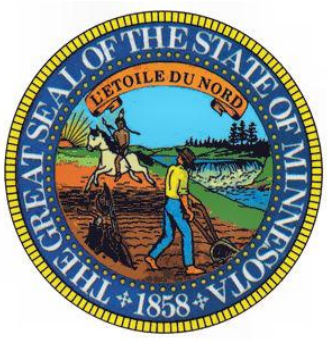
2017 Erich J. Spengler Midwest Regional Collegiate Cyber Defense Competition Team Packet



March 17-18, 2017

Team Adviser: _____ Team Captain: _____ page 1
Signature acknowledges concurrence with entire document

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Midwest Regional CCDC Mission and Objectives

The 2017 Erich J. Spengler Midwest Regional Collegiate Cyber Defense Competition (CCDC) provides a competitive opportunity for collegiate teams who have proven themselves in 2017 Midwest State CCDC Qualification or Wildcard events. The Midwest Regional Collegiate Cyber Defense Competition is designed to provide a controlled competitive environment that will permit each participating institution to assess their students' depth of understanding and operational competency in managing the challenges inherent in protecting an enterprise network infrastructure and business information systems. The winner of the 2017 Erich J. Spengler Midwest Regional CCDC is eligible to move on to the 2017 National CCDC in San Antonio, Texas, April 13-15, 2017.

Overview

Midwest Collegiate Cyber Defense Competitions are managed by CSSIA, the National Resource Center for Systems Security and Information Assurance. The competition is designed to test each student team's ability to secure a networked computer system while maintaining standard business functionality. The teams are expected to manage the computer network, keep it operational, and prevent unauthorized access. Each team will be expected to maintain and provide public services per company policy and mission. Each team will start the competition with a set of identically configured systems.

The objective of the competition is to measure a team's ability to maintain secure computer network operations in a simulated business environment. This is not just a technical competition, but also one built upon the foundation of business operations, policy, and procedures. A technical success that adversely impacts the business operation will result in a lower score as will a business success which results in security weaknesses.

Student teams will be scored on the basis of their ability to detect and respond to outside threats, including cyber attack while maintaining availability of existing network services such as mail and web servers, respond to business requests such as the addition or removal of additional services, and balance security against varying business needs.

Business Scenario

You have been hired as part of a team to take on the support of an existing infrastructure. The organization has issued a number of interim security policies that the network needs to be in compliance with. Please review the following policies, so that we can also ensure that we are in compliance.

Password Policy

All user passwords should be sufficiently complex and of a length to cause brute force password guessing to be unproductive. The infrastructure team should have guidelines and procedures for users to use to construct compliant passwords. Passwords to privileged administrator accounts and other service-accounts that have wide access to services and file system components should have stronger password requirements than typical end-users.

Perimeter Protection

The organization's network needs to be protected from unauthorized access from connections to the Internet (and other non-company networks). This should be accomplished through the development of security procedures, guidelines and the implementation of technology that will restrict inbound and outbound connections to only those that are needed to support the business and mission of the organization.

The infrastructure management should maintain current documentation that summarizes the topology of network and recent tests that verify the configurations are only permitting necessary connections.

File System Security

The theft of the organization's intellectual property is a concern and can cause significant liability in the event of a breach. The file system protections available should be fully implemented to ensure that only relevant users have access to data stored on servers. In all cases, each user's home directory should be private to their user credentials.

Files that are accessible to the Internet, such as web pages for the web site, should be monitored with an integrity checking mechanism, so that changes to these pages can be immediately detected.

Logging and Auditing

All servers and network components that support logging (syslog and Windows event log) should have this facility enabled. Syslog capable services should report their events to a common syslog server. These logs need to be reviewed periodically at an interval sufficient to detect potential breaches.

Reporting

All suspected breaches and detected attacks need to be reported to the appropriate authorities as soon as possible via our Red Team reporting service. A log of breaches and significant attacks along with their disposition should be maintained and available to management.

Internal Protection

The organization is concerned about APTs (Advanced Persistent Threats), caused by end-users falling victim to phishing attacks. It is highly likely that internal hosts have been compromised by these attacks. Therefore, it is imperative that all servers and related equipment be hardened via configuration, tools and effective procedures to minimize the loss of important documents and data to an internally compromised host. Effective logging needs to be implemented so that these potential attacks can be detected. The approach that the Infrastructure Team takes in this regard should be carefully documented and updated for management review.

Midwest Regional Competition Goals

1. To promote fair and equitable standards for cyber defense and technology based competitions that can be recognized by industry
2. To evaluate the defensive and responsive skills of each team under exact hardware, software application, and operating system configurations using a joint academic and industry rating scale
3. To demonstrate the effectiveness of each participating institution's academic security program
4. To be executed by a preponderance of industry professionals
5. To have industry recognition, participation and acceptance of each competition
6. To rate the effectiveness of each competition against a predefined standard of competition rules
7. To provide a cooperative and competitive atmosphere among industry partners and academia in the area of cyber defense education
8. To provide recognition for participating teams
9. To increase public awareness of academic and industry efforts in the area of cyber defense education
10. To select an educational team to represent the Midwest at the National CCDC.

Institutional Requirements for Participation

In order to compete at the regional, teams must satisfy the following requirements:

1. Submit paperwork from their institution authorizing their team to participate in the regional as an official school event; this authorization must include an explicit list of all student participants, and be signed by a school administrator. Schools should use their own authorization forms. This may also be an authorization letter on school letterhead. Teams may bring the authorization document to the event.
2. Have all student participants and alternates as well as all team advisers sign and submit MVCC Waiver forms. Emergency contact information is required.
3. All student participants must submit a resume in electronic form. Team advisers should collect these and email to the CSSIA Competition Director and Competition Administrator in a single compressed file.
4. All students and team advisers sign a MVCC photo release form; may submit at the event
5. Team Captain must sign this 2017 Erich J. Spengler Midwest Regional Team Packet; may sign at the event

Competition Team Identification

- **Blue Team** - student team representing a specific academic institution competing in this competition; Each team consists of up to 12 competitors, submitted to the respective State CCDC Director for respective Midwest State CCDC. Each competition team may consist of up to eight (8) members chosen from the submitted roster. The remainder of the roster is for substitution in the event a member of the active competition team cannot compete. Each competitor is expected to be a full time student at the school

from which they compete. An exception is a part time student that expects to graduate in the current term. Such a student may compete if they were a full time student during the previous term. Substitution in the competition team requires approval from the CSSIA Competition Director or a CSSIA Compliance Monitor present at the competition.

Further guidelines for Blue Team participation have been documented in respective 2017 Midwest State CCDC Team Packets.

- National rules apply; www.nationalccdc.org
- Further information is available at www.cssia.org/ccdc, the main website for Midwest Cyber Defense Competitions.

- **Red Team** – Professional network penetration testers from industry approved by the competition director and industry representatives
  - Scan and map the network of each competition team
  - Attempt to penetrate the defensive capabilities of each Blue Team network and modify any acquired environment
  - Assess the security of each Blue Team network
  - Attempt to capture specific files on targeted devices of each Blue Team network
  - Attempt to leave specific files on targeted devices of each Blue Team network
  - Follow rules of engagement for the competition

- **White Team** – Representatives from industry who serve as competition judges, remote site judges, scoring management, room monitors and security enforcement in the various competition rooms. Judges will assess the competition team's ability to maintain their network and service availability based upon a business inject and a scoring instrument, delivering inject scenarios, scoring of injects, creating log entries, securing log files, issuing or controlling the timing of injects, etc. Each competing Blue Team may have a White Team member present in their room that will assist judges by observing teams, confirming proper inject completion as well as reported issues.

- **Chief Judge:**
  - Serves as the final authority on scoring decisions or issues relating to equity or fairness of events or activities
  - Cannot be from any institution that has a competing Blue team or have any interest in any team outcome
  - Ideally, should be a representative from industry or law enforcement
  - Final authority of all judging decisions, including assessment of final scores and winners of the competition

- **Gold Team** – Comprised of the CSSIA Competition Director, the host site Chief Administrator, as well as representatives from industry and academia who make up the administration team both in planning and during the exercises. Responsibilities include, but are not limited to,
  - Administration and staffing of the cyber defense competition
  - Works with industry partners to orchestrate the event
  - Along with Industry White Team approves the Chief Judge

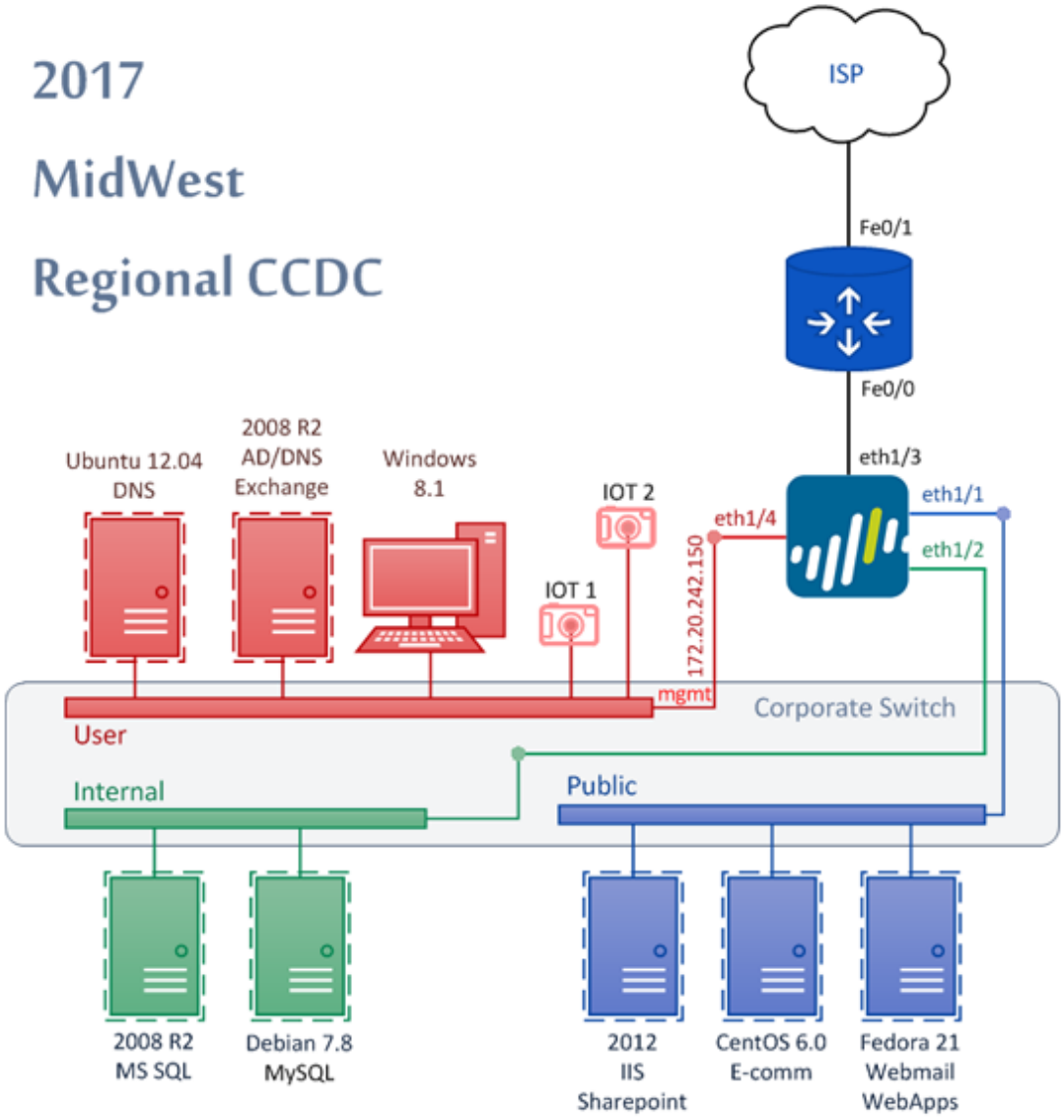
- Has the authority to dismiss any team, team member, or visitor for violation of competition rules, inappropriate or unprofessional conduct
- Manage event activities and events such as:
    - Greet people
    - Organize food, awards
    - Assist in setting up the competition
    - Assist with hotel / travel arrangements

- **Orange Team** – Student workers who assist the competition by accessing team services. Orange team members act like typical users, and may come from extraneous IP addresses. The Orange Team is expected to keep track of the accessibility of services and report to the White Team their results. The white team may use results of Orange Team activity as a part of scoring.

- **Green Team** – Tech support and hospitality – assists with any technical needs necessary to maintain the integrity of the competition. Assists with ancillary functions – greeters, food service, local directions.

Competition Topology

As the new IT staff, your team will be taking over management responsibilities of the network. The previous IT team may not have kept completely accurate documentation. This is the best information we have currently, and believe it to be reasonably correct. You may find a few differences when you begin your work.



Network Description

- The competition network will be hosted via the Cyber Stadium located at Moraine Valley Community College. Each competition network will be located remotely from any competition room and will be logically isolated from all other competing Blue Teams. The access point is to an NDG NETLAB$^{+™}$ PE system located at,

cyberlab.morainevalley.edu

The NDG NETLAB$^{+™}$ PE is accessible via a web browser. Access accounts and initial passwords will be distributed at the start of the competition. Accounts will be,

t1u1, t1u2,….,t1u8
t2u1,t2u2,…..
….
t10u1,…

- The router, and switch shown in the topology are hardware devices as follows:

Cisco 2811 Router with IOS C2800NM-ADVIPSERVICESK9-M, Version 12.4(24)T1
Cisco 2960 Switch with C2960-LANBASEK9-M, Version 12.2(55)SE7

All servers and workstations are virtual machines under the management of NETLAB^{+}™.

- Each team has the following router internal address:

Router
f0/0 172.20.243.253

- Core IP addresses are the following:

Team	Router f0/1	Core connection to Router f0/1	"Public" IP pool
1	172.31.1.2/30	172.31.1.1	172.25.1.0/24
2	172.31.2.2/30	172.31.2.1	172.25.2.0/24
3	172.31.3.2/30	172.31.3.1	172.25.3.0/24
4	172.31.4.2/30	172.31.4.1	172.25.4.0/24
5	172.31.5.2/30	172.31.5.1	172.25.5.0/24
6	172.31.6.2/30	172.31.6.1	172.25.6.0/24
7	172.31.7.2/30	172.31.7.1	172.25.7.0/24
8	172.31.8.2/30	172.31.8.1	172.25.8.0/24
9	172.31.9.2/30	172.31.9.1	172.25.9.0/24
10	172.31.10.2/30	172.31.10.1	172.25.10.0/24

- The firewall is a Palo Alto firewall VM, version 6.0.7 with the following addresses:

ethernet1/1 172.20.241.254
ethernet1/2 172.20.240.254
ethernet1/3 172.20.243.254
ehternet1/4 172.20.242.254

The management IP is labeled on the topology:

172.20.242.150

The Palo Alto is intended to be managed from the Windows8.1 workstation via a secure browser session where the default account/password is:

admin:changeme

Switch port assignments within the topology are as follows:

VM Label	Switch Interface
2008 R2	f0/1
Debian 7.8	f0/2
PA eth1/2	f0/8
Ubuntu 12.04	f0/9
2008 R2	f0/10
Windows 8.1	f0/11
PA eth1/4	f0/16
2012 IIS/Sharepoint	f0/17
CentOS 6.0 E-comm	f0/18
Fedora 21	f0/19
PA eth1/1	f0/24

The delineation of local IP, 'Public' IP, major service, and administrative access credentials per VM are as follows:

VM Label	Major Service	Internal IP	Public' IP or pool	Account	initial password
2008 R2	MS SQL	172.20.240.10	172.25.team#.97	administrator local administrator	!Password234 !Password123
Debian 7.8	MySQL	172.20.240.20	172.25.team#.20	root sysadmin	!Password123
Ubuntu 12.04	DNS	172.20.242.10	172.25.team#.23	sysadmin	!Password123
2008 R2	AD/DNS	172.20.242.200	172.25.team#.27	administrator	!Password234
Windows 8.1		172.20.242.100	172.25.team#.152	binddn	!Password123
2012 IIS/Sharepoint	http/https sharepoint	172.20.241.20	172.25.team#.9	administrator	!Password123
CentOS 6.0 E-comm	http/https	172.20.241.30	172.25.team#.11	root	!Password123
Fedora 21	webmail/http	172.20.241.40	172.25.team#.39	root	!Password123

- IOT1 & IOT2, internet of things, are physical devices attached to the competition network and are not directly accessible via NETLAB. One device is a Raspberry Pi hardware appliance loaded with Asterix/Linux FreePBX just as in the 2017 Midwest Qualification CCDC. Access the Raspberry Pi via web, admin:admin. Or access the Raspberry Pi via ssh, root:raspberry.
- The other IOT device is expected to be an Arduino hardware appliance running http service to be scored. More information on IOT devices will be made available at the event.
- Systems are loaded with various user accounts. The accounts that are used for scoring by the Scoring Engine are labeled in AD as "zCCDC Scoring User" as the

description. There are 91 of these accounts. **Root, Administrator, Admin or Sysadmin will never be used for scoring.**

- As the hosting site, MVCC will adhere to client requirements for the Blue Team workstations in accordance with NDG guidelines. See, https://www.netdevgroup.com/products/requirements/#client /
- Each competition network will be physically and logically isolated from the hosting organization's network.
- Each competing Blue Team will be provided a set of workstations at the host site that are logically and physically isolated from other Blue Teams in order to access respective remote competition networks.
- The White Team and each respective Blue Team will communicate with each other via a Team Portal, a trouble ticket and response application (ISE – Inject Scoring Engine) residing within the remote network at Moraine Valley Community College. This system is accessible via a browser where the system is located at,

ccdcadmin1.morainevalley.edu

- Team accounts to the ISE are,

team1, team2,…, team10

The ISE permits multiple logins using the same account.

Teams should login to the Team Portal/ISE first, using the team# account and password provided. Answer the Welcome inject signaling your readiness to compete. The drop flag is issued next, providing the initial password for all team accounts to the competition network at,

cyberlab.morainevalley.edu

Links to both the NDG NETLAB$^{+™}$ PE system which accesses the Cyber Stadium, and the Team Portal are also at

www.cssia.org and www.cssia/ccdc respectively.

- Teams should be attentive to monitor inject requests and notifications via the Team Portal/ISE. A Welcome Inject will be issued ahead of the start of scoring. Response to this initial inject confirms team communication with the White Team. A Cyber Access inject will subsequently be issued containing the team password needed for initial access to the competition stadium.
- Red Team activity may be either externally or internally sourced with respect to the remote competition network. At no time will the Red Team have access outside the remote network perimeter. Neither will the Red Team be given direct access to any Team network directly via the NDG NETLAB$^{+™}$ PE system.
- Each Blue Team network will be monitored by a scoring system operating within the remote network. An indication of services, as viewed by the indigenous scoring engine, will be made available to each Blue Team via the Team Portal/ISE.

- **While every effort is made to provide a stable and well defined competition topology, it is subject to change and /or modification as decided by the CCDC Competition Director.**

Functional Services

Certain services are expected to be operational at all times or as specified throughout the competition. In addition to being up and accepting connections, the services must be functional and serve the intended business purpose. At random intervals, certain services will be tested for function and content where appropriate.

HTTP

A request for a specific web page will be made. Once the request is made, the result will be stored in a file and compared to the expected result. The returned page must match the expected content for points to be awarded.

HTTPS

A request for a page over SSL will be made. Again, the request will be made, the result stored in a file, and the result compared to the expected result. The returned page needs to match the expected file for points to be awarded.

SMTP

Email will be sent and received through a valid email account via SMTP. This will simulate an employee in the field using their email. Each successful test of email functionality will be awarded points.

FTP

Successful access to a database and authentication will be tested via the FTP protocol. Some indication of connection integrity will also be examined. Successful test of functionality will be awarded points.

DNS

DNS lookups will be performed against the DNS server. Each successfully served request will be awarded points.

SSH

SSH connections will be performed against the system using credentials and usernames from Active Directory. Once connected a series of commands will be run and the output examined. Correct responses will be awarded points.

POP3

POP3 connections will be performed against the system using usernames from Active Directory. Once connected a series of commands will be run and the output examined. Correct responses will be awarded points.

Schedule – all times CST

Friday, March 17, 2017

12:00-1:30pm	Check-in at Moraine Valley Community College, Technology Building Receive Competition Packets, Team and Room Assignment, ISE password; Team captain signs off team packet Mingle with the Sponsors
1:30pm	Fogelson Auditorium David Durkee - Welcome & Introduction to the 2016 Regional CCDC Keynote Speaker A Word from our Sponsors (5 minutes for each sponsor) Travis Christianson, SecureWorks – Authoring Incident Responses Doug Huber of Lorain County Community College - Chief Judge
2:45pm	Speed Networking of Teams with the Sponsors
4:45-5:15pm	Students return to competition room/ login to ISE/ respond to Welcome inject
5:15pm	Start of Competition; scoring begins
6:00pm	Dinner – T100 Area - teams filter through and return to their rooms
10:00pm	Competition ends/Scoring ends for the day

Saturday, March 18, 2017

8:00-8:30am	Continental Breakfast Student Teams arrive at Moraine Valley Community College Go straight to the competition room
8:30am	Announcements via ISE
9:00am	Start of Competition; scoring begins
12:30pm	Lunch – Fogelson Foyer – teams filter through and return to their rooms
6:00pm	Competition ends/Scoring ends Dinner – T100 Area & Fogelson Foyer
7:00pm	Fogelson Theater - Presentations by Red & White Team representative(s) Announce final winners
7:30pm	Competition Director meets with First Place Team

Systems

1. Each team will start the competition with identically configured systems.
2. Teams may not add or remove any computer, printer, or networking device from the designated competition area. Teams must compete using the workstations provided. Competitors may not use their own laptops, workstations, tablet, &c.
3. Teams will be provided all access credentials on the morning of the competition.
4. Teams should not assume any competition system is properly functioning or secure.
5. Throughout the competition, Green, Orange, and White Team members will occasionally need access to a team's systems for scoring, troubleshooting, etc. Teams must allow Green, Orange, and White Team member access when requested. This includes access to the remote system. Teams reserve the right to refuse entry for those not wearing proper identification. Red Team members will not enter rooms.
6. Network traffic generators may be used throughout the competition to generate traffic on each team's network. Traffic generators may generate typical user traffic as well as suspicious or potentially malicious traffic from random source IP addresses throughout the competition.
7. Teams must maintain specific services on the "public" IP addresses assigned to their team. Moving services from one public IP to another is not permitted unless directed to do so by an inject. Likewise, teams are not permitted to change the internal addressing or VLAN scheme of the competition network unless directed to do so by an inject.
8. Teams are not permitted to alter the system names or IP address of their assigned systems unless directed by an inject; this may affect the results of the scoring mechanism.
9. **Teams are permitted to move services to another platform, provided that the same "public" IP address and DNS naming convention is maintained, along with other requirements of the service. Teams must also notify the White Team if services are moved to another platform, with a rationale for the change.**
10. Teams must maintain "public" services as available from all source IP addresses. Attempts to restrict or filter by IP source address may adversely affect scoring directly, and may also incur a penalty when detected.
11. In the event of system lock or failure, teams will be able to perform a complete restoration from within the administration console of the remote system. This will reset any system to its initial starting configuration. The number of system restorations will be tracked and negatively impact scores at the discretion of the White Team. Teams should also consider that system restoration will take time.
12. Systems designated as user workstations within the competition network are to be treated as user workstations and may not be re-tasked for any other purpose by teams.
13. Teams may not modify the hardware configurations of workstations used to access the competition network.
14. Servers and networking equipment may be re-tasked or reconfigured as needed.

Competition Rules: Acknowledgement & Agreement

Competition rules are applicable to all participants of the Midwest CCDC. They provide structure for the makeup of student teams, permitted actions during competition play,

guidelines for scoring, and contingencies for handling disputes. They also document expectations for appropriate conduct during the entire time participants are guests at the host site. Team advisers and team captains are required to sign where indicated, signifying their acknowledgement of competition rules and their commitment to abide by them.

Team advisers and team captains are responsible for deploying the competition rules to the remaining members of their team. Host sites reserve the right to stipulate additional rules conforming to local policies and guidelines.

Competition Rules: Student Teams

1. Each team will consist of up to no more than eight members. All team advisers have been informed of and will adhere to all national rules. See www.nationalccdc.org
2. Each team may have no more than two graduate students as team members.
3. Each team must have one adviser present during the entire competition – this may be a faculty/staff member or an administrator. Institutions may also send an additional faculty adviser. Team advisers and faculty representatives may not assist or advise the team during the competition. Team advisers and faculty representatives may not be involved in any scoring or decisions that involve a participating institution or Blue Team.
4. All team members, the team adviser, and all faculty representatives will be issued badges identifying team affiliation which must be worn at all times during competition hours.
5. Each team will designate a Team Captain for the duration of the competition to act as the team liaison between the competition staff and the teams before and during the competition. Team Captains should identify themselves to the White Team by team number, and not by institution.

Competition Rules: Professional Conduct

1. All participants are expected to behave professionally at all times they are visiting the host site, and at all preparation meetings.
2. Host site/ local site policies and rules apply throughout the competition.
3. All Midwest Cyber Defense Competitions are alcohol free events. No drinking is permitted at any time during the competition.
4. Activities such as swearing, consumption of alcohol or illegal drugs, disrespect, unruly behavior, sexual harassment, improper physical contact, becoming argumentative, or willful physical damage have no place at the competition.
5. In the event of unprofessional conduct, student team members and their adviser will meet with Gold Team members upon request. The consequence of unprofessional conduct will be determined by the Site Administrator with the recommendation of the Gold Team. This may be a warning, point penalty, disqualification, or expulsion from the campus.
6. The Site Administrator or a Gold Team member from CSSIA reserves the right to disqualify an offender from participation in future competitions.
7.

Competition Rules: Competition Play

1. During the competition team members are forbidden from entering or attempting to enter another team's competition workspace or room. They are also forbidden from accessing another Team network, either through their competition network, or by remote access to another team.
2. All requests for items such as software, service checks, system resets, and service requests must be submitted to the White Team. Requests must clearly show the requesting team by number, action or item requested, and date/time requested. **Teams should not identify the school they represent to the White Team.**
3. Teams must compete without outside assistance from non-team members which includes team advisers and sponsors. All private communications (calls, emails, chat, directed emails, forum postings, conversations, requests for assistance, etc.) with non-team members are forbidden and are grounds for disqualification.
4. No PDAs, memory sticks, CD-ROMs, electronic media, or other similar electronic devices, are allowed in the room during the competition unless specifically authorized by the White Team in advance. All cellular calls must be made and received outside of team rooms. Any violation of these rules will result in disqualification of the team member and a penalty assigned to the appropriate team.
5. Teams may not bring any computer, tablets, PDA, or wireless device into the competition area, including Nook and Kindle. MP3 players with headphones will be allowed in the competition area provided they are not connected to any system or computer in the competition area.
6. Printed reference materials (books, magazines, checklists) are permitted in competition areas and teams may bring printed reference materials to the competition.
7. Team sponsors and observers are not competitors and are prohibited from directly assisting any competitor through direct advice, suggestions, or hands-on assistance. Any team sponsor or observers found assisting a team will be asked to leave the competition area for the duration of the competition and a point penalty will be assessed against the team.
8. An unbiased Red Team will probe, scan, and attempt to penetrate or disrupt each team's operations throughout the competition.
9. Team members will not initiate any contact with members of the Red Team during the hours of live competition. Team members are free to talk to Red Team members, White Team members, other competitors, etc. outside of competition hours.
10. Only Blue Team, White Team or Gold Team members will be allowed in any Blue Team competition room. On occasion, White Team or Gold Team members may escort individuals (VIPs, press, etc.) through the competition area including team rooms. Guest visits must be approved by the CSSIA Competition Director and are not encouraged as it may distract the Blue Team members during their activities.
11. White, Gold, or Green Team members will be allowed in competition areas outside of competition hours. **The Red Team is never granted access to any Blue Team competition room, and is not granted access to the Cyber Stadium team networks outside of competition hours.**
12. All individuals involved with the competition will be issued badges which must be worn at all times during the competition.
13. Teams are permitted to replace applications and services provided they continue to provide the same content, data, and functionality of the original service. For example,

one mail service may be replaced with another provided the new service still supports standard SMTP commands, supports the same user set, and preserves any pre-existing messages users may have stored in the original service. Failure to preserve pre-existing data during a service migration will result in a point penalty as deemed appropriate by the White Team for each user and service affected.

14. Teams are free to examine their own systems but no offensive activity against other teams, the White Team, or the Red Team will be tolerated. This includes port scans, unauthorized connection attempts, vulnerability scans, etc. Any team performing offensive activity against other teams, the White Team, the Red Team, or any global asset will be immediately disqualified from the competition. If there are any questions or concerns during the competition about whether or not specific actions can be considered offensive in nature contact the White Team before performing those actions.
15. Blue Team members may not change usernames within their respective environment, unless directed to do so by the White Team. Blue Team members may change passwords for administrator and user level accounts. **Changes to passwords affecting scored services must be communicated to the White Team via the password change request feature of the ISE. Look for a password change policy to be issued during the competition. Changes to administrator and root account passwords may be changed without notification, since these are not used for scoring services**. Competitors have the responsibility to determine how accounts relate to services.
16. Teams are allowed to use active response mechanisms such as TCP resets when responding to suspicious/malicious activity. Any active mechanisms that interfere with the functionality of the scoring engine or manual scoring checks are exclusively the responsibility of the teams. Any firewall rule, IDS, IPS, or defensive action that interferes with the functionality of the scoring engine or manual scoring checks are exclusively the responsibility of the teams.
17. Each Blue Team will be provided with the same objectives and tasks.
18. Each Blue Team will be given the same inject scenario at the same time during the course of the competition.
19. Blue Teams may request information from the White Team and Scoring Manager as to why a particular service is not scoring properly. Disclosure of information regarding non-scoring of services is at the discretion of the White Team. Nevertheless, if core system or scoring system faults are discovered, every effort will be made towards corrective action together with modification of scores to maintain equity and fairness.
20. The White Team is responsible for implementing the scenario events, refereeing, team scoring and tabulation.
21. Scoring will be based on keeping required services up, controlling/preventing un-authorized access, and completing business tasks in a timely manner that will be provided throughout the competition.
22. Scores for inject completion and incident reports will be maintained by the White Team, and will not be shared with Blue Team members. Running totals will not be provided during the competition. Some debriefing of a general nature is likely at the end of the competition.
23. If a scenario or event arises that may negatively impact the integrity or fairness of any aspect of the competition that was not previously anticipated, it is the final decision and discretion of the Chief Judge to make adjustments in scores, or deploy new policies.

Competition Rules: Internet Usage

1. Competition systems will have controlled access to the Internet for the purposes of research and downloading patches. **All internet access from the competition network will be through a web proxy.**
2. The web proxy will permit a predetermined set of common web sites including several used for software repositories. Per National CCDC practice, the complete list of accessible sites will not be published.
3. Teams have been solicited for up to 15 additional sites per team to be accessible from the competition network. Such sites will be assessed, added to the web proxy, and the complete list of added sites published to teams as part of the documentation received at check-in, or alternatively, available in the team rooms, or available within the competition environment.
4. **Workstations located in competition rooms will not have internet connectivity. <<<<<**
5. Although internet activity is restricted in the competition network, means to circumvent the intent of this limitation may be discovered. Thus internet activity will be monitored. Any team member caught viewing inappropriate or unauthorized content will be immediately disqualified from the competition. This includes direct contact with outside sources through AIM/chat/email or any other public or non-public services such as Facebook. For the purposes of this competition inappropriate content includes pornography or explicit materials, pirated media files or software, sites containing key generators and pirated software, etc. If there are any questions or concerns during the competition about whether or not specific materials are unauthorized contact the White Team immediately.
6. No peer to peer, distributed file sharing clients or servers are permitted on competition networks.
7. Additional software or tools must be either free or open source within the limits of pre-determined internet accessibility.
8. Teams may not use any external, private electronic staging area or FTP site for patches, software, etc. during the competition.
9. All network activity that takes place on the competition network may be logged and is subject to release. **Competition officials are not responsible for the security of any personal information, including login credentials that competitors place on the competition network.**

Competition Rules: Scoring

1. Scoring will be based on keeping required services up, controlling/preventing un-authorized access, mitigating vulnerabilities, and completing business tasks that will be provided throughout the competition. Teams accumulate points by successfully completing injects, maintaining services, and by submitting incident reports. Teams lose points by violating service level agreements after services have been unavailable, usage of recovery services, and successful penetrations by the Red Team.
2. Scores will be maintained by the White Team. Individual tracking of services will be available to respective teams during the competition. Blue Team members should use available service reports and internal testing to assess the integrity of their network.

Blue Team members should refrain from making direct requests to the White Team for routine service verification.

3. Any team action that interrupts the scoring system is exclusively the fault of that team and will result in a lower score. Should any question arise about specific scripts or how they are functioning, the Team Captain should immediately contact the competition officials to address the issue.
4. Any team that tampers with or interferes with the scoring or operations of another team's systems will be disqualified.
5. Teams are required to provide incident reports for each Red Team incident they detect. Incident reports can generally be completed as needed throughout the competition and submitted to the White Team. The White Team reserves the right to stipulate the times and manner in which incident reports may be submitted. Incident reports must contain a description of what occurred (including source and destination IP addresses, timelines of activity, passwords cracked, etc), a discussion of what was affected, and a remediation plan. The White Team will assess scores for incident report submission based on clarity, thoroughness, and accuracy. The White Team may also, at their discretion, assess negative scores for frivolous, unnecessary, or excessive communication.
6. The winner will be based on the highest score obtained during the competition. Point values are broken down as follows:

35-50%	Functional services uptime as measured by scoring engine
35-50%	Successful completion of inject scenarios will result in varying points, depending upon the importance or complexity of the inject scenario
10-20%	Incident Response and Red Team Assessment

Precise percentage breakdown will be determined by the White Team.

Business Tasks

Throughout the competition, each team will be presented with identical business tasks. Points will be awarded based upon successful completion of each business task. Tasks will vary in nature and points will be weighted based upon the difficulty and time sensitivity of the assignment. Tasks may contain multiple parts with point values assigned to each specific part of the tasking. Each business task may have an indication of relative importance or value assigned and a specific time period in which the assignment must be completed. Business tasks may involve modification or addition of services.

Questions and Disputes

1. Team captains are encouraged to work with the CSSIA Competition Director, the White Team, and contest staff to resolve any questions or disputes regarding the rules of the competition or scoring methods before the competition begins. Protests by any team will be presented by the Team Captain to the competition officials as soon as possible. Competition Gold Team officials will be the final arbitrators for any protests or

questions arising before, during, or after the competition and rulings by the competition officials are final.

2. In the event of an individual disqualification, that team member must leave the competition area immediately upon notification of disqualification and must not re-enter the competition area at any time. Disqualified individuals are also ineligible for individual awards or team trophies.
3. In the event of a team disqualification, the entire team must leave the competition area immediately upon notice of disqualification and is ineligible for any individual or team award.

Aftermath

Members of CSSIA, Gold, White, and Green Teams strive to make the Midwest CCDC enriching experiences. All management and administrative teams are open to feedback and suggestions for improvement after the completion of the competition. This may include areas of concern or dissatisfaction.

Whether feedback is positive or negative, participants are forbidden from publishing, posting on the internet, or publicly communicating details of the competition other than what is available at www. cssia.org/ccdc. They are also forbidden from publishing, posting on the internet, or publicly communicating assessments of the Midwest CCDC, nor assessments of the performance of any team, nor speculations concerning different possible outcomes. Institutions that fail to adhere to this rule may be refused participation in future competitions.

Institutions may publish, post on the internet, or publicly communicate news stories of a general nature about the Midwest CCDC, and may also enumerate participating teams and winners.