

OPEN OPERATING STANDARDS ACT CLOUD CHECKLIST

Procuring Agency: _____

Solicitation Title/Method: _____

Solicitation / IPB #: _____ Contract Number: _____

Agency Identifier: _____ (if applicable)

Agency Contact Person

Section 15(g) of the Open Operating Standards Act (“Act”), 20 ILCS 45/1 *et seq.*

Consistent with both the Executive Order 10 (2010) directive requiring State agencies to limit information technology expenditures by increasing the use of cloud computing where appropriate, and with the initiatives and standards announced in the United States Department of Homeland Security publication "Federal Cloud Computing Strategy" dated February 8, 2011, all State agencies are required to evaluate safe, secure cloud computing options, before making any new information technology or telecommunications investments, and, if feasible, adopt appropriate cloud computing solutions. Each State agency shall re-evaluate its technology sourcing strategy to include consideration and use of cloud computing solutions as part of the budget process.

CLOUD COMPUTING ELEMENTS

The Five Essential Features

YES NO N/A

- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>On-demand self-service</u> - Does the model in question enable a consumer to unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Broad network access</u> - Do capabilities that are available over the network and accessible through standard mechanisms promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Resource pooling</u> - Are the provider’s computing resources (storage, processing, memory, and network bandwidth) pooled so as to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand, and to give consumers a sense of location independence in that the customer has little or no knowledge over the exact location of the provided resources but may be able to specify location at a higher level of abstraction? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <u>Rapid elasticity</u> - Can capabilities be elastically provisioned and released, at least in some cases automatically, to scale rapidly outward and inward commensurate with demand, such that the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time? |

Measured service - Does the deployment model in question automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts) in a way that can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service?

DEPLOYMENT MODEL

YES NO N/A

Private Cloud – “provisioned for exclusive use by a single organization comprising multiple consumers”, such as business units. A private cloud “may be owned, managed, and operated by the organization, a third party, or some combination” thereof. A private cloud may exist on or off the premises of the organization. NIST SP 800-145 at 3.

Community Cloud - “is provisioned for exclusive use by a specific community of consumers from organizations that have shared concerns (e.g. mission, security requirements, policy, and compliance considerations).” A community cloud “may be owned, managed, and operated by one or more of the organizations in the community, a third party, or some combination of them.” It may exist on or off premises.” NIST SP 800-145 at 3.

Public Cloud - public cloud is “provisioned for open use by the general public. A public cloud “may be owned, managed, and operated by a business, academic, or government organization, or some combination of them.” It exists on the premises of the cloud provider.

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SERVICE MODEL

YES NO N/A

For Infrastructure-as-a-Service (IAAS), “the capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications.” NIST SP 800-145 at 3. Furthermore, “the consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).” *Id.*

For Platform-as-a-Service (PAAS), the consumer is provided “the capability to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider.” *Id.* at 2-3. Although consumers do not “manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage,” they have “control over the deployed applications and possibly configuration settings for the application-hosting environment.” *Id.* at 3.

For Software-as-a-Service SAAS, “[t]he capability provided to the consumer is to use the provider’s applications running on a cloud infrastructure.” *Id.* at 2. A “cloud infrastructure” is defined as “is the collection of hardware and software that enables the five essential characteristics of cloud computing.” *Id.* at 2, fn.2.