Federal Risk and Authorization Management Program (FedRAMP)

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Briefing for the
Information Security and Privacy Advisory Board
February 14, 2013

What is FedRAMP?

FedRAMP is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services.

Our approach uses a “do once, use many times” framework designed to save cost, time, and staff required to conduct redundant agency security assessments.

FedRAMP Key Benefits

- Increases re-use of existing security assessments across agencies
- Saves significant cost, time and resources – do once, use many times
- Improves real-time security visibility
- Supports risk-based security management
- Provides transparency between government and cloud service providers (CSPs)
- Improves trustworthiness, reliability, consistency, and quality of the Federal security authorization process

FedRAMP and the Security Assessment and Authorization Process

FedRAMP

Program Management Office and Joint Authorization Board

- **Maintains Security Baseline including Controls & Continuous Monitoring Requirements**
- **Maintains Assessment Criteria**
- **Maintains Active Inventory of Approved Systems**

Consistency and Quality

Trustworthy & Re-useable

Ongoing Assurance

1 Assessment

Independent Assessment

- Before granting a provisional authorizations, Cloud Service Provider systems must be assessed by an approved, Independent Third Party Assessment Organization

Independent Assessors to be retained from FedRAMP approved list of 3PAOs

2 Provisional Authorization

Grant Provisional Authorization

- Joint Authorization Board reviews assessment packages and grants provisional authorizations
- Agencies issue ATOs using a risk-based framework

Authorizations:

1. **Provisional ATO - Joint Authorization Board**
2. **ATO – Individual Agencies**
3. **Cloud Service Provider supplied packages**

3 Ongoing A&A (Continuous Monitoring)

Continuous Review of Risk

- Oversight of the Cloud Service Provider's ongoing assessment and authorization activities with a focus on automation.

Ongoing A&A Activities Will Be Coordinated Through:

1. **DHS – US CERT Incident Response and Threat Notifications**
2. **FedRAMP PMO – POA&Ms, Scan Reviews, and ongoing assessment**

FedRAMP Phases and Timeline

Phased evolution towards sustainable operations allows for the management of risks, capture of lessons learned, and incremental rollout of capabilities

	FY12	FY12	FY13 Q3	FY14
	Pre-Launch Activities	**Initial Operational Capabilities (IOC)**	**Full Operations**	**Sustaining Operations**
	Finalize Requirements and Documentation in Preparation of Launch	*Launch IOC with Limited Scope and Cloud Service Provider (CSP)s*	*Execute Full Operational Capabilities with Manual Processes*	*Move to Full Implementation with On-Demand Scalability*
Key Activities	• Publish FedRAMP Requirements (Security Controls, Templates, Guidance) • Publish Agency Compliance Guidance • Accredit 3PAOs • Establish Priority Queue	• Authorize CSPs • Update CONOPS, Continuous Monitoring Requirements and CSP Guidance	• Conduct Assessments & Authorizations • Scale Operations to Authorize More CSPs	• Implement Electronic Authorization Repository • Scale to Steady State Operations
		Gather Feedback and Incorporate Lessons Learned		
Outcomes	• Initial List of Accredited 3PAOs • Launch FedRAMP into Initial Operating Capabilities	• Initial CSP Authorizations • Established Performance Benchmark	• Multiple CSP Authorizations • Defined Business Model • Measure Benchmarks	• Authorizations Scale by Demand • Implement Business Model • Self-Sustaining Funding Model Covering Operations • Privatized Accreditation Board

FedRAMP Accomplishments since June 6, 2012

Cloud Service Providers

- Over 80 Applicants
- Two 2 Provisional Authorizations (Autonomic Resources, CGI)

3PAOs

- Over 50 Applicants
- 16 Accredited 3PAOs

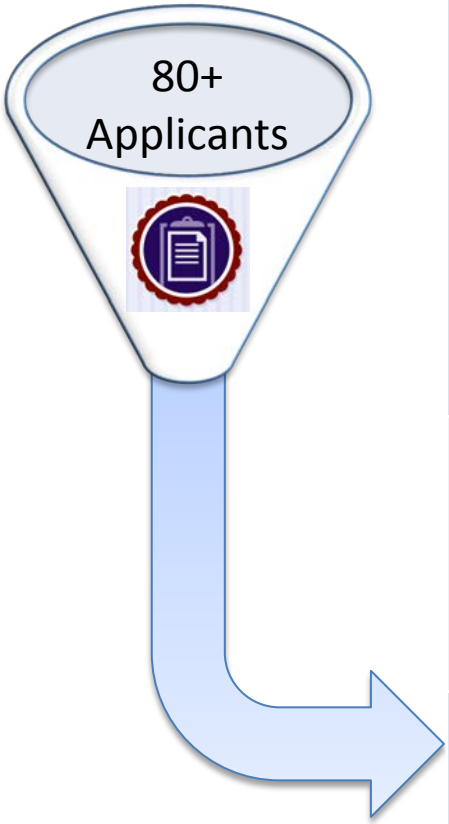
FedRAMP Program Office

- Published Baseline, Templates and Guidance
- Secure repository used by CSPs and storing FedRAMP Security Assessment Packages
- ISSOs engaged with prioritized CSPs
- Over 7500 touch points with industry, agencies

Federal Agencies

- Engagement with agencies granting “Agency ATOs”
- Multiple agencies reviewing documentation

FedRAMP Applicant Providers Overview



Deployment	IaaS	PaaS	SaaS
Public Cloud	• Virtual Machines • Storage • CDN • VDI	• .Net Code • Java Code	• CRM • BPM • Collaboration • Software Security Testing • Finance • Travel • Proj. Mgmt. • Human Resource
Private Cloud	• Virtual Machines • Storage • VDI • Cloud Backup	• Web Hosting	• BPM • Human Resource • FOIA • Acquisition Mgmt. • Online Training
Gov. Community Cloud	• Virtual Machines • Storage • VDI	• Web Hosting	• Access Control • Human Resource
Hybrid Cloud	• Virtual Machines • Storage		• Acquisition Mgmt.

Privacy and PII Concerns in the Cloud

- Privacy concerns in the cloud relate to both preventing and reacting to PII incidents
- FedRAMP reviews prevention measures in technical implementation:
  - Tenant isolation, boundary protection
  - Effective separation from corporate networks
  - Data sanitization of media for in-motion activities (i.e. VM de-provisioning)
  - Proper identity proofing mechanisms and secure communications
- Management and Operational controls are also key:
  - Are policies in place to allow proper response and provide transparency?
  - Do incident response procedures for alignment with NIST processes?
  - Does the CSP have the US-CERT notification processes in place?
- No substitute for effective contractual measures during acquisition
  - Establish SLAs upfront with penalties for non-performance
  - Understand the relationship between reseller and CSP
  - Document communication processes for incident responses

FedRAMP Privacy Approach

- FedRAMP requires all providers to complete a Privacy Threshold Analysis (PTA)
  (*PTA template available on fedramp.gov)*
- If CSP is storing PII, the 3PAO completes a Privacy Impact Assessment including:
  - Rationale for collection, Attributes of collection
  - Sources and storage durations
  - Access control, Safeguards
  - Contracts, Agreements and Ownership
  - Management, Maintenance and Business Processes
- CSP's Privacy Officer is required to sign off on the process
- This information is vetted by the JAB and available to every leveraging agency as part of the package

Lessons Learned

- Level of effort for thoroughly addressing all security controls in FedRAMP baseline is greater than expected
  - Vendors need sufficient time to adequately document their security implementations
  - FedRAMP has very rigorous standards for documentation due to government-wide nature of the authorizations
  - Expect greater efficiency as industry and government gain experience
- Prioritizing highest impact issues in the review process
  - Encryption standards (FIPS 140-2)
  - Multi-Factor Authentication
  - Appliances outside of direct CSP control (e.g. databases, authentication devices)
  - Boundaries
- Program improvements to increase time efficiencies:
  - Enhanced readiness reviews with CSPs
  - Parallel reviews of documentation
  - Reducing number of documents required get approval for testing
- JAB Agency reviews gaining efficiency as FedRAMP team better aligns expectations among stakeholders

Continuous Monitoring – the Next Frontier

- FedRAMP now monitoring providers with Provisional Authorizations
- Periodic assessment activities defined in FedRAMP's Continuous Monitoring Strategy & Guide (on fedramp.gov)
- FedRAMP's current strategy involves monthly reviews of key activities (POA&M, scan reports)
- Applying the Configuration Management processes as authorized Cloud Providers are growing and enhancing offerings
- Leveraging Agencies will benefit from these processes
- Working with DHS to evolve the monitoring process into a sustainable process that provides better situational awareness

Upcoming Program Developments

- Revision of Baseline
  - NIST will be updating the 800-53 control requirements from version 3 to version 4
  - Additional controls will specifically address privacy concerns
  - FedRAMP will have a public comment period to align baseline with new requirements
  - Expect updated baseline approximately 6 months after NIST finalizes revision 4
  - Update will occur within timeframe NIST gives agencies to move to the new standard (usually 1 year)

- Inclusion of High watermark in FedRAMP baselines
  - JAB does not think industry and government are ready for high baseline
  - DHS and DOD are working with CNSS to define high requirements and will work with FedRAMP as CNSS finalizes

- Privatization of 3PAO Accreditation
  - In coordination with NIST to move accreditation from a government review board (comprised of NIST and GSA) to a private review board
  - NIST has done similar efforts with health IT, common criteria labs, Underwriter's Labs (UL) and others.

Key Take Aways

- Launched on June 6, 2012; initial operating capability
  - Successfully proving that authorization process works
- Processes address lessons learned from previous efforts
  - Provide in-depth support for each CSP
  - Authorization process based on multi-stage approvals
- Response from CSPs and 3PAOs encouraging – robust applications, high level of interest from community
- Initial Operating Capability allows testing and vetting of processes, templates, and communications
- Ongoing communication and transparency will continue to be critical to success

GSA

For more information, please contact us or visit us at any of the following websites:

http://FedRAMP.gov
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Follow us on twitter @ FederalCloud