1 **Green Pace**

Security Policy Presentation
Developer: Matt Jackson
Southern New Hampshire University

2 **OVERVIEW: DEFENSE IN DEPTH**

3 **THREATS MATRIX**

- eCrime accounts for most intrusions
- Most intrusions use social engineering
- Hactivism unlikely to threaten customer data
- Sabotage is unlikely but has a high impact

4 **10 PRINCIPLES**

5 **CODING STANDARDS**

- Parameterize user input using prepared statements
- Ensure access values are within the range of the string length
- Do not use C standard free() to deallocate objects allocated with new
- Close files when they are not needed.
- Handle all exceptions
- Do not use assertions to validate input
- Make declarations unambiguous
- Ensure data values do not wrap around
- Use explicit, C++ casting conventions when converting data types
- Do not assume order of evaluation will ensure side effects are executed in that order
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6 **ENCRYPTION POLICIES**

7 **TRIPLE-A POLICIES**

8 **Unit Testing**

- Add five values to a collection (Positive test)
- Verify resize decrease (Positive test)
- Throw out-of-range exception (Negative test)
- Search for removed value (Negative test)
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9 **Add Five Values to Collection**

10 **Verify resize decrease**

11 **Throw exception**

12 **Search for removed value**

13 **Results**

14 **AUTOMATION SUMMARY**

15 **TOOLS**

- CODESonar
- Sonar Cube
- PVS-Studio
- SpotBugs
- Polyspace BugFinder

16 **RISKS AND BENEFITS**

17 **RECOMMENDATIONS**

GAPS

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- Policy and standards cannot address every bit of code

- Who is responsible for security upon deployment?
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- Education and awareness
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- Need data recovery plan and incident response guide
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18 **CONCLUSIONS**

- Splunk has identified 50 of the top cybersecurity threats. Many more exist. Continual vigilance and awareness of new trends is a must.
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- Consider using a third party to provide security as a service for consistency across products and clients.
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- Educate employees and clients, especially as new threats and procedures emerge
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- Create a disaster recovery plan
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19 **REFERENCES**