



# ISOAG Meeting December 6, 2017

## Welcome to CESC



# Welcome and Opening Remarks

Michael Watson

December 6, 2017



# ISOAG December 6, 2017 Agenda

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|---|--------------------------------|
| <b>I. Welcome &amp; Opening Remarks</b>   | <b>Mike Watson, VITA</b>       |
| <b>II. Evaluating Deployed Microsoft Access Databases Against SEC 501 Standards</b> | <b>John Musgrove, VITA</b>     |
| <b>III. Enterprise Cloud Oversight<br/>When &amp; Where Does it Apply</b>           | <b>Demetrias Rodgers, VITA</b> |
| <b>IV. Security Awareness (Fun &amp; Games)</b>                                     | <b>Terri Helfrich, SCC</b>     |
| <b>V. Upcoming Events</b>   | <b>Mike Watson, VITA</b>       |
| <b>VI. Partnership Update</b>   | <b>NG</b>                      |



Virginia Information Technologies Agency

# MS Access Database Security

Evaluating Deployed Microsoft Access Databases Against SEC 501 Standards

**John Musgrove, MS, CISA**

Director, IT Security Audit Services

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Information Security Officers Advisory Group

December 6, 2017



## Introduction

- Director, IT Security Audit Services @VITA
- Formerly at VCU Audit & Compliance
- IT Geek, Navy Veteran, World Traveler
  
- Happily Married
- Visited 40 countries, 6 continents
- Old Car Enthusiast – 4 classics in garage
- Photos published by Smithsonian



## Access Experience

- User & Programmer since 1992
- Richmond Region President, User Group
- Employed 10+ years as Access Guru
- Adjunct College Instructor 10 years



## History

- Access 1.0 released November 13, 1992
- First native windows RDMS by Microsoft
- Limited in size to 1 GB, total data & code



## Features and Benefits

- Leveraged VBA as code IDE
- File-Server database, not client-server
- Native SQL compiler
  - GUI or Code Interface
  - Pass-through queries to other platforms



# Version Control and Retirement

- Version of Access Database

	Launch	End Life	Extended
• 2007			10/10/2017
• 2010	7/15/2010	10/13/2015	10/13/2020
• 2013	1/09/2013	04/10/2018	04/11/2023
• 2016	9/22/2015	10/13/2020	10/14/2025



## User Level Security (ULS)

- Access 2007 last version to use ULS
- Enabled encryption
- Opened with single, shared password
- DOES NOT meet requirement for SEC 501
- Custom Module or 3<sup>rd</sup> Party add-in *might*



## File Extensions

- Original 8.3 extension: MDB
- After xxx, now: ACCDB
  
- Compiled, locked-down version:
- MDE or ACCDE
  
- Agency owned/programmed application
  - Must have MDB or ACCDB as source code



## Reviewing Access Databases

- Test/inspect MDB and MDE (or equivalent)
- Attempt special keys
  - Shift bypasses startup
  - F11 shows main navigation pane
- Are toolbars/ribbons visible & accessible?



## Still reviewing database

- Locking Mode – Read/Write errors
  - Edited Record or All Records, not ‘No Locks’
- Macros – Autoexec each time file opens
  - Can be used to:
    - Trigger events, run VB code
    - Interface with windows OS
    - Build/re-connect to external objects/data



## Database Documenter

- Built in Menu-driven tool
- Works for all six object types in Access
  - Table, query, form, report, macro, module
- Can examine and display/print
  - Properties, components, SQL, permissions
  - VB Code for archival storage (PDF)



## Hidden and System Objects

- Right-click on All Access Objects
  - Select “navigation options”
  - Or File | Options | Current DB | Navigation
- Show Hidden Objects
  - Reveals internal data tables
  - Connection string passwords – PLAIN TEXT



# Audit and Error Logs

- Not standard components
- Must be
  - Custom coded
  - Tested
  - Maintained
  - Monitored



## Good News, Bad News, Worse News

- Access is still a powerful, useful tool
- NOT SEC 501 compliant out of the box
- Deployment / Continued Use **REQUIRES**
  - Custom Coding for missing components
  - or COTS-purchase from vendor /reseller



## Contact Me

- [John.Musgrove@vita.virginia.gov](mailto:John.Musgrove@vita.virginia.gov)
- 804-416-5424 Desk at CESC
- On LinkedIn
- [in/john-musgrove-69366728](https://www.linkedin.com/in/john-musgrove-69366728)



# Enterprise Cloud Oversight: When and where does it apply?

**Demetrias Rodgers**  
Enterprise Services Director

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ISOAG  
December 06, 2017



## What is Enterprise Cloud Oversight Services (ECOS)? - continued

### ECOS Applies when:

- Services under procurement meet the definition or characteristics of a SaaS provider.
- When an agency is requesting the provider to act on behalf of a commonwealth entity, is accepting commonwealth data, serving as the data custodian and/or system administrator of that data for purposes of making it available back to the commonwealth via an interface for fee.

Visit this webpage for more detail on SaaS Characteristics:

[Enterprise Cloud Oversight Services \(ECOS\)](#)



# ECOS – Where & Why Not

- **SaaS is the new Buzzword**

- Suppliers will now refer to everything as SaaS, however there are services that are identified as SaaS which do not require ECOS.
- These are services where the subscribers are simply consuming from the provider (e.g. data, licenses, content).
  - These are cases where there is no COV data being uploaded into the suppliers system
  - These services like a subscription to Gartner or where you content or data is being shared with you for fee do not require ECOS,
  - SaaS solutions where Commonwealth data is being stored, transmitted or processed will require ECOS
    - Commonwealth data is defined as “Data maintained, transformed or stored by an agency or it’s designee in the performance of commonwealth business”.



## How is ECOS different? *Data, Data, Data*

- Types of **Data** in the Cloud (*sensitive, PHI, PII, public*)
- Location of **Data** in the Cloud (*public, private, hybrid*)
- Access to **Data** in the Cloud
- Risks
  - Technical (*service provider platform, security, Data privacy*)
  - Supplier viability, performance and reporting
  - Contractual (*special contract terms*)
    - Loss or compromise of **Data**
    - Supplier liability
    - Return of **Data**
    - Termination/Exit strategy

# ECOS – Where & Why

- There is shared security responsibility for cloud.
- ECOS applies for Software as a service (SaaS) only.
- There are cloud models and with each comes varying responsibility. Cloud services still require:
  - A/V, Anti-malware
  - Network security controls
  - Secure coding practices,
  - Logging, reporting and alerting.
- SaaS is the least burdensome on the agencies as well as it is the closest model to the services currently provided under our Managed Services model

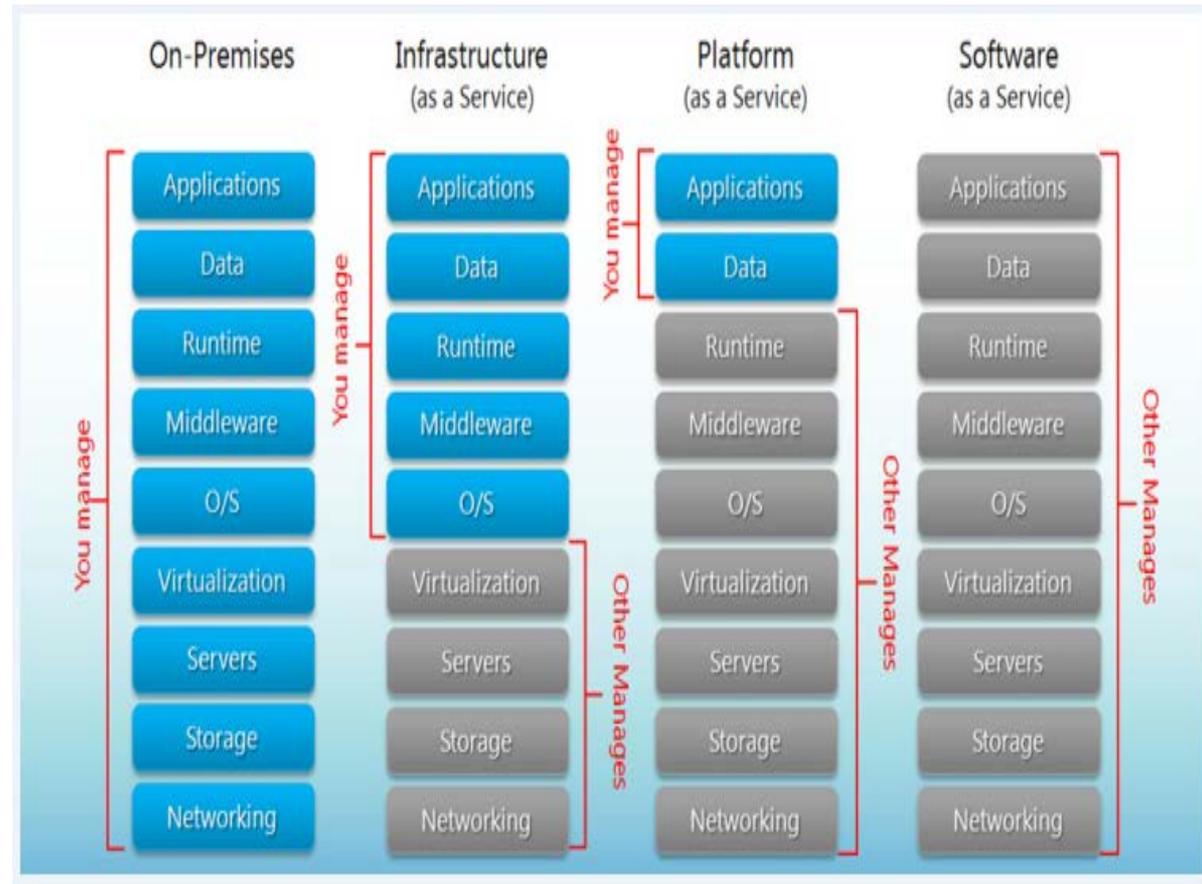
Responsibility	On-Prem	IaaS	PaaS	SaaS
Data classification & accountability	Cloud Customer	Cloud Customer	Cloud Customer	Cloud Customer
Client & end-point protection	Cloud Customer	Cloud Customer	Cloud Customer	Shared
Identity & access management	Cloud Customer	Cloud Customer	Shared	Shared
Application level controls	Cloud Customer	Cloud Customer	Shared	Cloud Provider
Network controls	Cloud Customer	Shared	Cloud Provider	Cloud Provider
Host infrastructure	Cloud Customer	Shared	Cloud Provider	Cloud Provider
Physical security	Cloud Customer	Cloud Provider	Cloud Provider	Cloud Provider

Legend: ■ Cloud Customer ■ Cloud Provider



## Cloud Responsibilities

- Shared responsibility for security and management responsibility are not one in the same.
- SaaS solutions are not managed by the subscribing tenant at all.
- Tenants subscribe and consume with a shared responsibility for access control related activities only for SaaS offerings





## ECOS policy - continued

- **PURPOSE:** To enable the adoption of cloud-based services across the COV using VITA as an IT service provider. Cloud computing includes evaluating the service provider for adequate IT management as well as cataloging cloud services that have existing contracts with the commonwealth.
- The full policy is located here: [Third Party Use Policy](#)



# Questions

Contact: Demetrias Rodgers  
[Demetrias.Rodgers@vita.virginia.gov](mailto:Demetrias.Rodgers@vita.virginia.gov)



Terri Helfrich, SCC  
There are no slides for her  
presentation.





Virginia Information Technologies Agency

# Upcoming Events





## Future ISOAG

**January 10, 2018 @ CESC 1:00-4:00**

**Speakers: Servio Medina, Defense Health Agency**

**Bill Freda, VITA**

**Chuck Ross, Impactmakers**

***ISOAG meets the 1<sup>st</sup> Wednesday of each month in 2017***



## IS Orientation

**December 14, 2017**

**1:00-3:00 CESC**

Link for registration:

<http://vita2.virginia.gov/registration/Session.cfm?MeetingID=10>

**ISOAG meets the 1<sup>st</sup> Wednesday of each month in 2017**



## Registration is Now Open

**“2018 COVA Information Security  
Conference: “Expanding Security  
Knowledge”**

**April 12 & 13**

**Location: Altria Theater**

**<https://wm.irisregistration.com/Site/VITA2018>**

**Registration Fee - \$175**

**\*Contact [CommonwealthSecurity@vita.virginia.gov](mailto:CommonwealthSecurity@vita.virginia.gov) for more  
information**



# Conference Keynote Speakers

**Adam S. Lee,**  
**Special Agent in Charge**  
**Federal Bureau Investigations (FBI)**  
**Richmond (Division) Field Office**

**Dr. Deanna D. Caputo**  
**Principal Behavioral Psychologist**  
**Human Behavior and Cybersecurity Capability**  
**Steward**  
**The MITRE Corporation**

# ADJOURN

## THANK YOU FOR ATTENDING

