



FLBUG

Florida Banner User Group

Our Journey to Better Sleep

Application Security in Banner

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Who Are We...

- Application Security Admin for **Enterprise Application Services**
- 2 DBAs, 20+ developers/app admins and functional techs
- Banner for 20+ years...
 - Large number of customizations
 - A lot of legacy code in the database
 - Automation heavy
 - Security investment and focus has dramatically increased in the past few years
 - Understanding the REAL threats that exist and complexity of our systems lead to... *INSOMNIA*

Trouble Sleeping...

- Heart Burn
- Snacking at bedtime
- Netflix binge watching
- Snoring
- Kids in the bed
- Late night video game sessions
- **Nagging feeling of dread...**





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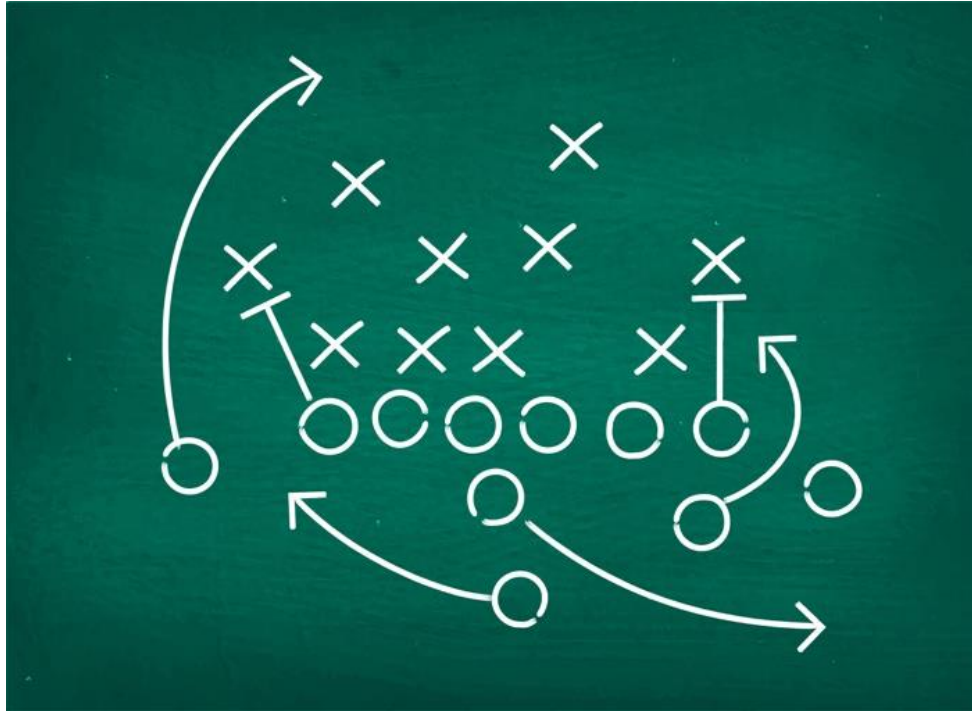
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Our Trouble Sleeping...

- Uncertainty of what is in the database
 - Large # of customizations and automations
 - Legacy Code
- Uncertainty of the level of privileges for applications
 - No process for allocating privileges for apps/service accounts
- Need to reduce developer privileges
- Need to update service account passwords
- Need for more pro-active reviews by data custodians
- Need for more visibility
 - Auditing and Reporting

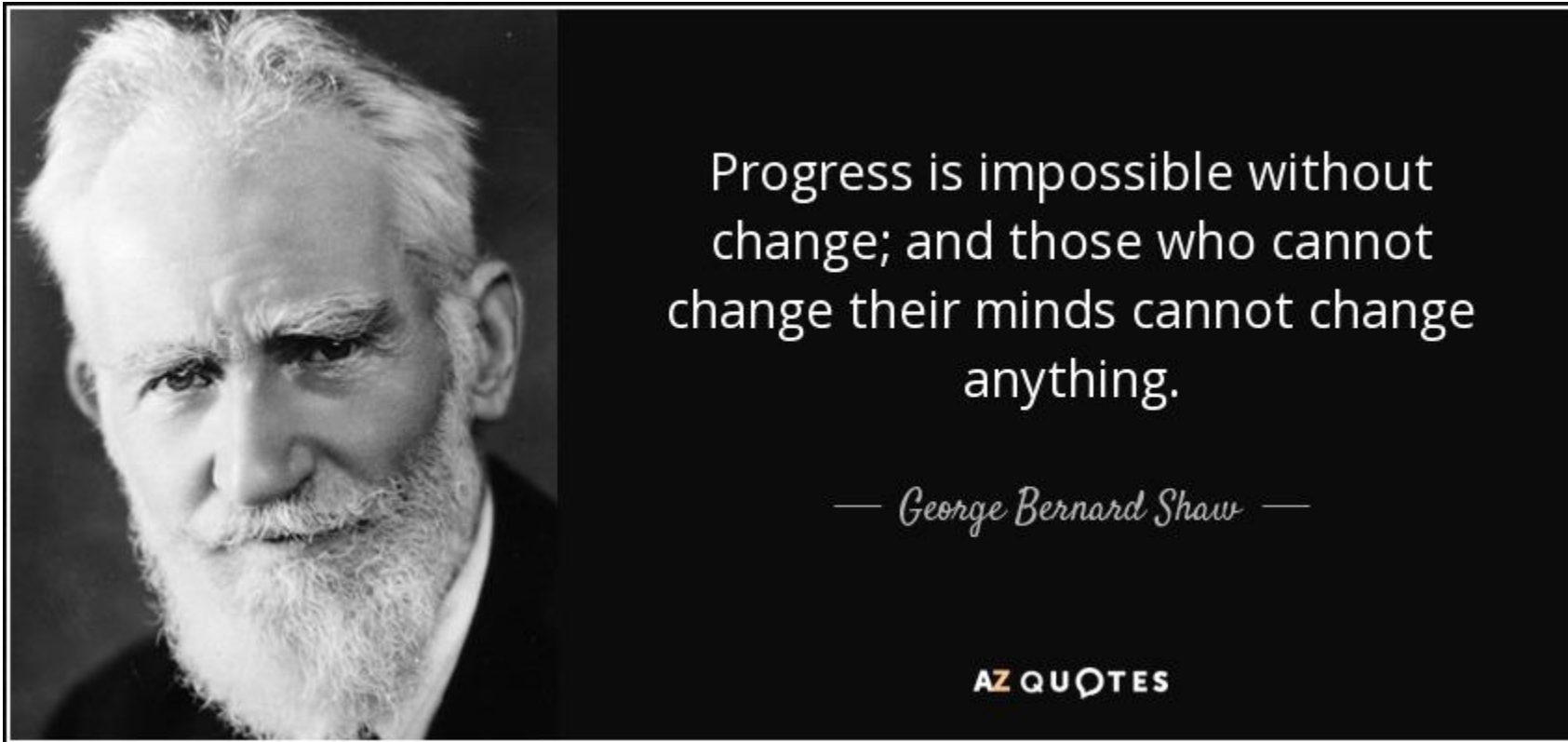


Game Plan...



- Increase our understanding of our system
 - Code reviews
 - Documentation
 - Code cleanup
- Increase our knowledge of best practices
 - Oracle Database security
 - Roles/Privileges
 - Oracle Auditing
 - Profiles for resource limitations
 - Banner security
 - Password requirements

Implementing Change...



Implementing Change...

- We reduced developer privileges
 - Created Oracle roles for developers to utilize when needed
 - Role with higher privileges only granted in non-prod
- We reduced the number of users in non-prod instances
 - Only users who perform development and/or testing are unlocked in non-prod
- Reviewed and enforced our terminations policies
 - User accounts are locked after last work day and deleted after 365 days



Implementing Change...

- Securing our Service Accounts – close to 200 total
 - Password policy review and enforcement
 - Password Verify Function update
 - Password rotation schedule
 - Passwords rotated at least every 365 days for service accounts
 - Custom profiles with resource and password limits
 - Reduction of privileges for overly privileged accounts
 - Breaking up service account used for multiple applications into multiple service accounts
 - Granting only the very granular privileges that each application needs
 - New applications are heavily scrutinized and granted least privileges needed



Implementing Change...

- Increase resources for Data Custodians
- Created custom Banner job for Banner/Oracle Security review
- GZRSCAD – Banner and Oracle Security Audit Reports
 - Produces security reports by module (HR, AR, Finance, Finaid, General)
 - Produces multiple security reports
 - List of Banner Users and their security groups
 - List of Security Groups and their objects
 - List of Oracle Users and their roles
 - List of Roles and their objects
 - Tab level security
 - Name changes



What's Next...

- New security application
 - Streamline security requests, management and reporting
 - Allow data custodians to pull reports or view security for a specific user
 - Allow data custodians to acknowledge they have performed an annual review
- Strengthen security setup in third-party applications
- Increase database auditing and reporting (Oracle Auditing/Banner Unified Auditing)



What's Next...

Better Sleep



Contact Info

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Presentation will be available at FLBUG.org



Questions?

