**CLOUD COMPUTING CHECKLIST**

Gartner Hype Cycle: Graph and terminology to describe how technology matures over time.

Five Characteristics of Cloud Computing: Network access, elasticity, resource pooling, measured service, and on-demand self-service.

Iaas: Buying infrastructure.

Paas: Buying infrastructure and platforms (operating systems, databases, middleware).

Saas: Buying infrastructure, platforms, and software.

Daas: Database as a service.

Service Oriented Architectures (SOAs)

Database: SQL, NoSQL

Relational Databases

Four NoSQL Databases: Key-Value, Column Store, Document Store, Graph Database

Content Delivery Network: Network of distributed computers to deliver content.

Logging: Loggly, Logentries

KPI – Key Performance Indicators: Tell if the system is meeting the business goals.

Backup: Active – Pass Cold, Active – Pass Warm, Active – Pass Hot

Access: OAuth, OpenID

Lightweight Directory Access Protocol (LDAP)

API Management

Monitoring

Security: Protection, Detection, Prevention.

Intrusion Detection

Firewall

Patch Management

Policy Enforcement

Auditing

Key Management: Keys should not be stored in clear text, should be changed every 90 days, should not be stored on the same server they are protecting.

Encryption

SecaaS – Security as a Service

Caching

Search

E-mail

Analytics

Payments

Control

Regulations: Health Information Portability and Accountability Act, Payment Card Industry Data Security Standards, Private Information Regulation, ISO 27001, FISO, SSAE 16, FedRAMP, ITAR, FIPS.

Private, Public, Hybrid Cloud: Public cloud shares services with other users. Private cloud has one user. Hybrid cloud implements both.

Legacy Systems: Existing systems. Legacy systems are tough to migrate to a new cloud. Systems should be migrated one step at a time.

Scaling Up: Adding additional hardware to a stack.

Scaling Out: Adding additional infrastructure that runs along side existing.

Stateless Service: Unaware of any information from a previous request.

Stateful: Aware of information from a previous request.

Encryption: 75% of security breaches are inside job. 63% of those breaches were not with intent.

Service Level Agreement (SLA)

The Open Group Architecture Frameworks (TOGAF)

Zachman Framework

Business Architecture Diagram

Program Flow Chart Diagram

Greenfield Applications

Global Cloud Computing Report Card – Business Software Alliance

Cloud Providers: AWS, RackSpace, GoGrid, Apigee, Mashery, Layer 7, EC2, Apprenda, Azure, OpenStack

Programming Languages: Ruby, PHP, Python, Node.js

Patriot Act

Cross-Zone Redundancy

Cross-Region Redundancy

Cloud Bursting: Leveraging the cloud to handle peaks in traffic.

Representational State Transfer (RESTful)

Representation: XML, JSON, HTML

UI – User Interface

UX

HATEOAS – Hypermedia as the engine of application state: The client interacts with applications only through hypermedia (hyperlinks)

ACID – Atomacity, Consistency, Isolation, Durability): Transactions are used to ensure that a transaction is complete and consistent.

BASE – Basically Available, Soft State, Eventually Consistent: Resources can fail and the data will eventually become consistent

CSP – Cloud Service Provider

SDLC – Software Development Life Cycle

Disaster Recovery

Governance

Data Management

Incident Management

Change Management

Business Continuity

Access Management