISO/IEC JTC1 SC38 17789 (Cloud Computing Architecture) and the NIST SP 500-291 Cloud computing Standards Roadmap to create our initial mapping of cloud roles and activities to existing cloud computing standards. For each of the roles/sub roles listed in our mapping a list of standards are identified that will be relevant to the role (based on the activities identified in SC38 17789). Each of the standards will then be assigned a value of likely, possible, unlikely, or no value. (No value means that there has been no one to advocate the relevancy of the standard to that role and will be excluded from the final document).

This mapping will form the core basis for our final guide document.

To ensure the usefulness of this standard will require a high degree of accuracy in describing the relevancy of any given standard to the existing role. In addition, it is also recognized that this effort in using the 17789 and NIST SP 500 291 as the start point, might be currently missing important and relevant standards efforts and potential cloud roles and activities.

For that reason, the IEEE P2301 group has decided to circulate our draft mapping to the groups who can provide the best possible feedback for the effort. The standards groups that have help create our industry leading cloud computing standards and the technical experts who have been working extensively with those standards. It is our request, that both individuals and groups will take the opportunity to review our draft mapping and provide input on how to improve the draft document.

All feedback will then be discussed within the IEEE P2301 group during our regularly scheduled calls (third Monday of every month). Our group is looking to have the draft document to be completed

and ready for standardization process by the end of the June 2015. With that goal in mind, we request that any feedback be provided to the IEEE P2301 group by April 10<sup>st</sup>.

Feedback can be completed by using the following on-line google forms:

<https://docs.google.com/forms/d/1qiIKMfmKdEi8PGzcVJyGg-x5Ci12YOMfe8BjMj15X6A/viewform?c=0&w=1>

or

by emailing a contribution to [john.messina@nist.gov](mailto:john.messina@nist.gov).

We look forward to any and all assistance in ensuring that our Cloud Profile document will be both useful and highly relevant to Cloud Computing stakeholders. Thanks in advance!

Sincerely,

John Messina

IEEE P2301 Chair

For any contribution to be included into the IEEE P2301 Cloud Profiles Mapping by email please include the following information:

Standard Name: (Role / Sub Role / Functionality / Likely – Possible)

Example:

IETSSZ Fake Cloud Deployment Standard:

- Cloud Provider/Cloud Service Deployment Manager / Define Deployment Steps/ Likely
- Cloud Provider/Cloud Service Deployment Manager / Define Environment and Process/Possible

All possible Roles/Sub Roles/Functionality are listed below. Additional information discussing the roles and functionality can be located in the ISO/IEC JTC1 SC38 17788/17789 standards.

### **Cloud Service Provider**

- Inter-cloud provider
  - Manage Peer Cloud Services
  - Perform Peering
  - Federation
  - Intermediation
  - Aggregation
  - Arbitrage
- Cloud Service Operations Manager
  - Prepare Systems
  - Monitor and Administer Services
  - Manage assets and inventory
  - Provide audit data
- Cloud Service Deployment Manager
  - Define environment and process
  - Define metrics gathering
  - Define deployment steps
- Cloud Service Manager
  - Provide Services
  - Deploy and provision services
  - Perform service level management
- Cloud Service Business Manager
  - Manage business plan to provide cloud services
  - Manage customer relationships
  - Manage financial processing
- Customer Support and Care
  - Monitor customer requests
- Cloud Service Security and Risk Manager
  - Manage security and risks
  - Design and implement service continuity
  - Ensure compliance
- Network Provider
  - Provide network connectivity
  - Deliver network services
  - Provide network management services

### **Cloud Service Partner**

- Cloud Service Developer
  - Design, Create, Maintain Services
  - Compose Services
  - Test Services
- Cloud Auditor
  - Test Services
  - Report Audit Results
- Cloud Service Broker
  - Acquire and Assess Customers
  - Assess Marketplace
  - Setup Legal Agreement

### **Cloud Service Customer**

- Cloud Service User
  - Use cloud Service
- Cloud Service Administrator
  - Perform Service Trial
  - Monitor service
  - Administer security policies
  - Provide billing and usage reports
  - Handle problem reports
  - Administer tenancies
- Business Manager
  - Perform business administration
  - select and purchase services
  - request audit report
- Cloud Service Integrator
  - connect ICT Systems to Cloud Services

**Likely:**                **Standard is very likely to be useful to a cloud stakeholder working in this area**

**Possible:**           **Standard might be useful to a cloud stakeholder working in this area**

Example: Cloud Service Provider / Inter-cloud Provider / Functionality

CATEGORY	CLASS	ROLE	FUNCTION	LIKELY	POSSIBLE
Authentication & Authorization	Cloud Service Provider	Inter-cloud provider	Aggregation	SAML	
				XACML	OpenID Authentication
			Federation	ISO 9594-8:2008 X.509	
				RFC 3820: X.509	
				RFC 5246	
				RFC 5280: Internet X.509	
				SAML	
				XACML	
			Intermediation		RFC 5849
					ISO 29115 X.1254
					OpenID Authentication
					OpenID Authentication
			Manage Peer Cloud Services	SAML	
				XACML	
				ISO 9594-8:2008 X.509	
				RFC 3820:	

		X.509	
		RFC 5246	
		RFC 5280:	
		Internet X.509	
		SAML	
			RFC 5849
			ISO
			29115 X.1254
			OpenID
			Authentication
			XACML
	Perform Peering	SAML	
			OpenID
			Authentication
			XACML
Availability	Federation		ATIS-02000009
Confidentiality	Aggregation	XML	
	Federation		FIPS 188
	Intermediation	KMIP	
		XML	
Data Portability	Aggregation	CDMI	
	Federation	CDMI	
	Intermediation	CDMI	
	Perform Peering	CDMI	
Identity Management	Aggregation	SAML	
			WS-Federation
			WS-Trust 1.3
			OpenID
			Authentication
			1.1
	Federation	SAML	
		SPML	
		WS-	
		Federation	
		WS-Trust 1.3	
			OpenID
			Authentication
			1.1

	Intermediation	SAML SPML WS- Federation	OpenID Authentication 1.1
	Manage Peer Cloud Services	FIPS 201.1  SAML WS- Federation WS-Trust 1.3	SPML OpenID Authentication 1.1
	Perform Peering	SAML WS- Federation	SPML OpenID Authentication 1.1
	Aggregation	XML Signature FIPS	
	Federation	FIPS 186-4	XML Signature FIPS FIPS 180-4 FIPS 198-1
Integrity	Intermediation	FIPS 180-4 FIPS 186-4 XML Signature FIPS	FIPS 198-1
	Aggregation	ISO 27018	ISO 27001:2005
Security Controls			

Security  
Monitoring &  
Incident  
Response

		ISO WD TS 27017 ISO 1st WD 27036-4
Arbitrage	ISO 1st WD 27036-4	
		ISO 27018
Federation	ISO 27018	
		ISO 27001:2005 ISO WD TS 27017 ISO 1st WD 27036-4
Intermediation	ISO 27018	
		ISO 27001:2005 ISO WD TS 27017 ISO 1st WD 27036-4
Manage Peer Cloud Services		ISO 27001:2005 ISO WD TS 27017 ISO 27018 ISO 1st WD 27036-4
		ISO 27001:2005 ISO WD TS 27017 ISO 27018 ISO 1st WD 27036-4
Perform Peering		
		ISO 27001:2005 ISO WD TS 27017 ISO 27018 ISO 1st WD 27036-4
Aggregation		ISO WD 27039
		PCI DSS
Federation	PCI DSS	



Security Policy Management	Intermediation		X.1500
	Manage Peer		PCI DSS
	Cloud Services		PCI DSS
	Aggregation	XACML	
	Federation	XACML	
	Intermediation	XACML	
	Manage Peer	FIPS 199	
	Cloud Services	FIPS 200	
		ISO 27002	
		XACML	
Service Agreements			ATIS-02000008
	Perform Peering	ATIS-02000008	
		XACML	
	Aggregation	TOSCA Version 1.0	
			TR194
			TR195
			TR196
			TR197
			TR198
	Arbitrage	TOSCA Version 1.0	
		TR194	
		TR195	
		TR196	
		TR197	
		TR198	
	Federation		GB917
			TR178
	Intermediation		TOSCA Version 1.0
			TR178
	Manage Peer		TOSCA Version 1.0
	Cloud Services		GB917

Service Interoperability	Perform Peering	TR178 TR197	TR178
			TR195
			TR196
	Aggregation	CAMP  CIMI DFDL ISO 17826:2012 (CDMI) OCCI TOSCA Version 1.0 Y.3520	TR195
			TR196
	Federation	CIMI DFDL OCCI TOSCA Version 1.0 Y.3520	
	Intermediation	CAMP CIMI DFDL ISO 17826:2012 (CDMI) OCCI TOSCA Version 1.0 Y.3520	ISO 17826:2012 (CDMI)
	Manage Peer Cloud Services	CAMP  CIMI	

				Y.3520	
					ISO 17826:2012 (CDMI)
			Perform Peering	CIMI DFDL OCCI	
					Y.3520 TOSCA Version 1.0 ISO 17826:2012 (CDMI)
System Portability	Cloud Service Customer	Cloud Service Adminstrator	monitor service		WS Agreement
		Cloud Service User	Use cloud Service		WS Agreement
	Cloud Service Partner	Cloud Auditor	Test Services	WS Agreement	
		Cloud Service Broker	Setup Legal Agreement		WS Agreement
		Cloud Service Developer	Design	Create	Maintain Services
			Compose Services		WS Agreement
			Test Services	WS Agreement	
	Cloud Service Provider	Cloud Serivce Manager	Provide Services		WS Agreement
			perform service level management	WS Agreement	
		Cloud Service Deployment Manager	define metrics gathering		WS Agreement
		Cloud Service Operations Manger	Monitor and Administer Services	WS Agreement	
			Provide audit		WS Agreement

Cloud Service Security and Risk Manager	data		
	design and implemnt service continuity		WS Agreement
Inter-cloud provider	ensure compliance		WS Agreement
	Aggregation	ISO 17203:2011 (OVF 1.0)	
		WS Agreement	
	Arbitrage		OVF 2.0 TOSCA Version 1.0
		WS Agreement	
	Federation		ISO 17203:2011 (OVF 1.0) OVF 2.0 TOSCA Version 1.0
		ISO 17203:2011 (OVF 1.0) WS Agreement	
	Intermediation		OVF 2.0 TOSCA Version 1.0
		ISO 17203:2011 (OVF 1.0) WS Agreement	
	Manage Peer Cloud Services		OVF 2.0 TOSCA Version 1.0
		WS Agreement	TOSCA

		Version 1.0
	Perform Peering	ISO 17203:2011 (OVF 1.0)
		WS Agreement
		OVF 2.0
		TOSCA
		Version 1.0
Network Provider	provide network management services	WS Agreement