



CYBER FRIDAY:

The Forensic Record

April 14, 2023 @ 11:00 am - Noon
Presented by Matt Frost, WPI



Webinar Etiquette

PLEASE

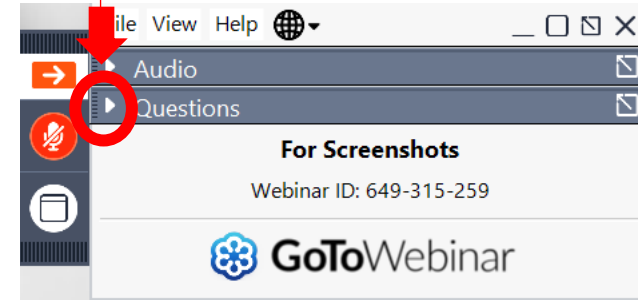
- Log into the GoToWebinar session with the name that you registered with online
- Place your phone or computer on MUTE
- Use the QUESTIONS option to ask your question(s).
 - We will share the questions with our guest speaker who will respond to the group

THANK YOU!



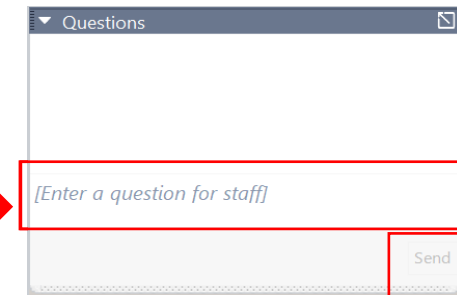
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USING THE QUESTIONS BOX

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here at any time
during a
presentation



Click Send when ready to submit a question

WPI is Wisconsin's APEX ACCELERATOR

The APEX Accelerators program, under management of the Department of Defense (DOD) Office of Small Business Programs (OSBP), plays a critical role in the Department's efforts to identify and engage with a wide range of businesses entering and participating in the defense supply-chain. The program provides the education and training that all businesses need to participate to become capable of participating in DOD and other government contracts.

More about WPI

- WPI provides services to all of Wisconsin's 72 counties
 - Individual counseling at our offices, client's facility or virtually
 - Small group training – webinars and workshops
 - Conferences including one on one buyer meetings – Marketplace, The Contracting Academy, Small Business Academy, Wisconsin Federal Contractor Forum, Acquisition Hour, Cyber Fridays, DOD Roadmap series, Government Opportunities Business Conference, End of Year Federal Contractor Update, Annual DOD Contract Management Update, Evening FAR sessions and more.....
- Last year WPI sponsored or participated in over 80 events
- Last year WPI provided technical assistance to over 1300 companies
- The APEX Accelerator is funded in part through a cooperative agreement with the Department of Defense
- WPI is also funded by the Wisconsin Economic Development Corporation (WEDC), contributions and in-kind

WPI OFFICE LOCATIONS

■ MILWAUKEE

- *Technology Innovation Center*

■ MADISON

- *FEED Kitchens*
- *Dane County Latino Chamber of Commerce*
- *Wisconsin Manufacturing Extension Partnership (WMEP)*
- *Madison Area Technical College (MATC)*

■ ASHLAND

- *Ashland Area Development Corporation*

■ CAMP DOUGLAS

- *Juneau County Economic Development Corporation (JCEDC)*

■ EAU CLAIRE

- *Western Dairyland*

■ FOND DU LAC

- *Envision Greater Fond du Lac*

■ GREEN BAY

- *NWTC Startup Hub*

■ LACROSSE

- *Veterans in Professions*

■ MANITOWOC

- *Progress Lakeshore*

■ OSHKOSH

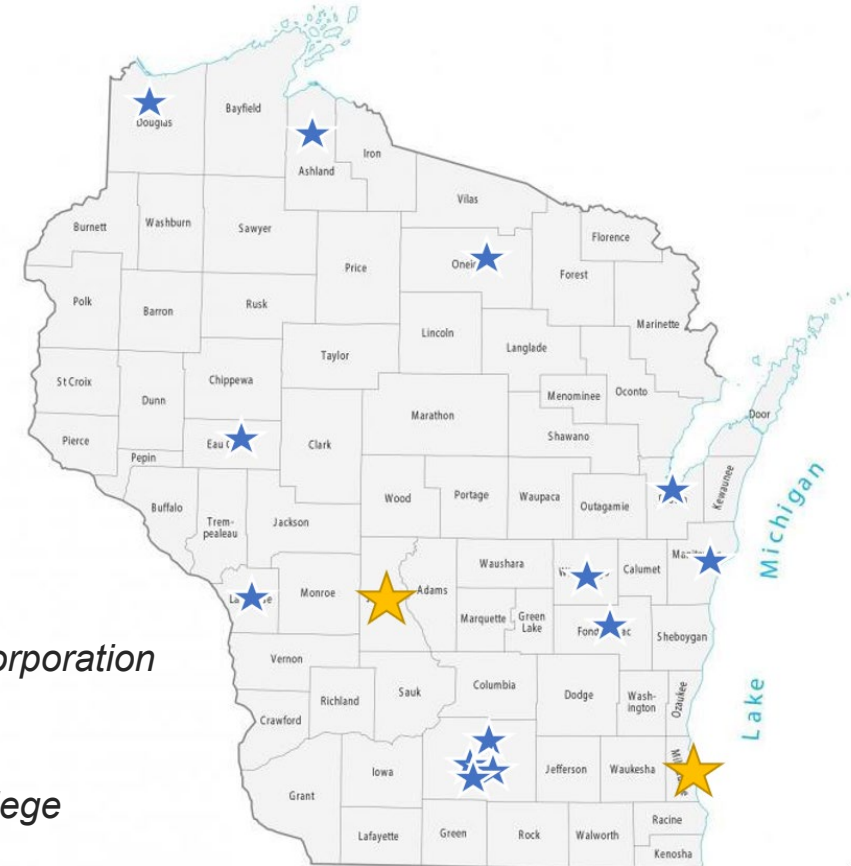
- *Greater Oshkosh Economic Development Corporation*

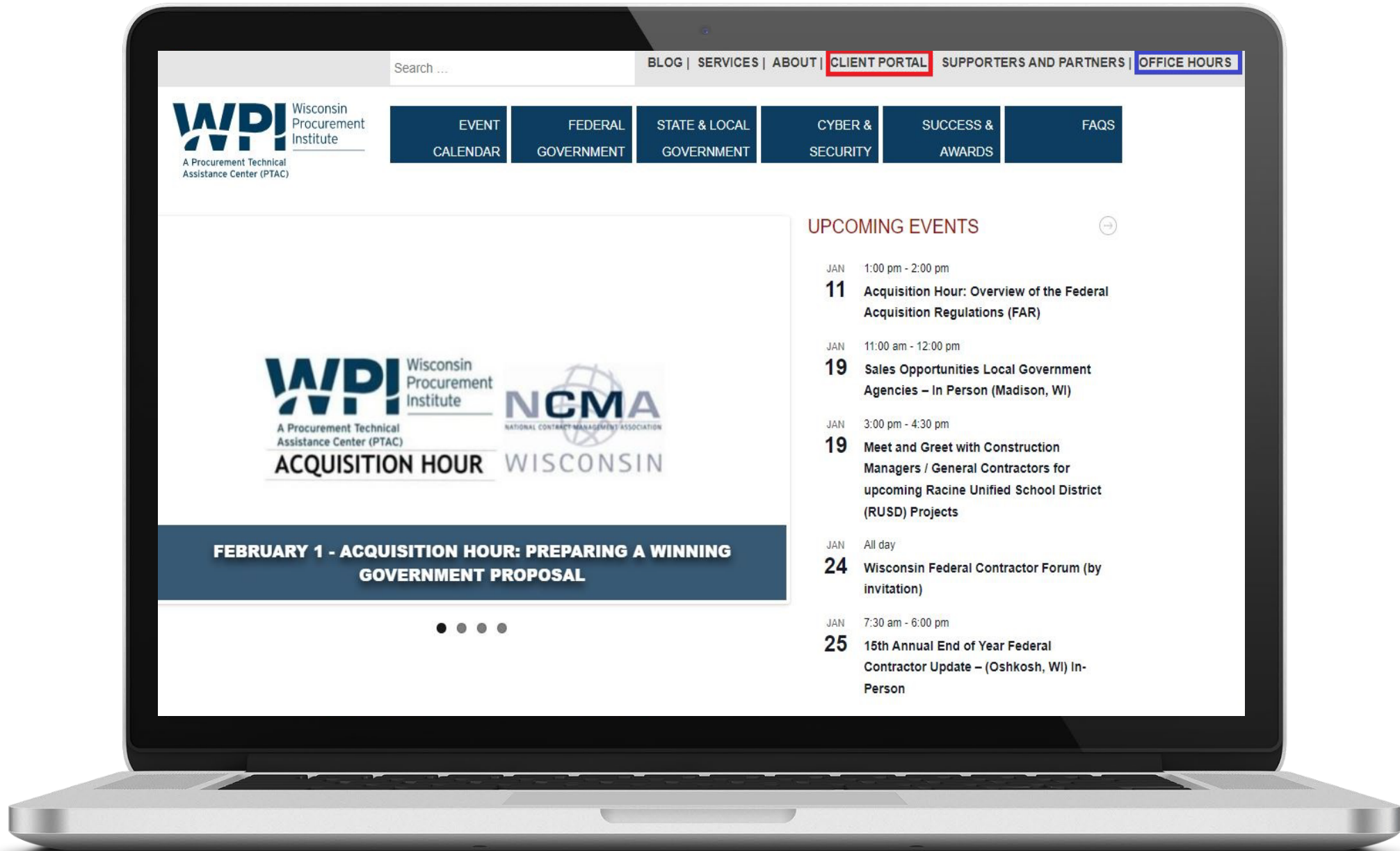
■ RHINELANDER

- *Nicolet Area Technical College*

■ SUPERIOR

- *Small Business Dev Center; UW Superior*





Search ...



- EVENT CALENDAR
- FEDERAL GOVERNMENT
- STATE & LOCAL GOVERNMENT
- CYBER & SECURITY
- SUCCESS & AWARDS
- FAQS



FEBRUARY 1 - ACQUISITION HOUR: PREPARING A WINNING GOVERNMENT PROPOSAL



UPCOMING EVENTS

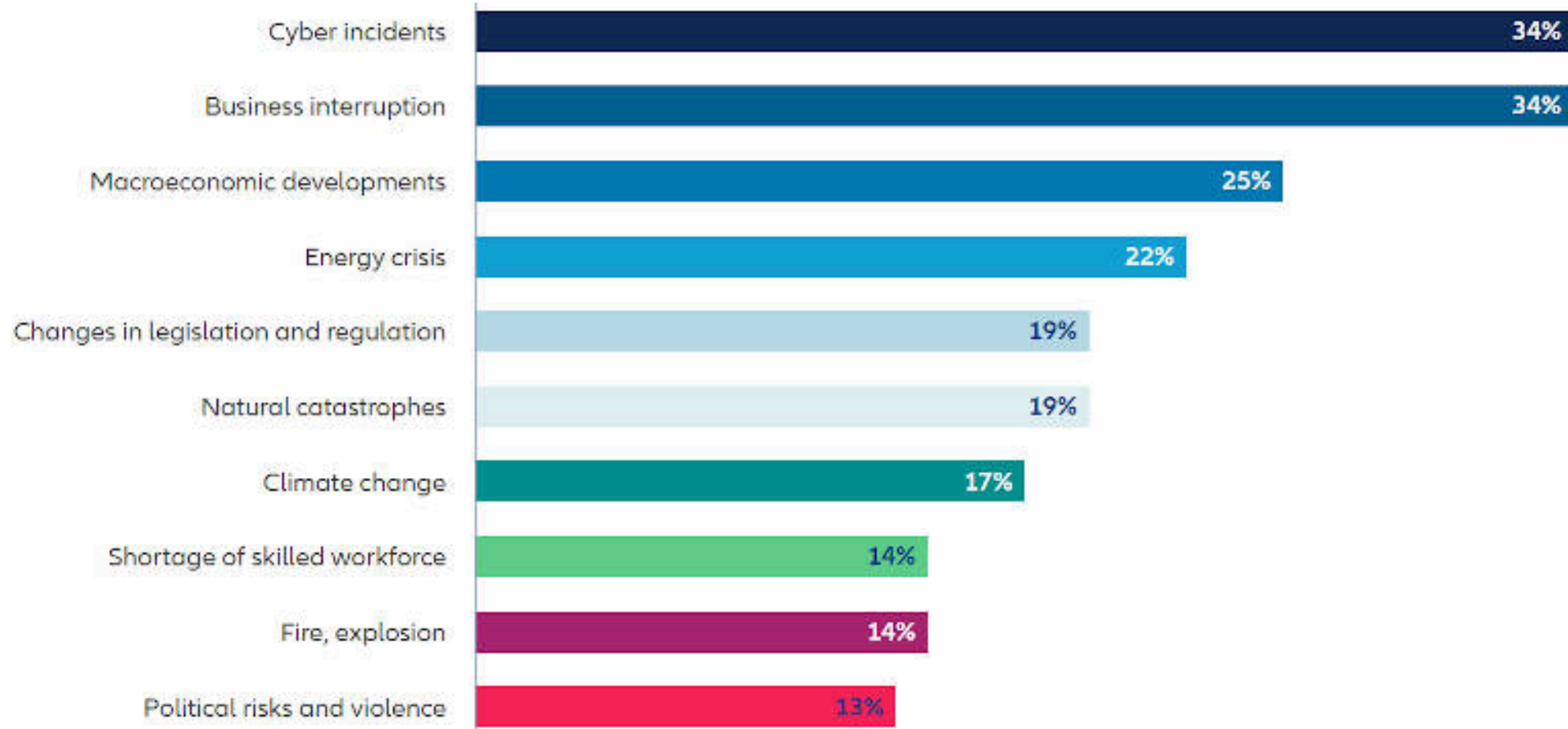
- JAN 1:00 pm - 2:00 pm
11 Acquisition Hour: Overview of the Federal Acquisition Regulations (FAR)
- JAN 11:00 am - 12:00 pm
19 Sales Opportunities Local Government Agencies – In Person (Madison, WI)
- JAN 3:00 pm - 4:30 pm
19 Meet and Greet with Construction Managers / General Contractors for upcoming Racine Unified School District (RUSD) Projects
- JAN All day
24 Wisconsin Federal Contractor Forum (by invitation)
- JAN 7:30 am - 6:00 pm
25 15th Annual End of Year Federal Contractor Update – (Oshkosh, WI) In-Person

The Forensic Record



CYBER FRIDAY SESSIONS – April 14th, 2023

Why prepare?



Source: Allianz Risk Barometer 2023

The numbers represent the percentage of all participants who responded (2,712). The numbers do not add up to 100% because more than one risk could be selected.

NIST

National Institute of Standards and Technology

The Contractor shall implement NIST SP 800-171, as soon as practical, but not later than December 31, 2017.

3.3.1

Create and retain system audit logs and records to the extent needed to enable the monitoring, analysis, investigation, and reporting of unlawful or unauthorized system activity.

When the Contractor discovers a cyber incident that affects a covered contractor information system or the covered defense information residing therein, or that affects the contractor's ability to perform the requirements of the contract... the Contractor shall rapidly report cyber incidents to DoD.

Guide to Computer Security Log Management

1

NIST SP 800-61

NIST Special Publication 800-92
Guide to Computer Security Log
Management

2

CISA

Department of Homeland Security's
Cybersecurity & Infrastructure
Security Agency

3

NIST SP 800-171 R2

NIST Special Publication 800-171 R2
Protecting Controlled Unclassified
Information in Nonfederal Systems
and Organizations

1



INTENT

2



LOGS & RECORDS

3



CONSIDERATIONS



Incident Response



Audit and Accountability

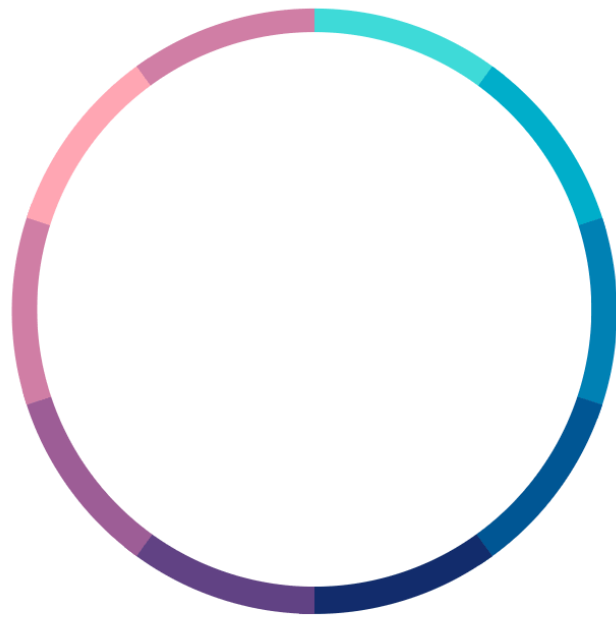
- Create Logs
- Identify Users/Services
- Review and Update Events
- Alerting
- Review, Analyze, and Report
- Record Reduction and Reporting
- Preserve the Timeline
- Secure and Protect

What to Log?

LOG MANAGEMENT 101

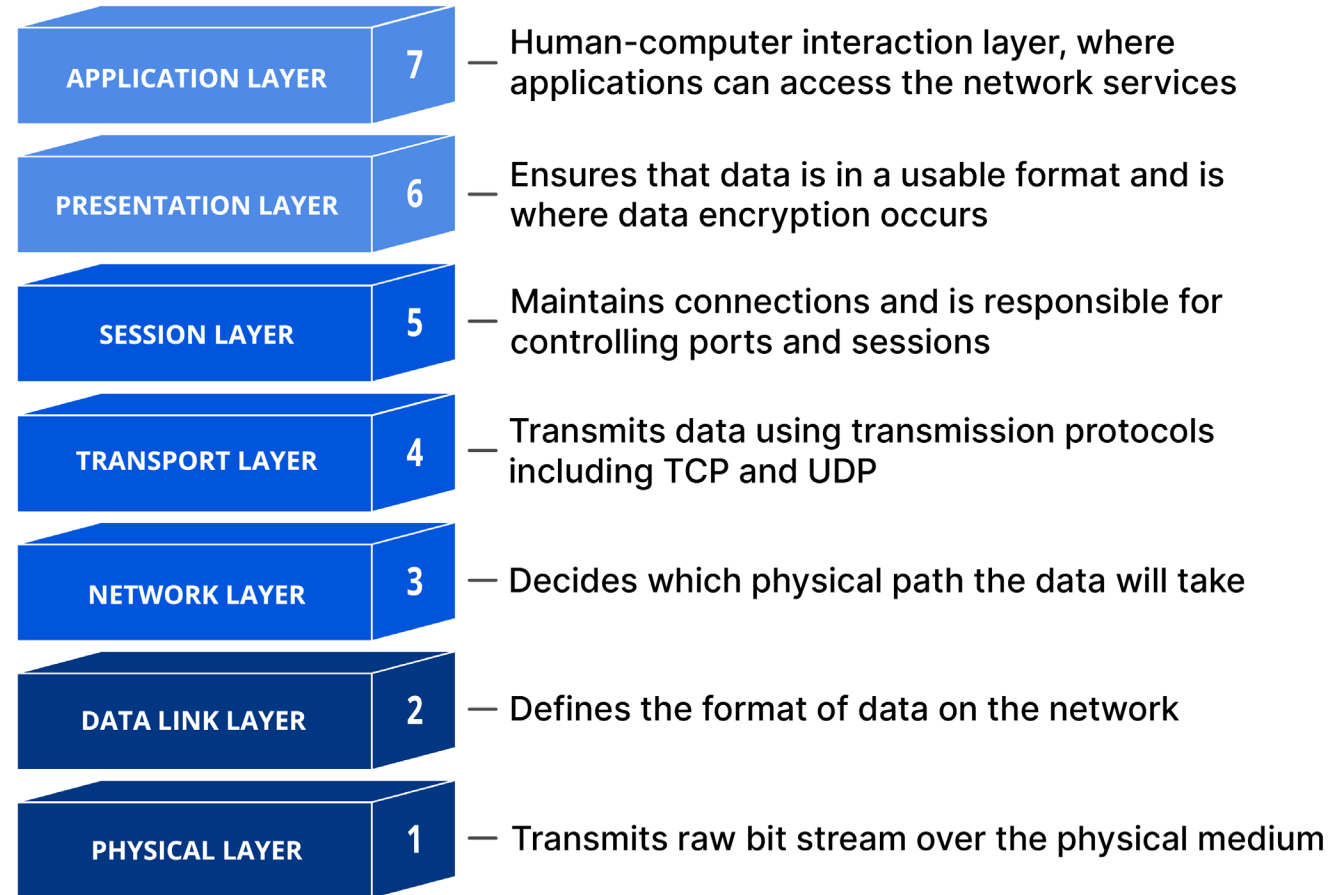
What to Log

- DNS
- Packet Capture Logs
- Cloud Platform Logs
- Windows Events
- Data Base



- Linux Logs
- Infrastructure Devices
- Containerized Applications
- Web Servers
- Security Device Logs

The OSI Model – Open Systems Interconnection



Roles and Responsibilities

01

Security Administrator

Responsible for the configuration, capture, analysis, and maintenance of the logs.

02

Incident Response Team

Responsible for the review, risk management, and decision making when presented with log analysis.

03

Audit & Review

Responsible for ensuring log data is preserved, accurate, and capable of being correlated and analyzed.

04

Process & Planning

Determines log management intentions, operations, and procedures.

1



INTENT

2



LOGS & RECORDS

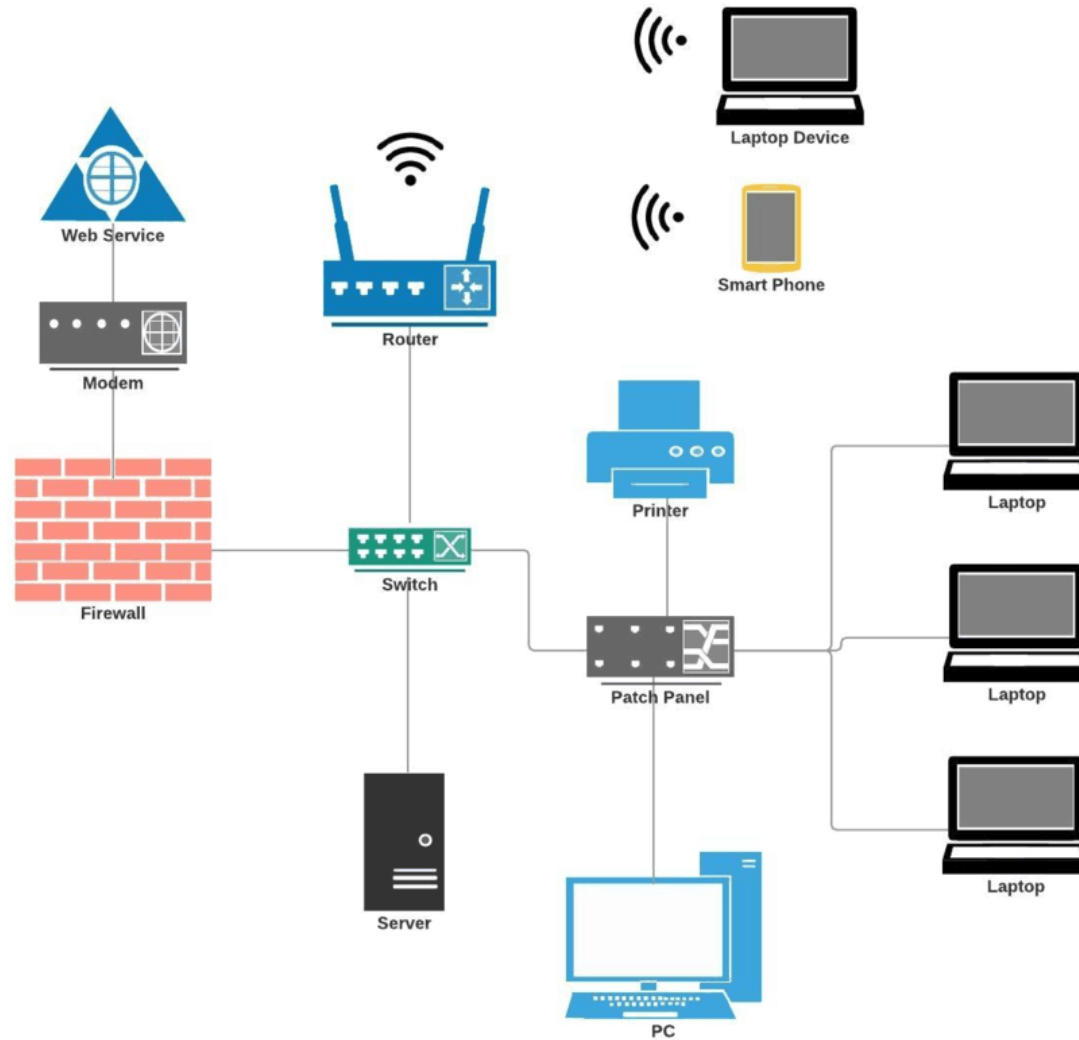
3



CONSIDERATIONS

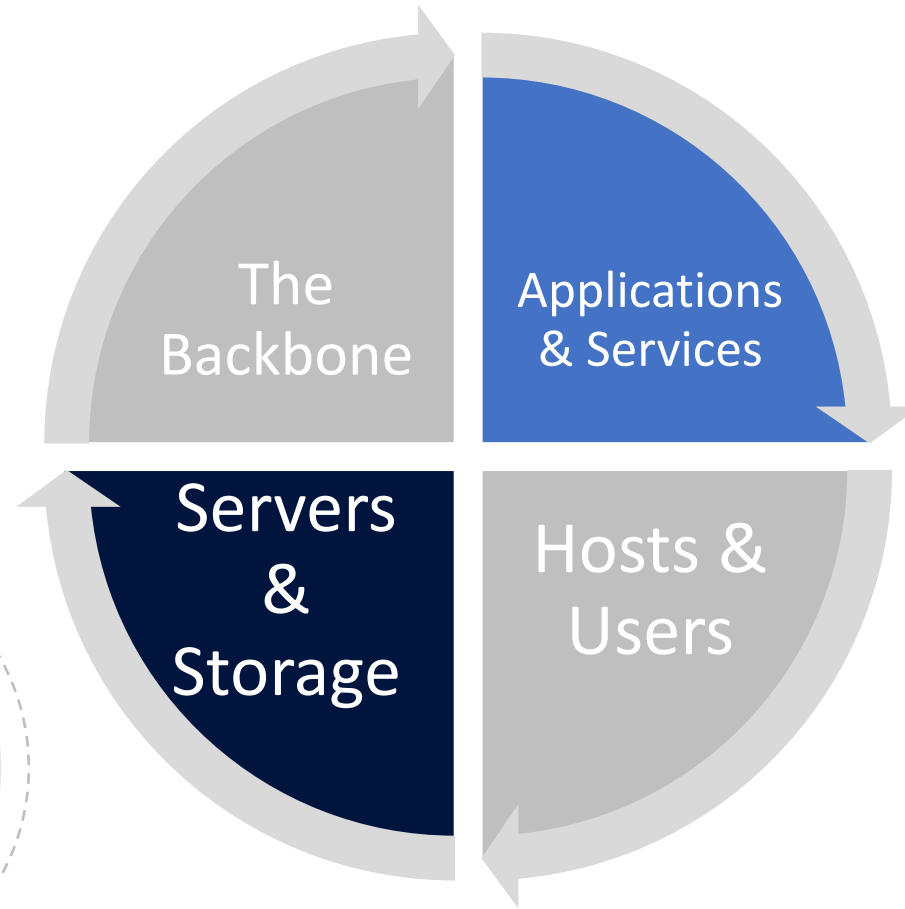


The Battlefield

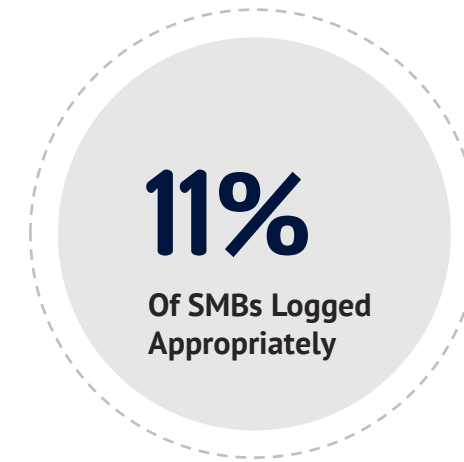
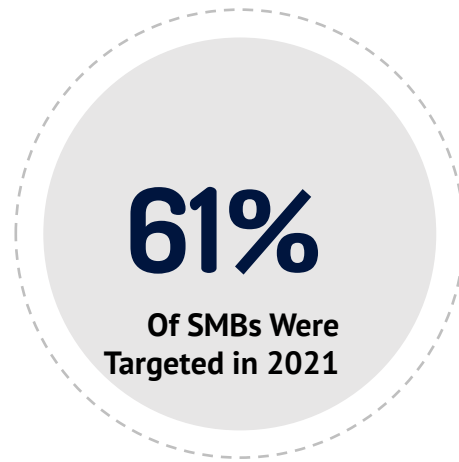


The Correlative Process

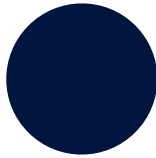
Capturing a comprehensive picture of your data usage is critical to discover, identify, and mitigate incidents.



Practical limitations for SMBs can make log collection/analysis difficult – focus on a solid start and expand as resources allow and necessity demands.

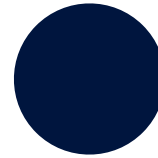


What to capture?



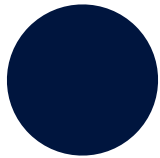
REQUESTS

Record each request or invocation of service within the application.
Ex: Services, API Access, Process Start Up, Application Access



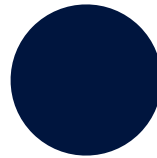
AUDIT TRAIL

Any change to data including creating, updated, deleting, or exporting data. Includes identity, date and time, and what data was involved.



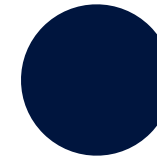
AVAILABILITY

Faults and exceptions that impact availability and stability of system components. Ex: Capacity Limit, Usage, Errors or Bugs, Connectivity, Latency/Response



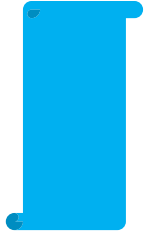
THREATS

Suspicious activities and events.
Ex: Unauthorized access to processes or data, invalid parameters or input, failed authentication attempts, failed verifications, warnings/alerts.



EVENTS

Any activity that a user can make on/in an application or system. Ex: Search Queries, File Views, Shares, Time Spent on Data, Behavioral Histories



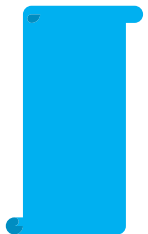
CONTROL ACCESS

Designated administrators (not all administrators, necessarily). Principle of Least Privilege.



STORE AND ENCRYPT

Log files should be stored for a period of no-less than 90 Days and encrypted to preserve their integrity.



BACKUP

Log files should be backed up regularly and preserved in multiple locations.

SECURING THE RECORD



1



INTENT

2



LOGS & RECORDS

3

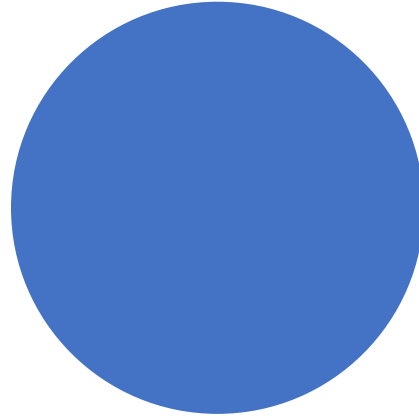


CONSIDERATIONS

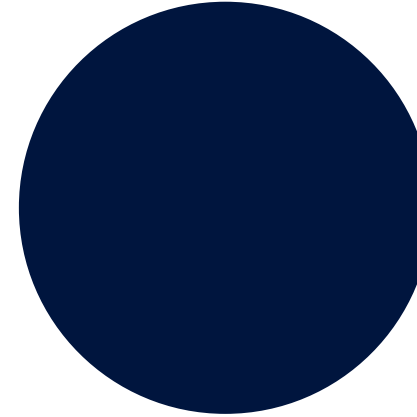


ADDITIONAL DOCUMENTATION

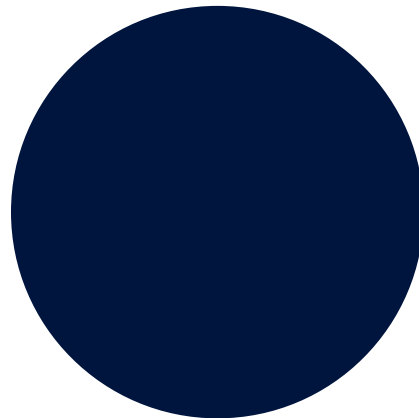
Timeline/Journal of Incidents



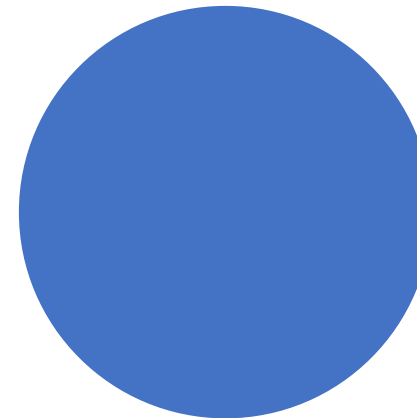
Incident Response Team's
communications/meeting
minutes.



Person of Authority

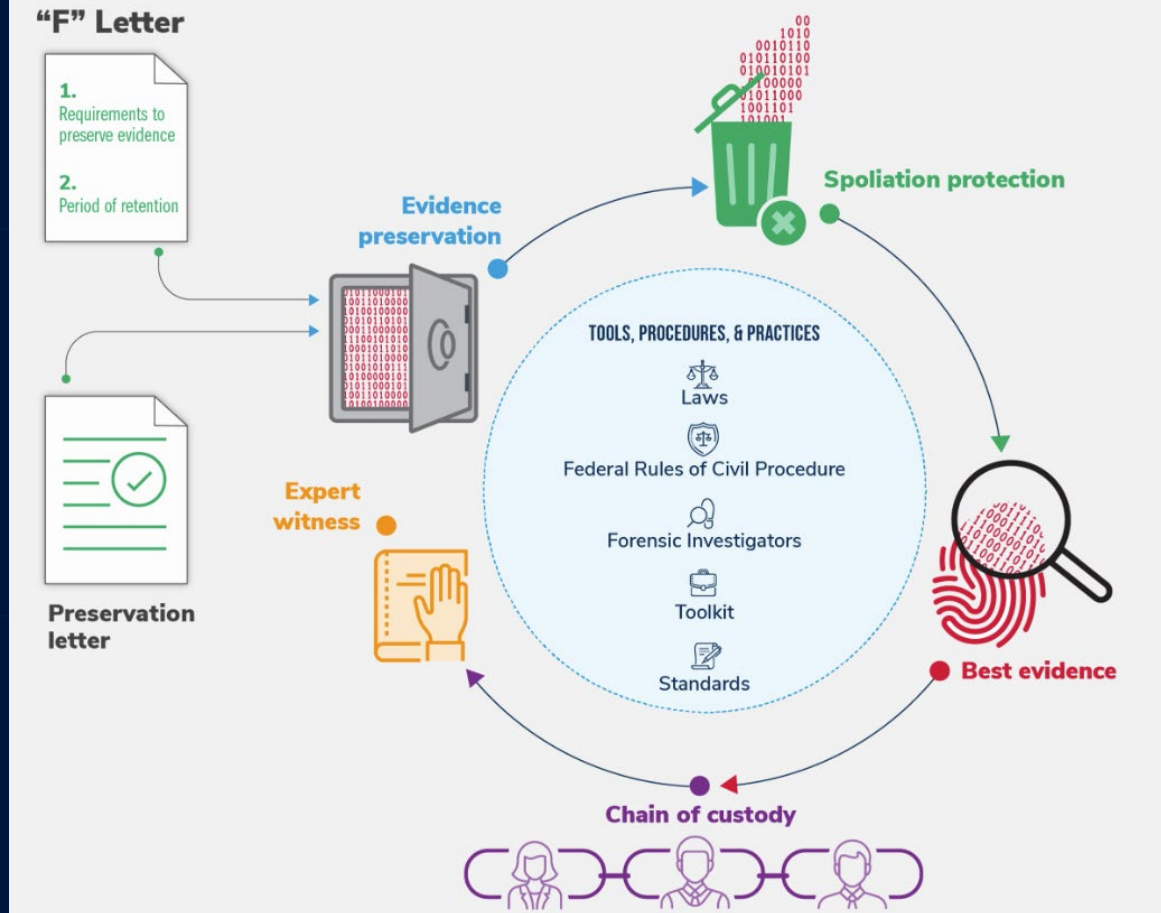


Chain of Custody



THINGS TO DO

The Digital Forensics Legal Model



- ✓ Preserve Power State (No Shutdowns or Startups)
- ✓ Create Copy or Image
- ✓ Establish Physical Custody
- ✓ Document Chain of Custody
- ✓ Be Familiar with Laws and Process

Matthew Frost

mattf@wispro.org

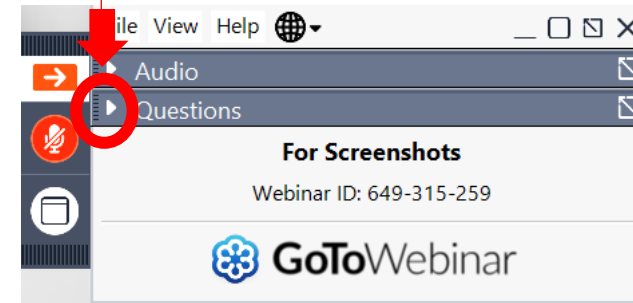


QUESTIONS?



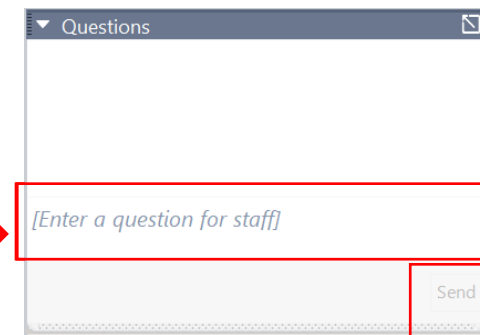
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UPCOMING TRAINING - EVENTS

CYBER FRIDAY LIVE WEBINAR SERIES

- ~~March 24~~
~~Protecting the Data~~
- April 14
The Forensic Record
- April 28
Culture of Security



The
Contracting
Academy

*Developing and Growing
Government Contractors*

Presents:

9th Annual DOD Contract Management Update

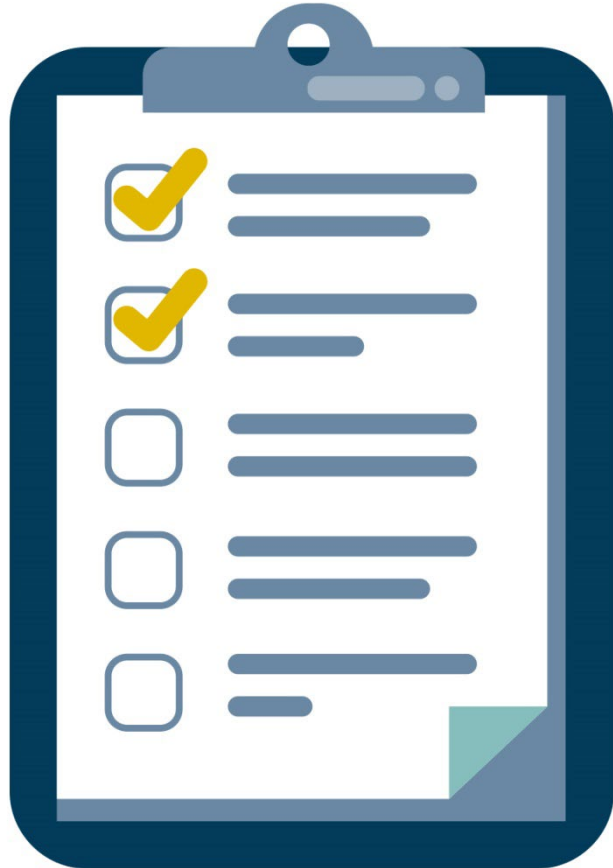
—VIRTUAL—

May 2-3, 2023

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SURVEY



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carolineb@wispro.org

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