
OmniSOC
The Higher Education & Research
Security Operations Center

Meet the team!




arfsec@iu.edu

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Mike Simpson

- **CISO for ARF**
- Senior Security Analyst at OmniSOC
- 20+ years of experience in IT / Cybersecurity
- Areas of expertise:
  - Cybersecurity Program Development & Strategy
  - Network Security
  - Digital Forensics
  - Network Penetration Testing
  - Physical Security

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Mikeal Jones

- **Deputy CISO for ARF**
- **Leads CRMP / Compliance Documentation initiative**
- Security Analyst at OmniSOC
- 20+ years of experience in IT / Cybersecurity
- Areas of expertise:
  - IT Operational Strategy
  - Cybersecurity
  - Systems Architect + Admin

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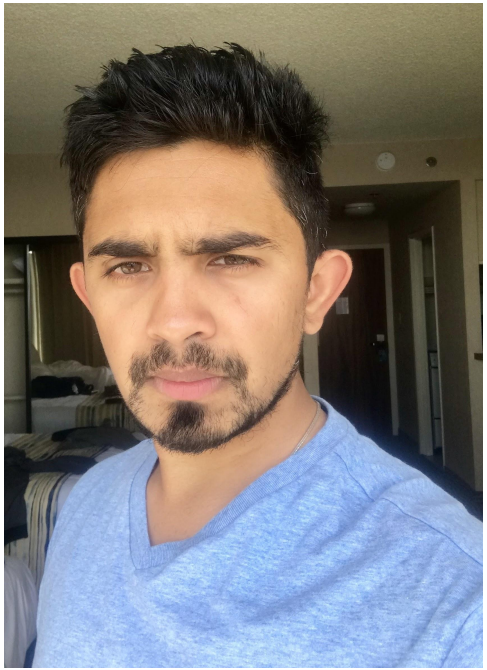
Ishan Abhinit



- **Leads Incident Response policy and procedures initiative**
- Senior Security Analyst at IU CACR
- 12+ years of experience in IT
- Masters degree in Cybersecurity
- Areas of expertise:
  - Cybersecurity Program Development & Strategy
  - Security Log Analysis

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Vishal Bhardvaj

- Security Analyst at OmniSOC
- 10+ years of experience in IT
- Master of Science in Cybersecurity
- Areas of expertise:
  - Windows software development
  - Macintosh data recovery
  - Telecommunications (2G, 3G, 4G)

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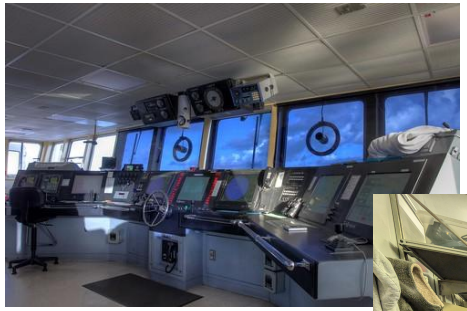
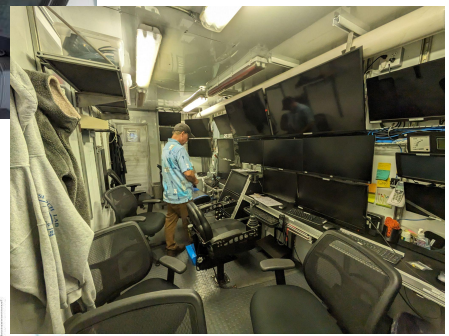
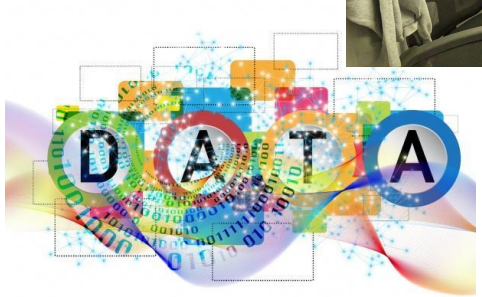
Cybersecurity Enables Science

- Cybersecurity efforts protect against threats to:
  - **Ship Operations**: safe and reliable operation of the vessel.
  - **The instruments and scientific systems** that collect and work with the data on the ships including connections between systems and back to shore.
  - **The integrity and availability of the data itself.**







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Continuing Projects:

- CRMP and compliance documentation
- Incident Response (IR) Policy & Procedures
  - Review existing
  - Work with you to create new
  - All ship operators should have them!
- Cyber-Incident Drills
  - Test IR Policies and Procedures
  - Prepare for the cyber-incident that will come.
- Participating in the NextGen Firewall (NGFW) Project
  - Great opportunity to upgrade network security!
- Monitoring network data.
  - From NGFW
  - Corelight NIDS and OmniSOC Data Aggregators

Continuing Projects (cont.):

- Deploying Forwarned STINGARv2 Honeypots
  - 8 ships have them deployed.
  - VMs or Raspberry Pi available
  - We can help with deployment
- External Network Vulnerability Scanning
- Attend ship inspections:
  - Sproul
  - Sharp
- Ship and facility visits
- **All of OmniSOC's services are already paid for and do not affect your day rate.**

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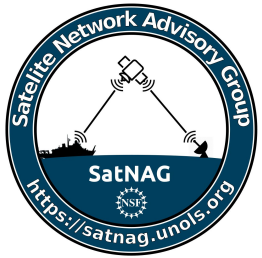
Community Engagement

- Consults and Participates with:
  - CIWG
  - SatNAG
  - HiSeasNet
  - NextGen Firewall (NGFW) Project
- Participates at RVTEC Conference
- Attend UNOLS Council Meetings
- Participated on the training cruises on the Sikuliaq



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NextGen Firewall (NGFW) Project:

- In production phase
  - No longer in beta, but refinements continue to be made
- 7 ship have FortiGates and FortiAnalyzers deployed
- 3 additional ships are in the process of scheduling their deployment.
- Allows OmniSOC to monitor network traffic

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Use of End of Life OS and/or Software:

- Reasons:
  - OT or Science system has software that requires a fixed or out dated OS version.
  - Upgrading is prohibitively expensive or the upgrade does not exist..
- Risks - Overall increase over time.
  - **Often no security updates and known exploits**, increase likelihood of successful attack leading to spread of compromise and losing functionality, operational time, and data.
  - **Increasing difficulties integrating with systems** running up to date software. Outdated data formats may require conversation.
  - **Delays in detecting attacks or problems.**
  - **Possible increase in legal liability** and/or repercussions in case of an incident.
  - **Increased operational and maintenance costs:** spare parts or copies of the software may have to come from alternative sources or specially made. Operating the system around lack of integration or mitigation controls takes more time.

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Use of End of Life OS and/or Software:

- Response:
  - Plan for replacement or upgrade. Easier said than done, but often the most effective.
  - Mitigate risks while working toward replacement or upgrade.
    - Air gap or severally limit network access, both internal networks and Internet access.
    - Increase monitoring of the EoL system. May require regular manual interactions.
    - Increase the hardening of the system. Security controls needed may make operation of the system less efficient.
  - Work towards upgrading or replacement as quickly as possible.

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Thank you for your attention.

Questions?

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